COMMUNITY-BASED DISASTER RISK MANAGEMENT
The Partnerships for Disaster Reduction - South East Asia Phase 3 (PDR-SEA3) 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. ADPC is Thailand 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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United Nations Economic and Social Commission for Asia and Pacific is the regional arm of the United Nations Secretariat for the Asian and Pacific regions, located in Bangkok, Thailand. UNESCAP is committed to materialize the visions of the United Nations Millennium Declaration, which was adopted by the UN General Assembly in September 2000. The current PDR-SEA project is being implemented jointly by UNESCAP and ADPC at the regional level.

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The European Commission Humanitarian Aid Department (ECHO) oversees and coordinates the European Union’s humanitarian operations in non-member countries, in partnership with non-governmental organizations, specialized agencies of the United Nations, and other international bodies. DIPECHO is the Disaster Preparedness program set up by ECHO in 1996 to prevent and prepare for natural disasters.

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CRITICAL GUIDELINES

COMMUNITY-BASED DISASTER RISK MANAGEMENT
CRITICAL GUIDELINES
Community-based Disaster Risk Management

Published by the Asian Disaster Preparedness Center through its Partnerships for Disaster Reduction - Southeast Asia Phase 3 (PDRSEA3) Project jointly implemented by ADPC and UNESCAP with funding support from DIPECHO

This booklet on “Critical Guidelines of CBDRM” was drafted by Ian Davies and Zubair Murshed through a consultative process with stakeholders and particularly as a result of the “Regional Workshop on Standards of Community Based Disaster Risk Management” held on 24-27 January 2006 in Bangkok Thailand.

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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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The importance of community-based approaches has been recognized since long in promoting a culture of safety through reducing local vulnerabilities and building capacities. These approaches have been practiced by various community groups, national and international organizations and government departments, in some cases, for over two decades now.

The practice of community-based approaches has remained diverse due to a host of factors. They include the organizational mandates of the concerned organizations, socio-cultural context of the communities, levels of economic development of communities, political structures in a country and multiplicity in funding cycles of donor organizations. This diversity has raised concerns about the quality in practice and the need for promoting good practices.

Another key trend in the recent years has been the efforts by NGOs, UN and other international organizations to mobilize government support for CBDRM in policy, planning and programming. This is sometimes also known as integration of CBDRM. In this regard the organizations have adopted various approaches including national and local advocacy, capacity building, integrating risk factors into development planning and joint implementation of CBDRM activities with government departments. These efforts to gain governmental support have also necessitated the need for common national frameworks about community-based approaches so as to convince the authorities. The development organizations find it difficult to mobilize support from the authorities in the absence of a common reference point. The ADPC's own experience under the Partnerships for Disaster Reduction South East Asia (PDRSEA3) program demonstrated the need for development of regional guidelines.

The development of minimum standards in other disciplines like the humanitarian sector, as well have played a catalytic role in creating a demand within the disaster risk reduction community to formulate minimum standards for practice in the area of community-based disaster risk management.
In an effort to address the above issues, the initiative on drafting of Critical Guidelines of Community-based Disaster Risk Management was undertaken by the ADPC and the UNESCAP under the jointly implemented Partnerships for Disaster Reduction South East Asia (PDRSEA3) project.

It is expected that the availability of these Critical Guidelines will enable development practitioners to follow common principles, processes and approaches in the identification, design, implementation, monitoring and evaluation of community-based projects on disaster risk management, thus contributing to the improvement in practice.

The Critical Guidelines were developed through a consultative process. Professor Ian Davis and Mr. Zubair Murshed, program manager PDRSEA3 prepared the first draft of the guidelines. In developing this draft inputs were provided by Mr. Loy Rego, Director DMS team, and Mr. Shesh Kanta Kafle, Training Manager PDRSEA3, among others. The draft was subjected to a review by CBDRM practitioners from about 10 countries. Based upon the recommendations from the workshop the draft was further revised and finalized by Ian Davis and Zubair Murshed.

The Regional Workshop in Bangkok in January 2006 proved invaluable in reviewing the first draft of the guidelines and providing recommendations in establishing the function, format and focus of these guidelines. The text of this document is the product of these discussions and agreements. The workshop was attended by about 25 leaders drawn from regionally based international, national and local NGO’s to discuss the first draft of these guidelines and seek confirmation over the overall directions. The ADPC is grateful to all these individuals who spent their valuable time in the review. They included Frank Elvey (Timor Leste), Chandra Lukitasari (Indonesia), Banu Subagyo (Indonesia), Bernie O'Neill (Cambodia), Keo Chanthalangsy (Lao PDR), Moloy Chaki (Bangladesh), Paul Venton (UK), Emmeline Managbanag (Philippines), Rene Jinon (Thailand), Krishna Karkee (Nepal), Uzma Hoque (Thailand), Pablo Taebola (Thailand), David Sandilands (Vietnam), Christel Rose (Thailand), Joseph Chung (Thailand), Danilo Atienza (Indonesia), Leigh Vickery (Lao PDR), Raul de la Rosa (Timor Leste), Delna de Jesus (Timor Leste), Nguong Chinh (Vietnam), Supaporn Khrutmuang (Thailand), Wantanee Kongomboon (Thailand), Edlin S.Lumanog (Thailand), Muhibuddin Bin Usamah (Thailand), and Le Huu Ti (Thailand). ADPC is grateful to UNDP India for providing funding support for this workshop.

The consultative process followed in the development of the guidelines helped establish a minimum consensus amongst the practitioners in establishing benchmarks for the CBDRM practice, which is an encouraging development towards improvement of quality in the CBDRM practices. These critical guidelines are by no means exhaustive. This output should be considered as ‘work in progress’, which has been formulated upon the basis of experiences of participating organizations and individuals. Other individuals and organizations may have different experiences. The application of these guidelines in the field should allow further refinement.

The document is divided into two parts. The first part titled as General Guidance describes the background, source materials and principles if performance and outcome indicators, key definitions, elements of risk reduction, and the concept of resilient community. The second part is titled as “Guidelines for good practice in community-based disaster risk management”. It is divided into two sections. The first section is about Process Indicators, while the second is about Outcome Indicators. The Process Indicators discuss six process steps in the implementation of CBDRM programs and projects. For each process step, i) aim, ii) steps in this process, iii) key outcome indicators, vi) and guidance notes to implement CBDRM are discussed. The purpose of the first section is to describe the essential elements of a good CBDRM process. The purpose of the second section is to discuss the expected outcomes of a good CBDRM process. The Outcomes are about institutional arrangements and product outputs that a CBDRM program/project must endeavor to establish in the local community in order to ensure the continuity of community initiatives for
disaster risk reduction after the completion of externally sponsored development initiatives. These Outcome Indicators can also serve as markers to gauge the success of an externally supported CBDRM process in developing capacity of local community to achieve sustainable development. If an externally supported process was able to establish the institutional arrangements described in the outcome indicators, that initiative could be described as a successful initiative, an otherwise assessment would mean more efforts were required to develop community capacity.

The ADPC and UNESCAP are grateful to DIPECHO South East Asia for the generous support provided for implementation of the PDRSEA3 program and two previous phases of the program since 2001. These Critical Guidelines have been prepared under the third phase of the PDRSEA, primarily for users in the South East Asian region. The PDRSEA 3 was jointly implemented by the ADPC and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).
GENERAL GUIDANCE
Performance Indicators

If you cannot measure results, if you cannot show what you’ve done, other partners will be found. Why is that? Doing good is not enough. We have to show what kind of good we’re doing, in which sectors, in which communities, and whether the good has bad consequences, or bad side effects, that no one anticipated.

Andrew Natsios, USAID (2003)

Evaluation reports (of disaster assistance) were so consistent in their criticism of agency monitoring and evaluation practices that a standard sentence could almost be inserted into all reports along the lines of: It was not possible to assess the impact of this intervention because of the lack of adequate indicators, clear objectives, baseline data and monitoring.


Countries that develop policy, legislative and institutional frameworks for disaster risk reduction and that are able to develop and track progress through specific and measurable indicators have greater capacity to manage risks and to achieve widespread consensus for engagement in and compliance with disaster risk reduction measures across all sectors of society.

Para 16
Mainstreaming DRR into Government and NGO Sectors, Development Plans and Actions

Staff ‘ownership’ of both risk reduction and the process of mainstreaming itself is key to attaining ‘full integration’… Organizations are run by people and hence mainstreaming risk reduction will be totally dependent on enthusiastic and well-informed staff continually promoting it. If staff ‘own’ risk reduction as their responsibility, it has an excellent chance of becoming sustainable within the organization.

Sarah la Trobe and Ian Davis (2005)

An integrated, multi-hazard approach to disaster risk reduction should be factored into policies, planning and programming related to sustainable development, relief, rehabilitation, and recovery activities in post-disaster and post-conflict situations in disaster-prone countries.


Resilient Communities

An ability to recover quickly from or adjust easily to misfortune, change or disturbance…The capacity of a system, community or society to resist or to change in order that it may obtain an acceptable level in functioning and structure.

Purpose and Scope

These Guidelines have been devised to improve the quality and overall effectiveness of Community-based Disaster Risk Management (CBDRM). The guidelines are intended for officials in local governments, NGO’s, civil society organizations and community leaders as they devise CBDRM projects and programs. The guidelines are concerned with general principles, defining an approach and strategies to provide a framework for tasks that will need to take place at the local level. Thus the guidelines are more a ‘nutritional guide’ rather than a ‘cook book’. The reason for this focus concerns the variability and cultural diversity of local communities that require locally specific indicators to match any local situation.

The aim of this document is to provide a series of practical, simple and relevant templates that can be developed and adapted for use at specific local levels. Eventually these templates may become accepted international tools to measure the quality of performance and outcomes through appropriate indicators for use at the family and community level. It is expected that the availability of a series of indicators will enable development practitioners to be able to follow common principles, processes and approaches in the identification, design, implementation, monitoring and evaluation of community-based projects on disaster risk management.

The guidelines are in line with the Hyogo Framework of Action (HFA), which was adopted in January 2005 at the World Conference on Disaster Reduction (WCDR) in Kobe, Japan 168 Governments as a ten year plan to make the world safer from natural hazards. The Hyogo Framework has extensive cross-cutting reference to the importance of CBDRM. The following specific aspects of the Hyogo Framework support the focus of these guidelines.

Strategic Goal 12 (b) The development and strengthening of institutions, mechanisms and capacities at all levels, in particular at the community level, that can systematically contribute to building resilience to hazards.

Priorities for Action 1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
Key Activities

Community participation
Promote community participation in disaster risk reduction through the adoption of specific policies, the promotion of networking, the strategic management of volunteer resources, the attribution of roles and responsibilities, and the delegation and provision of the necessary authority and resources

National and local risk assessments
Develop systems of indicators of disaster risk and vulnerability at national and sub-national scales that will enable decision-makers to assess the impact of disasters on social, economic and environmental conditions and disseminate the results to decision-makers, the public and population at risk

The above statements effectively capture the focus of this project with a series of key clauses:
- ‘Strengthen the community level’
- ‘Ensure that DRR is a local priority’
- ‘Promote community participation in DRR’
- ‘Develop indicators of disaster risk and vulnerability…to assess the impact of disasters on social, economic and environmental conditions’
- ‘Disseminate the results to population at risk’

A draft of the Guidelines was prepared by Ian Davis and Zubair Murshed. In January 2006 a consultation was held in Bangkok amongst 25 leaders drawn from regionally based international, national and local NGO’s to discuss the first draft of these guidelines and seek confirmation over the overall direction. Their names are set out in Appendix 2 of this document. This workshop proved very useful in establishing the function, format and focus of these guidelines. The text of this document is the product of these discussions and agreements. The participants in this consultation agreed on the following issues and these agreements have been incorporated into the text:

i. Focus of Project
- the title of this project should use the term ‘Guidelines’ rather than ‘Standards’ since the term ‘standards’ is too finite and precise for its purpose in this project.
- This form of guidelines is important to enable CBDRM to move forward.
- the over arching focus of this project is to build resiliency to enable local communities to resist hazard impact, to bounce back after disasters and to adapt and change to ensure effective recovery.

ii. Scope of Project
- The guidelines will be applicable for all disaster phases: pre, during and post disaster.
- The intention should be to develop indicators of ‘good practice’ rather than ‘best practice’.

iii. Audience of Project
- The target users and primary audience are NGOs, civil society organizations, and local government officials who may belong to commune, sub-district, municipal or district governments. Others will be considered as secondary users. Therefore the guidelines have been developed from the perspective of NGOs, civil society organizations and local government officials.
• **Institutionalization** or **mainstreaming** risk assessment and disaster risk reduction into all appropriate sectors of society is an important stage in the development of CBDRM. Therefore, there is a priority need to include the local government officials as the primary target groups.

iv. Detailed Observations
- Different countries as well as different communities within the countries are at different stages in terms of their understanding of hazards, risks, and in the development of CBDRM. In addition there is wide cultural diversity with variable political, social and economic systems, Therefore, the **Critical Guidelines** will be developed in the form of a “**template or nutrition guide**” The users are encouraged to apply this template to create local guidance notes or assessment tools.

The Hyogo Framework for Action gives emphasis to the need for specific actions given local variable patterns:

> “Recognize the importance and specificity of local risk patterns and trends; decentralize responsibilities and resources for disaster risk reduction to relevant sub-national or local authorities, as appropriate”


- **Terminology** can be confusing at times due to the language problems, therefore the emphasis should be understanding the “**concepts**” rather than debating specific terms. (UNISDR have developed an extensive disaster terminology that can be seen on their web site isdr@un.org. In Appendix 1. a selection of definitions that relate to the scope of this project have been included)

- The **term CBDRM will be kept intact** in order to avoid adding another acronym; since essentially the practice does not differ significantly under various terms.

- The **language** of the document will be simplified as much as possible to make certain that the advice is both practical and usable. This is particularly important in view of the many potential audiences of these Guidelines.

- The document’s length will be kept **shorter**.

- **Qualitative indicators are of more value than quantitative** since they are much easier to identify and measure and are likely to be more useful in developing effective programs.

- These guidelines should not be specifically attached to the ADPC publication: ‘**Community-based Disaster Risk Management, Field Practitioners’ Handbook**’ rather these **Guidelines should be capable of being related to the various sets of field based manuals** that are currently available.
Purpose and Scope

In developing these guidelines it has been important to avoid any temptation to reinvent wheels, so it has been particularly useful to be able to refer to and build from recent parallel work on the quest for indicators to measure the effectiveness of risk reduction. The following studies have enriched this publication.

**ALNAP**
- An organization of European based NGO’s “Active Learning Network for Accountability and Performance in Humanitarian Action” (ALNAP) has played a key role in the development of learning, accountability and quality across the humanitarian sector (ALNAP, 2002).

ALNAP publish annual reviews of evaluations of Humanitarian Action. These reports discuss learning at field levels. Available from [www.alnap.org or alnap@odi.org.uk](http://www.alnap.org or alnap@odi.org.uk)

**Davis, Ian**
- Material from two papers developed by the author in 2003 and 4 has been adapted for this text: “The Effectiveness of Current Tools for the Identification, Measurement, Analysis and Synthesis of Vulnerability and Disaster Resilience” (2003) Program of Indicators for Disaster Risk Management, National University of Colombia, Manizales. Available from [http://idea.unalmzl.edu.co](http://idea.unalmzl.edu.co)

“The application of performance targets to promote effective earthquake risk reduction strategies” to the 13th International Conference on Earthquake Engineering, Vancouver August 2004 (DAVIS, 2004).

**Hilhorst, Dorothea**
- A particularly useful overview of the use and misuse of standards and indicators in the disaster field has been written by Dr. Dorothea Hilhorst, who works in Disaster Studies in Wageningen University, Netherlands.

Hilhorst, D. 2002 Being Good or Doing Good? Quality and Accountability of Humanitarian NGO's Disasters 26(3): 193-212 ([Thea.Hilhorst@alg.asnw.wau.nl](mailto:Thea.Hilhorst@alg.asnw.wau.nl))
Humanitarian Policy Network (HPN)


Inter-American Development Bank

- In addition the Inter-American Development Bank (IADB) and Universidad Nacional de Colombia have collaborated on a vital project: “The Effectiveness of Current Tools for the Identification and Synthesis of Vulnerability and Disaster Risk.” (CARRENO, 2005; DAVIS, 2003; IADB, 2003; LAVELL, 2003)

  This project was finalized in 2005 with the publication of “Indicators of Disaster Risk and Risk Management” Summary Report and Main Technical Report. (CARDONA 2005). Available from http://idea.unalmzl.edu.co

ProVention Consortium


SPHERE


Tearfund


- The Tearfund Project “Mainstreaming disaster risk reduction, a tool for development organizations” (LA TROBE AND DAVIS 2005)

Practitioners and officials need sets of principles to guide their actions. Principles provide frameworks for planning and action so that if the circumstances faced by them differ from those implied by indicators then they can use the principles to design their own tools for CBDRM.


Therefore no attempt has been made in the proposals set out below to duplicate this code that has now been widely accepted and signed by International and National NGOs. Therefore the following principles are a specific outworking of the Code of Conduct within the CBDRM environment.

In the past sets of principles contain a random mix of tactical concerns intermixed with those concerned with values and strategy. We believe that there is a value in disaggregating them into an orderly set of interdependent categories. Therefore an attempt has been made to separate them into four categories that can best be described as a pyramid, where each level sits on the foundation of those below.

Figure 1. The pyramid of principles
Level 1: Ethical, Core Value Principles relate to the underlying shared beliefs and concerns of the organization and of its mandate as it seeks to undertake CBDRM. Using a food metaphor Level 1 would relate the ethics of food production. (Such as a human rights based approach to CBDRM)

Level 2: Strategic Principles that concern the policy direction of CBDRM that will be informed and be based on the ethical principles. Using a food metaphor Level 2 would be a nutrition guide. (Such as what actions to consider taking-why, where and with what expected consequences?)

Level 3: Tactical Principles that concern the practical outworking of the strategic principles. Using a food metaphor Level 3 would be a cookbook. (Such as how to adopt the agreed strategy, considering staffing / financial implications etc.)

Level 4: Implementation Principles that are related to all the preceding levels: core values, strategy and tactics. Using a food metaphor Level 4 would be eating the meal as well as congratulating the cook or writing a letter of complaint to the restaurant! (Such as actions taken as well as their monitoring and evaluation)

PROPOSED PRINCIPLES, BASED ON THE FOUR LEVELS

Level 1: Ethical Principles

PRINCIPLE 1. (Ethics) Observe Basic Rights
People have basic rights that are to be respected and observed in undertaking CBDRM. These include the right to:
• safety;
• be listened to;
• be consulted over any issue that may affect their well-being or future;
• receive appropriate assistance following disaster impact.

PRINCIPLE 2. (Ethics) Share Information concerning those ‘at-risk’
If anyone or any organization undertakes local risk assessment and discovers that a given community is at risk, then they have an ethical responsibility to share this information and disseminate it to the individual families and community in question. They also have an additional responsibility to share this with the wider community living in the area.

PRINCIPLE 3. (Ethics) Share Assessment Information
NGOs will agree to share the results of their risk assessments or post-disaster damage/ needs and capacity assessments with any other organization, such as local governments and other NGO’s that may need the data to reduce disaster risks or aid recovery.

PRINCIPLE 4. (Ethics) Collaborate rather than Compete
Given a common overriding desire to serve the needs of the poor and vulnerable, NGO’s undertaking CBDRM agree to collaborate with other NGO’s or local governments, rather than compete with them. This positive commitment will be expressed in the following areas:
• avoiding competition to secure projects;
• poaching key staff from an adjacent agency/ organization;
• publicity in relation to fund-raising policies;
• sharing relevant knowledge and information;
• avoiding assessments where these have already taken place;
• providing mutual support.
Level 2: Strategic Principles

PRINCIPLE 5. (Strategy) Strategic Considerations
Before embarking on CBDRM, a given organization, (whether government or NGO) will build into the project design:
• a set of indicators to measure effectiveness;
• clear objectives;
• baseline data;
• monitoring and evaluation procedures.
• Exit strategy

PRINCIPLE 6. (Strategy) Trust vs Control
In measuring the effectiveness of CBDRM it is vital to secure a fine balance between trust and control. Excessive controls in the form of performance and outcome indicators and a lack of involvement of key stakeholders in the formulation of indicators will significantly erode trust.

PRINCIPLE 7. (Strategy) Ensuring Staff Commitment and Competence
Agency and Government officials who implement CBDRM projects and programs need to be fully convinced that performance and outcome indicators are necessary, and that they can significantly improve the efficiency and quality of risk reduction measures. Training will be required to support this process.

Level 3: Tactical Principles

PRINCIPLE 8. (Tactical) Tactical Considerations
To be effective, performance and outcome indicators need to satisfy a range of demands. Effective indicators are:
• transparent;
• robust;
• representative;
• replicable;
• nationally comparable;
• sustainable;
• measurable;
• achievable;
• relevant;
• time framed;
• easily understood.

PRINCIPLE 9. (Tactical) Baseline Data
For each performance indicator, a baseline is necessary. This is crucial in measuring progress toward an intermediate result or satisfying an objective. Depending on the type of performance indicator being measured, the baseline data can be a point-in-time observation or a cumulative or an average value over a period of time. (Adapted principle from USAID, 2004).

PRINCIPLE 10. (Tactical) Measuring Quantifiable and Non-Quantifiable Indicators
There is a strong bias in performance indicators towards tangible, measurable and quantifiable elements (such as building a safe dwelling) thus neglecting the measurement of intangible and less visible aspects (such as strengthening risk perception). Therefore alternative ways are needed to maintain standards for non-quantifiable measures.

PRINCIPLE 11. (Tactical) Measuring Minimum Requirements
Performance indicators should specify the minimum requirements to make risk reduction effective. The aim of any indicator is not to indicate best practice, but to ensure that the competency of personnel, effectiveness of procedures, quality of measures etc. do not fall below standards of general acceptability. (Adapted principle from ALEXANDER, 2003. p.114)
PRINCIPLE 12. (Tactical) Relevance of Indicators
Each indicator should define the conditions to which it applies. Performance or Outcome Indicators are not expected to universally apply to all situations. Therefore it is important to specify where the standard is valid and where it does not apply. (Principle from ALEXANDER, 2003. p.114)

PRINCIPLE 13. (Tactical) Updating of indicators within a context of dynamic change
Performance Indicators and Standards relate to risk assessment, planning, implementation and monitoring and evaluation. All these processes relate to dynamic patterns of continually changing hazards, vulnerabilities and capacities. Therefore indicators and standards will need to be regularly updated in this dynamic context.

PRINCIPLE 14. (Tactical) Mainstreaming
Actions taken to implement CBDRM should aim to be integrated into normal development policies, planning, programming and practice related to sustainable development, relief, rehabilitation, and recovery activities in pre and post-disaster situations.

Level 4: Implementation Principles

PRINCIPLE 15. (Implementation) Cultural Adaptation of Indicators
All performance and outcome indicators need to be considered, and if necessary revised and adapted to suit the social, cultural, economic and environmental variables within local cultural contexts.

PRINCIPLE 16. (Implementation) Side-Effects
Within the implementation of CBDRM, indicators are needed as well as monitoring measures to assess whether any negative unexpected side effects are taking place. Officials need to be aware of possible examples and be able to take speedy evasive action to minimize any adverse consequences.
key definitions

(See Appendix 1 for additional definitions from UNISDR)

Vulnerability Criteria
Human Vulnerability describes the ‘characteristics of a person of group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a natural hazard.’ (WISNER, et al 1994 p.11) Vulnerability can also apply to other sectors: physical, economic, and environmental sectors. Therefore ‘vulnerability criteria’ indicates how the scale and extent of the varied forms of vulnerability can be assessed, judged or evaluated.

Vulnerability contains two elements: exposure and susceptibility.

“Exposure is determined by where and how people live and work relative to the hazard. Susceptibility takes into account those social, economic, political, psychological and environmental variables that intervene in producing different impacts amongst people with similar levels of exposure.”

(DFID, 2004 p.15)

Outcome Indicators
Indicators always point to something. In this context specific indicators, or signals need to precisely defined. They may relate to two forms of outcome:

Firstly, the impact of a hazard, or potential hazard on a given situation; and
Secondly, the impact of the implementation of a given risk reduction measure, program or project on the protection of people or property.

Performance Indicators
A performance indicator is an aspect of a project or program that can be used to measure progress and the success of the program.
Quantitative Performance Indicators

“Performance indicators can be measured quantitatively or qualitatively. Quantitative measures answer questions such as “how many?” “how much?” and “what percent?” Examples of quantitative information are data from food delivery records, health clinic records, and death records”.

(USAID, 2004)

Qualitative Performance Indicators

“Qualitative measures are subjective (e.g., changes in people’s attitudes, perceptions and well being, etc.) and therefore require indirect methods to quantify. These indirect methods include interviews, focus group discussions and rapid assessments”.

(USAID, 2004)

Evaluation

“The process of determining the merit, worth or value of something or the product of that process”

(SCRIVEN, 1991 p.139)

A systematic and impartial examination of risk reduction measures in order to draw lessons to improve policy and practice and enhance accountability.
- it is commissioned by or in cooperation with the organization(s) whose performance is being evaluated;
- it is undertaken either by a team of non-employees (external evaluation) and employees (internal evaluation from the commissioning organization and/or the organization being evaluated;
- it assesses policy and practice against recognized criteria (efficiency, value for money, effectiveness, timeliness, coordination, impact, connectedness to other sectors and the development process, relevance, appropriateness, coverage, coherence and levels of protection from hazards)
- it articulates findings, draws conclusions and makes recommendations

(Adapted from ALNAP, 2002, p.201)

Participatory Evaluation

An evaluation process in which stakeholders play an active part in the design of the process, in its undertaking and in the development of the findings, conclusions and recommendations.

Risk Reduction Measures

A collective expression that encompasses structural and non-structural protection measures. These are often described as mitigation and preparedness but there is no precise division between these terms

“These are various activities, projects and programs that the communities may identify after assessing and analyzing the risks that they face. These measures are specifically intended to reduce the current risks and prevent future risks to the community”

(ABARQUEZ and MURSHED, 2004 p.6)
A circular chain is suggested below as a useful metaphor of an effective risk reduction strategy. The reasons for this representation are:

1. Each element in the chain has to be strong, since much is demanded from it to contribute to the demanding function of protecting lives, livelihoods and property. A single weak element in a risk reduction strategy, such as a poorly devised and unenforced building code, can constitute a major source of failure.

2. A chain is made up of a collection of interdependent links, in the same manner as CBDRM.

3. A chain is only as strong as its weakest link. In the same manner disaster risk management requires ALL its elements to perform effectively. If one fails the entire safety strategy is put at risk. This is why performance indicators are needed to measure the quality of each element as well as their linkages.

The elements in the chain that relate to CBDRM this seismic protection model are as follows:

**Structural Measures**
- Building Measures, Non-Engineered Structures
- Protection of lifelines, or critical facilities (such as local schools, health centers and buildings of public assembly such as mosques, temples or churches.)

**Non-Structural Measures**
- Public awareness
- Training
- Preparedness Plans
- Community insurance protection
Figure 2. The Chain Model: Links between risk reduction measures in earthquake protection
Aim of Resilience

The aim of CBDRM is to create resilient people living within resilient communities within resilient environments within resilient countries. This is achieved by reducing the:
1. Probability of failure through risk reduction measures;
2. Consequences of failure, in terms of fewer lives lost, fewer injuries and reduced direct and indirect damage;
3. Time needed for recovery; and the
4. Patterns of vulnerability that can develop during the process of reconstruction.

The Nature of Resilient Communities

A resilient community is one that has certain capacities in three phases:

**Phase 1.** The ability to absorb the shocks of hazard impact, so that they do not become disasters (thus to reduce the probability of failure);

**Phase 2.** The capacity to bounce back during and after disaster (thus to reduce the consequences of failure);

**Phase 3.** The opportunity for change and adaptation following a disaster (thus to reduce the time needed for recovery as well as patterns of vulnerability).

**Phase 1: The ability to absorb the shocks of hazard impact (Pre-Disaster)**

Ways have to be found to ensure that a community is strengthened, becoming less fragile and less susceptible to disaster impact. Vulnerability is intimately related to social processes in disaster prone areas and is usually related to the fragility, susceptibility or lack of resilience of the population when faced with different hazards. In addition, ways have to be found to assist a community to survive despite receiving the impact of severe natural hazards. It is important to note the range of elements of a society needs to withstand:

“Local resiliency with regard to disasters means that a locale is able to withstand an extreme natural event without suffering devastating losses, damage,
1. general guidance


• diminished productivity, or quality of life without a large amount of assistance from outside the community

Characteristics of resilience before a disaster

Societies anticipate and reduce disaster impact by adopting many approaches:

- using traditional experience and knowledge (coping mechanisms);
- preparing for any possible hazard by having emergency kits or supplies, (buffer stocks) ready for the event;
- having family or community disaster plans as well as adaptive behavior, (strengthening houses, providing emergency protection of doors and windows from high winds, etc.);
- organizing training courses in first aid, etc.;
- temporary evacuation before an impending flood or cyclone of volcanic eruption;
- permanent relocation of the community away from unsafe sites

Phase 2: The capacity to bounce back during and after disaster (Post-disaster, immediate relief phase)

Ways have to be found to deal with the unexpected and recover rapidly: “The capacity to cope with unanticipated dangers after they have become manifest, learning to bounce back” (WILDAVSKY, 1991:77). Specific factors need to be identified that enable societies to become resilient:

“People continually adapt to crisis, coming up with creative solutions. They prioritize livelihoods and household assets rather than the quick fix. Supporting resilience means more than delivering relief or mitigating individual hazards. Local knowledge, skills, determination, livelihoods, cooperation, access to resources and representation are all vital factors enabling people to bounce back from disaster”

(IFRC/RC, 2004:1).

Characteristics of resilience during and after a disaster

Themes need to be addressed such as integrating recovery plans to link social, physical and economic recovery; following a disaster recovery plan; recognizing the importance of securing a prepared community who know what to do to recover; and taking actions to reduce future vulnerability. Societies cope during and after a disaster by:

- drawing on the support of their community;
- taking stock to determine what they have and what or who is missing;
- restoring communications to facilitate aid distribution;
- mitigating future risks (both psychological as well as material threats);
- recognizing that physical recovery work can combine bereavement therapy with a possible income source; and
- regarding the entire experience as a learning process.
Phase 3: The opportunity for change and adaptation following a disaster (Post-Disaster, longer-term recovery phase)

The opportunity to change, adjust and adapt following a disaster is to find creative ways to increase the resilience of everyone and everything. This will therefore include all actors, communities and their leaders, social systems, local administration, disaster planning and diversified livelihoods. The demanding challenge is to build them into the recovery process by learning the hard lessons gained from failure:

“...The capacity to adapt existing resources and skills to new systems and operating conditions”

(COMFORT, 1999:21)

Characteristics of resilience after a disaster

The following concerns need to be addressed during the recovery process, together they will build far more resilient communities:

• devise a community recovery plan that links social, physical, economic and environmental recovery;
• regard physical recovery work as bereavement therapy and a possible income source and the entire reconstruction experience as a learning process;
• draw on support of their community by being adaptable, flexible and patient;
• where possible ensure that there is local purchase or reconstruction goods using local labor to re-vitalize the damaged local economy;
• recognize the value of a prepared community who know what to do to recover;
• take actions to reduce future vulnerability as the recovery proceeds.
Indicators of a Resilient Community

Resilience is a moving target, and realistically it may not be possible for communities to achieve absolute resilience against hazards or other risk factors. However, communities can still achieve certain level of development, and they can establish institutional arrangements that would enhance their resilience. In order to assess whether a community has achieved a certain level of resilience, we will need to establish some indicators, which if existed would mean that the community had achieved a minimum level of resiliency. A set of indicators is given as below. This set of indicators is by no means comprehensive. You might like to identify more indicators relevant to your local area and community.

- A Community organization;
- A DRR and DP plan;
- A Community Early Warning System;
- Trained manpower: risk assessment, search and rescue, medical first aid, relief distribution, masons for safer house construction, fire fighting
- Physical Connectivity: roads, electricity, telephone, clinics
- Relational connectivity with local authorities, NGOs, etc
- Knowledge of risks and risk reduction actions
- A Community Disaster Reduction Fund to implement risk reduction activities
- Safer House to withstand local hazards
- Safe source/s of livelihoods
GUIDELINES FOR GOOD PRACTICE IN COMMUNITY-BASED DISASTER RISK MANAGEMENT
### Process 1: Undertake Groundwork for CBDRM

**Steps in this Process**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Coalitions of committed local stakeholders are formed and they are the driving force behind the need for CBDRM, and exert pressure on government to devolve power to local levels.</td>
</tr>
<tr>
<td>2.</td>
<td>Responding to this pressure the government is committed to the devolution of powers to local communities. As part of devolving power and authority, all the processes outlined in these guidelines are built into the National Disaster Law supported by National Disaster Legislation.</td>
</tr>
<tr>
<td>3.</td>
<td>A decision is made concerning the scale of community selection, considering how many communities to address and the overall location of communities being considered for selection. This decision is determined by available resources of assisting groups.</td>
</tr>
<tr>
<td>4.</td>
<td>Budget support is assured. This commitment is given before Process 2 commences.</td>
</tr>
</tbody>
</table>

**Key Outcome Indicators**

- A consortium of local stakeholders in areas of high risk exists and maintains pressure on government.
- The Government has devolved powers to local government and through them to local communities. The devolution policy is set out in current legislation.
- Decisions are translated into implementation strategies.
- Budgets have been formulated to support local action and finance is now available at the local level.

**Guidance Notes to Implement CBDRM**

(see cross-cutting issue in the Guidance Notes column)

- **Before sustainable CBDRM can occur it is essential to build political commitment (“buy-in”) from the government. Process 1 describes a possible template for securing such support.**

**Bottom-up Process**

Since CBDRM is essentially a bottom-up process, it follows that any progress will require local stakeholders to initiate and maintain pressure on their government, rather than expect that the institutionalization will naturally evolve from the top.

**Role of Central Government**

Later the central government will need to play a key role in developing legislation, allocating resources such as technical expertise and finance and seeking to develop uniform standards throughout the country.

**Devolve Power to local levels**

It is likely to be relatively easy task to create the conditions needed for CBDRM where governments have devolved powers to local authorities.

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**UNDERTAKE GROUNDWORK FOR CBDRM**

- The aim of the first process is undertake essential groundwork to within Government for CBDRM to occur and flourish.
- These conditions include a political, administrative and financial environment within national and local governments.
<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
</table>
| **5. Patterns of authority to oversee CBDRM have been agreed with local leaders/ coordinators appointed** | Leaders/ coordinators are in place to oversee CBDRM within the National government. Local leaders/ coordinators for CBDRM have been appointed at specific local levels by local governments. | **CROSS-CUTTING ISSUES**

1. **Culture**
   Different countries are at different stages in terms of hazards, risks, and development of CBDRM. Therefore, these Critical Guidelines are developed to be adapted to specific contexts. This is essential when recognizing the rich cultural diversity of countries in terms of political, social and economic systems.

2. **Audience**
   NGOs and Local government officials are the primary users. Others will be considered as secondary users. Therefore the indicators are to be seen from the perspective of NGOs and Local government officials.

3. **Finance**
   Budget support is a common theme to support all the processes outlined in these guidelines. This provision is linked to the priority importance of legislation that establishes the National Disaster Plan since this places a legal obligation on government to enable CBDRM to take place, with financial support. |
<table>
<thead>
<tr>
<th>PROCESS 2</th>
<th>Steps in this Process</th>
<th>Key Outcome Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM (certain notes have been designated as ‘cross-cutting’, with application to all processes. These notes are set in bold type)</th>
</tr>
</thead>
</table>
| SELECT COMMUNITIES FOR CBDRM THROUGH RISK ASSESSMENT | Some steps in the following processes are sequential while others can usefully occur in parallel. | | **The selection of communities for CBDRM is a complex assessment process that involves a range of integrated activities:**  
1. Hazard Mapping;  
2. Vulnerability and Capacity assessment of beneficiary communities  
3. Economic Assessment to measure poverty levels  
4. Review of Capacity of Assisting Groups  
5. Basic Loss Estimation (lives and property loss scenarios)  
6. Acceptance of a given community to engage in CBDRM  

**The Selection of single or multiple sites?**  
One of the early decisions is whether to initiate CBDRM on a single or multiple sites? This decision will relate to extent of funding support, the prior experience of CBDRM and available resources of assisting groups.  

If the entire process is new then it will be prudent for authorities to conduct a single pilot project to gain experience rather than embark on multiple sites simultaneously.  

**Vulnerable Communities**  
The selection of communities is undertaken with a focus on the most vulnerable communities in a given location, providing protection from major hazard threats. This selection process also recognizes the opportunities as well as limitations of assisting groups. |

- The aim of the second process is to locate a vulnerable community, that is also very poor, as an appropriate venue for risk reduction actions.  
- Therefore the selection of communities for CBDRM and risk assessment are integral parts of the same process, since it is not possible to select a community with high patterns of vulnerability without assessing its risks.  
- Part of the assessment process will reveal local capacities that can actively support CBDRM  
- The assessment method will be a fully participatory process to determine the scope and scale of risks facing a community (This process may select many communities rather than a single one, See Guidance Note)  

1. Community risk assessment is a required task in disaster and development legislation.  
   Legislation enacted and observed in government structures and policy including provision for CBDRM  

2. Government approvals are in place for CBDRM to take place in selected communities.  
   Government Approval for CBDRM in the form of instructions and agreements with local government officials and/ or NGO officials.  

3. One person is appointed to manage Process 2. This person is in charge of the Risk Assessment System (see Step 4 below).  
   Official appointed to manage Process 2 (this may be the same person with responsibility for the entire CBDRM in selected localities)  

4. A ‘system’ is established to manage the community risk assessment process. This is based in local government and is linked into a national assessment system. The system contains an integrated set of actors drawn from locally based NGO’s, academics in areas where there are universities, local government officials and community leaders.  
   Risk Assessment System in place  

5. Funding is committed to enable CBDRM through the Risk Assessment System in place.  
   Improved selection method in place  

6. A key policy decision is taken to select communities for CBDRM on a single or multiple sites? This decision is agreed with stakeholders and is then established on this basis.  
   Funding is for the initial ‘set-up process’ of risk assessment, but there is also a commitment to maintain the process continually. (see cross-cutting issue in the Guidance Notes column)  

7. Community based training in place. Improved competencies measured by indicators  
   Expertise for Assessment  
   There are aspects of risk assessment that will need professional expertise in say flood hazard assessment or the assessment of building vulnerabilities and capacities are combined.  
   However, if such skills are not available local knowledge can possibly fill some of the gaps.  
   When hazards are frequent local farmers can be trained and from post training performance and monitoring of trainees improved performance. (see cross-cutting issue in the Guidance Notes column)  

8. A transparent method for the selection of communities is agreed with stakeholders and is agreed with This knowledge is a vital capacity.  
   Community leaders. This knowledge is a vital capacity.  
   Cross-cutting issue in the Guidance Notes column)  

9. Agreements in place for the community leaders.
<table>
<thead>
<tr>
<th>Steps in the following processes are sequential while others can usefully occur in parallel.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELECT COMMUNITIES</strong></td>
</tr>
<tr>
<td>Some steps in the following processes are sequential while others can usefully occur in parallel.</td>
</tr>
<tr>
<td><strong>FOR CBDRM THROUGH</strong></td>
</tr>
<tr>
<td>1. Community risk assessment is a complex assessment process that involves a legislative process in government structures and policy agreements with local government officials and/or NGO officials.</td>
</tr>
<tr>
<td>2. Government approvals are in the form of instructions and agreements with local government officials and/or NGO officials.</td>
</tr>
<tr>
<td>3. Economic Assessment to measure poverty levels.</td>
</tr>
<tr>
<td>4. Review of Capacity of Assisting Groups</td>
</tr>
<tr>
<td>5. Basic Loss Estimation (lives and property loss scenarios)</td>
</tr>
<tr>
<td>6. Acceptance of a given community to engage another process. This person is in charge of the Risk Assessment System (see Step 4 below).</td>
</tr>
<tr>
<td>7. Vulnerable Communities</td>
</tr>
<tr>
<td>8. Community leaders.</td>
</tr>
<tr>
<td>9. Women appointed to participate in assessment process and selection of locations</td>
</tr>
<tr>
<td>10. Community based training in Risk Assessment and CBDRM is in place for officials selecting communities for CBDRM. Evidence of numbers trained and from post training performance and monitoring of trainees improved performance. (see cross-cutting issue in the Guidance Notes column)</td>
</tr>
<tr>
<td>11. Training in place. Improved competencies measured by indicators</td>
</tr>
<tr>
<td>12. A transparent method for the selection of communities is agreed with stakeholders and is then established on this basis.</td>
</tr>
<tr>
<td>13. Selection method in place</td>
</tr>
<tr>
<td>14. Agreements in place for assessments to take place with community leaders</td>
</tr>
<tr>
<td>15. Agreements made</td>
</tr>
</tbody>
</table>

### Assessing Vulnerabilities and Capacities

In undertaking Vulnerability Assessment it is important to also assess Capacities. These social strengths can be seen as the positive antidotes to patterns of acute vulnerability. It has to be recognized that assessment may reveal an element that combines vulnerability and a capacity.

For example, the vulnerability assessment may reveal that there are many elderly people within a community. They may lack mobility that could make them highly vulnerable when rapid movement is needed to evacuate on account of rising flood waters. However, older people may have good memories of past disasters, thus enabling them to communicate vital experience to the younger members of their community. This knowledge is a vital capacity.

### Expertise for Assessment

There are aspects of risk assessment that will need professional expertise in say flood hazard assessment or the assessment of building vulnerability. However, if such skills are not available local knowledge can possibly fill some of the gaps. When hazards are frequent local farmers can be expert in drought assessment, riverboat owners may know about flooding and local builders may know something about earthquakes.
In undertaking social vulnerability and capacity assessment it is important to de-professionalize the process. (Thus, midwives, local religious leaders and school teachers can, when trained make excellent assessors since they may have the confidence of the local community)

### Vulnerability Assessment Criteria

Vulnerability assessment is a multi-level task that considers diverse scales of vulnerability. These range from root causes of vulnerability (such as a lack of good governance, or no public access to political power), to dynamic pressures (such as urbanization or population growth) that translate these causes into unsafe conditions (such as a lack of early warnings of impending hazards or unsafe dwellings). Specific local patterns of vulnerability are identified, including vital links between root causes, pressures and unsafe conditions. Unsafe conditions revealed in this process become targets for action in CBDRM. Data is secured concerning the following:

1. **Elements at Risk**
   - Establishing what the impact of the hazard could have on which elements of a given society (mainly based on factual information gained from people’s past experience)

2. **Vulnerable Conditions**
   - Establishing why the elements are at risk

3. **Pressures**
   - Establishing who or what is creating the vulnerable conditions and how this is taking place.

4. **Underlying Causes**
   - Establishing why vulnerable conditions are created or ignored by the pressures.

<table>
<thead>
<tr>
<th>Process 2</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Risk and Capacity Assessment takes place in full cooperation with communities to gather data on the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Evidence of the hazard threat (the nature of the hazard/ severity/ frequency/ duration/ specific location)</td>
<td>Local hazard maps completed</td>
<td></td>
</tr>
<tr>
<td>b. Evidence of the vulnerability of high risk groups within the community (percentage of high-risk groups etc.)</td>
<td>Groups identified</td>
<td></td>
</tr>
<tr>
<td>c. Evidence of poverty within the community (census data and register of poverty assistance grants etc.)</td>
<td>High poverty levels identified and mapped. Links between vulnerability and poverty correlated</td>
<td></td>
</tr>
<tr>
<td>d. Evidence that the community wishes to fully participate in CBDRM. (This includes a willingness to participate in task forces involved in risk reduction activities etc.)</td>
<td>Agreement made</td>
<td></td>
</tr>
<tr>
<td>e. Evidence of the number of emergent community leaders</td>
<td>Leaders selected</td>
<td></td>
</tr>
<tr>
<td>f. Tangible evidence of the number of people who will be in safer conditions as a result of the risk reduction measures</td>
<td>Numbers calculated and related to maps indicating locations of protected communities</td>
<td></td>
</tr>
<tr>
<td>g. Tangible evidence of the protection of property within the community as a result of risk reduction measures</td>
<td>Location of property calculated and related to maps indicating their location.</td>
<td></td>
</tr>
</tbody>
</table>
In undertaking social vulnerability and capacity assessment it is important to de-professionalize the following:

1. Evidence of the hazard threat
   - Local hazard maps completed
   - (The nature of the hazard/ severity/ frequency/ duration/ specific location)

2. Evidence of the vulnerability
   - Groups identified
   - Range from root causes of vulnerability (such as a lack of good governance, or no public access to the community (percentage of high-risk groups etc.)
   - Specific local patterns of vulnerability are identified, including vital links between root causes, pressures and unsafe conditions. Unsafe conditions revealed the effects of early warnings of impending hazards or unsafe dwellings).
   - Agreement made
   - Data is secured concerning the following:
     - Elements at Risk
       - Task forces involved in risk reduction activities etc.)
     - Pressures
       - in safer conditions as a result of the risk reduction measures
     - Vulnerable Conditions
       - protected communities
     - Underlying Causes
       - created or ignored by the pressures.
     - Underlying Values and Belief Systems
       - Based on VENTON and HANSFORD, (2006)

3. Evidence that the community wishes to fully participate in CBDRM. (This includes a task force involved in risk reduction activities etc.)

4. Data concerning accessibility of the community to assisting bodies

5. Data concerning staff security

**Evidence needed for Site Selection**

The assessment data is mainly quantitative but there are aspects that are qualitative, such as the assessment of risk perceptions as part of vulnerability assessment or the identification of leadership potential within the community.

### CROSS-CUTTING ISSUES

1. **Training at the Community Level**
   - Each of the processes requires community based training. This may in part be fused with the training of staff from the assisting groups. Throughout these guidelines references are made to this training activity in the ‘process to be followed’ set in the column describing performance indicators. However, it is vital to recognize that all the training described can take place within separate modules in the same course.

2. **Gender Awareness and Action**
   - Evidence of disaster impact has repeatedly drawn attention to the vulnerability of women and small children, often in their care. Additionally, women play a dominant role in livelihood security in many societies. Therefore each of the processes will need to recognize the significance of gender awareness, as well as specific provision for women and small children in assessment, planning and implementation.

<table>
<thead>
<tr>
<th>h. Data concerning accessibility of the community to assisting bodies</th>
<th>Information available</th>
</tr>
</thead>
</table>
i. Data concerning staff security | Information available |

| 11. Community risk assessment is undertaken with the direct involvement of community members, and other stakeholders. | Full cooperation took place |
| 12. Perceptions of multiple groups in the community must be considered about the risks and risk reduction measures. | Information gathered from risk assessment |
| 13. Local knowledge about past hazards, vulnerable groups, and capacities and coping mechanisms is taken into account in the conduct of risk assessment. | Information gathered from risk assessment |
| 14. Risk assessment integrates the results of scientific knowledge, secondary data and community perceptions. | Information gathered from risk assessment |
| 15. A baseline is determined for each location. This will be obtained from the participatory risk assessment exercise described in this process. Baselines will be a qualitative and quantitative record of the status of the community and its location prior to CBDRM taking place. This is essential in order to measure progress. | Baseline Survey completed. Typically this can include:
  - Links between vulnerability and poverty are determined.
  - Poverty conditions revealed in this process are targets for action in CBDRM
  - Specific local capacities (including community leaders) are identified.
  - Community strengths revealed in this process become vital human resources for action in CBDRM |
<table>
<thead>
<tr>
<th>PROCESS 2</th>
<th>continuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Number and location of High Risk Communities are identified for specific monitoring and CBDRM</td>
<td></td>
</tr>
<tr>
<td>- Training courses are in progress to equip local community members to assess risks and undertake basic risk reduction measures (how many courses, review of evaluations, monitoring and evaluation of training effectiveness)</td>
<td></td>
</tr>
<tr>
<td>- Risk and capacity assessment brings valuable side benefits, (other than risk assessment) to the community, such as:</td>
<td></td>
</tr>
<tr>
<td>- assessment skills;</td>
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<tr>
<td>- a better understanding of community resources/ social dynamics;</td>
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<tr>
<td>- improved leadership and community solidarity;</td>
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<tr>
<td>- enhanced levels of social motivation.</td>
<td></td>
</tr>
<tr>
<td>- Economic vulnerability assessment provides valuable information to develop small scale business continuity plans to ensure that the micro and macro economies can survive disaster impact.</td>
<td></td>
</tr>
<tr>
<td>- The information gained from the risk assessment, is set in an appropriate format to assist in the development of effective risk</td>
<td></td>
</tr>
</tbody>
</table>
2. guidelines for good practice in community-based disaster risk management

- Number and location of High Risk Communities are identified for specific monitoring and CBDRM
- Training courses are in progress to equip local community members to assess risks and undertake basic risk reduction measures (how many courses, review of evaluations, monitoring and evaluation of training effectiveness)
- Risk and capacity assessment brings valuable side benefits, (other than risk assessment) to the community, such as:
  - assessment skills;
  - a better understanding of community resources/social dynamics;
  - improved leadership and community solidarity;
  - enhanced levels of social motivation.
- Economic vulnerability assessment provides valuable information to develop small scale business continuity plans to ensure that the micro and macro economies can survive disaster impact.
- The information gained from the risk assessment, is set in an appropriate format to assist in the development of effective risk reduction measures.
- Risk assessment data is located in a setting where it will not be lost.
- Risk assessment data is fully backed up so that if data is mislaid an alternative source is available.
- Risk data is posted in a simple accessible format in public areas so that the entire population can see who or what is ‘at-risk’ (for example flood levels are marked on telegraph poles, risk maps are sited on notice boards in key buildings such as schools, police stations, mosques, churches etc.)
<table>
<thead>
<tr>
<th>PROCESS 3</th>
<th>Steps in this Process</th>
<th>Key Outcome Indicators</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>Some steps in the following processes are sequential while others can usefully occur in parallel.</td>
<td>(measuring change in individuals and community life)</td>
<td>Building confidence with the selected communities is essential from the outset of CBDRM. The process is aided when working with groups with long-standing links with the community in question. It is also vital for the relationship to be in the form of an informal contract where the beneficiary community, as well as the assisting group knows what they can expect of the assisting group and what they are expected to contribute and vice-versa.</td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>1. Funding is committed to enable Process 3 to take place</td>
<td>Funding allocated</td>
<td></td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>2. A key policy decision is taken to achieve full transparency concerning proposed actions.</td>
<td>Evidence that policy is implemented</td>
<td></td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>3. All information concerning risks to the local community is made freely available, with data posted on public building notice boards or within public buildings.</td>
<td>Data is posted</td>
<td></td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>4. Key local leaders are identified to play vital roles in relation to external assisting groups (see cross-cutting issue in the Guidance Notes column)</td>
<td>Leaders recognized</td>
<td></td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>5. An information gathering process is established to enable relevant information to be collected to understand the nature, needs and resources of target communities.</td>
<td>Process in place, and monitored</td>
<td></td>
</tr>
<tr>
<td>BUILD RAPPORT AND UNDERSTAND THE COMMUNITY</td>
<td>6. Community based training is provided in building rapport and understanding communities. A key element of this training is in attitudinal and behavioral change on behalf of both the community as well as within staff from assisting groups.</td>
<td>Training takes place, (number of courses, number of people who attended, impact of training on development of attitudinal and behavioral change evaluated)</td>
<td></td>
</tr>
</tbody>
</table>

CROSS-CUTTING ISSUES

1. Leadership
   - The example of the leaders/managers of the assisting group is likely to be of paramount importance in determining the level of rapport and trust.

2. Build Trust
   - Recognize the importance of the list of actions to build trust:
     - Living in the community
     - Being transparent
     - Participating in the life of a community
     - Listening to local people
     - Total impartiality in maintaining contact with varied caste groups and residents with income variables
   - Performing local tasks

3. Understand the Community
   - Recognize the importance of the following factors in community dynamics. Understanding:
     - social groups;
     - cultural arrangements;
     - economic activities;
     - risk perceptions;
<table>
<thead>
<tr>
<th>Steps in this Process</th>
<th>Evidence of understanding of the community by assisting group staff is found in their awareness and respect for local traditions and living patterns that may enhance or constrain risk reduction initiatives.</th>
</tr>
</thead>
</table>
| 7. External assisting groups decide to live within the community for the duration of the project, and to participate in the daily life of that community. | Confidence and trust are expressed in various ways, including:  
- Social surveys and/or community meetings to assess the level of confidence and mutual trust between communities and external assisting groups.  
- Existence of joint task forces to undertake CBDRM drawn from local communities and external assisting groups.  
- Development of public spirit and wider social concern than family links.  
- Good working relationships between employers and employees. Increased productivity, reduced absenteeism and fewer disputes.  
- Improved sanitary conditions and refuse clearance within the settlement.  
Training in place. Improved competencies measured by indicators.  
Selection method in place  
Agreements made.  
- Development of community facilities, such as schools and community buildings.  
- Community care for highly vulnerable groups-elderly/disabled/etc.  
Assess numbers of external staff living within communities where CBDRM is taking place.  
- spatial characteristics;  
- vulnerable households and groups. |
<p>| 8. Through varied means, seek to build confidence and mutual trust with communities where CBDRM is taking place. | Evidence of the levels of rapport will be apparent when local residents begin to take actions to reduce their risks or those of their neighbors or colleagues. Such actions demonstrate the scale of local learning growing from constructive and active relationships based on mutual trust and genuine friendship between members of the community and assisting groups. |</p>
<table>
<thead>
<tr>
<th>PROCESS 4</th>
<th>Steps in this Process</th>
<th>Key Outcome Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM (certain notes have been designated as ‘cross-cutting’, with application to all processes. These notes are set in bold type)</th>
</tr>
</thead>
</table>
| PARTICIPATORY DISASTER RISK MANAGEMENT PLANNING                                                                 |                                                                                      |                                                                                     | CROSS-CUTTING ISSUES  

Shared Values  
It is important to recognize that the planning process is not just a mechanical set of actions. It is based on a shared set of values and convictions of the community that are a common requirement across all the processes.  
Thus, if there are tensions within the community these will inhibit the planning process, or may even prevent plans being realized. This shows the importance of conflict resolution initiatives and inspired leadership. It also emphasizes the importance of training to strengthen attitudes and promote behavior that will serve the entire community, not for the pure self-interest of individual stakeholders. |
| 1. The commitment of local government to CBDRM is assured, with adequate budget support in place as required in disaster legislation. | Agreement with local government and Funding allocated |                                                                                     |
| 2. One person is appointed to manage Process 4. This person is in charge of the Planning System as described below. | Manager appointed |                                                                                     |
| 3. A ‘system’ is established to undertake the disaster risk management planning process. This is based in local government and is linked into a national assessment system. The planning system is based on the active participation of an integrated set of actors drawn from local NGO’s, academics in areas where there are universities, local government officials and community leaders. | The involvement of the community in the planning process is indicated in the presence of community representatives in all the groups making planning decisions on risk reduction. |                                                                                     |
| 4. The risk management planning process is undertaken with the direct involvement of stakeholders and the affected community. Planning covers all key sectors: social, economic, physical and environment. | Social Planning will often include community leaders in the full planning process. For example, the leaders of business and leaders of local community organizations such as schools, health centers, sports clubs and religious organizations. |                                                                                     |
| 5. Using the risk assessment data collected in Process 2 a ‘system’ is established to facilitate participatory disaster risk management planning. This defines roles for the required steps | A comprehensive community disaster plan exists |                                                                                     |
### Process 4: Steps in this Process

<table>
<thead>
<tr>
<th>Key Outcome Indicators</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>(measuring change in individuals and community life)</td>
<td>(certain notes have been designated as ‘cross-cutting’, with application to all processes. These notes are set in bold type)</td>
</tr>
</tbody>
</table>

#### Particpatory Disaster Risk Management Planning

1. The commitment of local government to CBDRM is assured, with adequate budget support in place as required in disaster legislation.

2. One person is appointed to manage Process 4. This person is in charge of the Planning System as described below.

3. A ‘system’ is established to undertake the disaster risk management planning process. This is based in local government and is linked into a national assessment system. The planning system is based on the active participation of an integrated set of actors drawn from local NGO’s, academics in areas where there are universities, local government officials and community leaders. The involvement of the community in the planning process is indicated in the presence of community representatives in all the groups making planning decisions on risk reduction.

4. The risk management planning process is undertaken with the direct involvement of stakeholders and the affected community. Planning covers all key sectors: social, economic, physical and environmental. Social Planning will often include community leaders in the full planning process. For example, the leaders of business and leaders of local community organizations such as schools, health centers, sports clubs and religious organizations.

5. Using the risk assessment data collected in Process 2 a ‘system’ is established to facilitate participatory disaster risk management planning. This defines roles for the required steps. A comprehensive community disaster plan exists.

6. These detailed plans for risk reduction are created in participation with the affected communities (see cross-cutting issue in the Guidance Notes column)

   - This community Disaster Evacuation Plan is tested every six months in a community drill exercise (and this will occur before a flood or cyclone season)
   - The existence of firm plans for risk reduction inspires local business confidence to operate in the area.
   - The first stage indicators of the planning process are the detailed plans of both structural and non-structural risk reduction.
   - The second stage indicators of the planning process are the actual measures, and their effectiveness

7. Community based training is provided in Participatory Disaster Risk Management Planning

   - Training takes place, (number of courses, number of people who attended, impact of training on development of attitudinal and behavioral change evaluated)

8. All parties propose risk reduction measures based on the following:

   - their vision of a prepared and resilient community;
   - their agreement to a level of acceptable risk (for example, what level of flood protection, from a seventy, one hundred of five hundred return flood?)
   - their decision concerning the risks they face. Can they be prevented, reduced, transferred or lived with?

   - The community has accepted CBDRM and its implications. Evidence of their involvement, commitment and general support can be found qualitatively in the level of community ‘spirit’ and ‘ownership’ of the project and in quantitatively in such facts as
     - how many projects are in progress in what locations?
     - protection of specific numbers of people
     - a specific record of protected property.
• their own capacities, as well as resources that they can secure from outside their community
• evidence is collected concerning the existence and effectiveness of participatory disaster risk management planning.
### PROCESS 5

**COMMUNITY-MANAGED IMPLEMENTATION OF RISK REDUCTION MEASURES.**

- The aim of the fifth process is to effectively implement a program of CBDRM within a selected community (or communities).

<table>
<thead>
<tr>
<th>Steps in this Process</th>
<th>Key Outcome Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM (certain notes have been designated as 'cross-cutting', with application to all processes. These notes are set in bold type)</th>
</tr>
</thead>
</table>
| 1. Funding is committed to enable Process 5. to take place | Funding allocated | **Realistic Intentions**
It is important to set realistic targets that stand a reasonable chance of being achieved. Therefore some of the performance indicators in this section are proposing that 75% of various elements are protected over a five year period of implementation, rather than 100%. However, the monitoring of performance after say two years will indicate the state of progress and targets may then be expanded or contracted. |
| 2. One person is appointed to manage Process 5. This person is in charge of the Implementation Process as described in this section. | Manager appointed | **CROSS-CUTTING ISSUES**
**Assessment Bias**
There is a bias in the use of performance indicators that concerns the ease of measuring some aspects of risk reduction, (such as the construction of safe dwellings) in contrast to the difficulty in measuring less tangible measures, (such as enhanced perception of risk within a community) |
| 3. Community-based training is provided in Community Managed Implementation | Training takes place, (number of courses, number of people who attended, impact of training on development of attitudinal and behavioral change evaluated) | |
| 4. A baseline is determined in each location. This will be obtained from the risk assessment exercise outlined in Process 2. Baselines will be a qualitative and quantitative record of the status of the community and its location prior to CBDRM taking place. This is essential in order to measure progress. (see the list of information needed in a baseline in Process 2 Column 2) | The Baseline Report documents the status of the community. | |
5. Evidence is collected concerning the existence and effectiveness of CBDRM. This includes the following:

- Mechanisms are in place to ensure management of the local level risk reduction measures by the community.
- A community based organization (CBO) is established to implement both structural and non-structural risk reduction actions.
- Implementation of hazard mitigation measures, embankments, flood diversion channels, bridges, water harvesting tanks, etc.
- Implementation of vulnerability reduction measures,
- Implementation of emergency preparedness measures, drills, early warning, evacuation, first aid, search and rescue etc.
- Implementation of recovery operations.
- Management issues involved here include identification and arrangement of appropriate inputs (experts, equipment, information, services, consultations with stakeholders, etc.)
- Links are in place with central government in relation to the revision and enforcement of new building bye-laws and land-use planning controls. These are needed to cover public and commercial buildings as well as the dwellings of middle-class home owners.

A safer environment is available to the target groups, their property and livelihoods. This is measured in the following quantitative manner:

- **Lives Protected**
  - Aim for a 20% reduction in deaths and serious injuries over a five year period as a result of effective CBDRM.
  - Number of individuals and families living in a specific number of stated locations whose lives are protected.
  - Number of ‘high-risk’ groups who have secured special attention in CBDRM with specific measures for their protection
  - Stress levels of target groups are reduced due to decreased losses from disasters. This will be indicated in multiple aspects of social life; e.g. reduction in quarrel, shouting at each other, reduction in stress related disease etc.

- **Livelihoods Protected**
  - Aim for the protection of 75% of livelihoods as a result of risk reduction measures over a five year period.
  - The number of livelihoods protected
  - Livelihood sources of the target groups strengthened as a result of reduction in negative impact by disasters.

- **Indicators concerning how the local economy is protected, (for example-through economic diversification)**
- **Income of target group is increased due to avoidance of shocks caused by disasters.**

- **Property Protected**
  - Aim for a 20% reduction of property losses over a five year period as a result of effective CBDRM.
  - Aim for the protection of 75% of all workplaces and factories (retrofit) over a five year period (for example, building them on safe land with disaster contingency plans for business continuity)
  - Aim for the protection of existing dwellings (retrofit) at the rate of 5% per annum, or 25% over a five year period
  - The number of business enterprises protected.

- **Critical Facilities Protected**
  - Protection of all critical facilities, such as schools, health centers, police stations and buildings of multiple assembly such as mosques, churches, cinemas, basic services such as water, electricity, telephones etc. over a five year period.
  - Number of critical facilities protected, (schools, public buildings, water supply etc.)
government in relation to the revision and enforcement of new building bye-laws and land-use planning controls. These are needed to cover public and commercial buildings as well as the dwellings of middle-class homeowners.

- A system is in place to support low income families to improve the safety of their homes though building extensionists who offer on the job training to local home owners and builders in ways to improve the safety of dwellings.

negative impact by disasters.

- Indicators concerning how the local economy is protected, (for example-through economic diversification)
- Income of target group is increased due to avoidance of shocks caused by disasters.

- **Property Protected**
  - Aim for a 20% reduction of property losses over a five year period as a result of effective CBDRM.
  - Aim for the protection of 75% of all workplaces and factories (retrofit) over a five year period (for example, building them on safe land with disaster contingency plans for business continuity)
  - Aim for the protection of existing dwellings (retrofit) at the rate of 5% per annum, or 25% over a five year period
  - The number of business enterprises protected.

- **Critical Facilities Protected**
  - Protection of all critical facilities, such as schools, health centers, police stations and buildings of multiple assembly such as mosques, churches, cinemas, basic services such as water, electricity, telephones etc. over a five year period.
  - Number of critical facilities protected, (schools, public buildings, water supply etc.)
<table>
<thead>
<tr>
<th>PROCESS 6</th>
<th>Steps in this Process</th>
<th>Key Outcome Indicators</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARTICIPATORY MONITORING AND EVALUATION</td>
<td>Funding is committed to enable Process 6 to take place</td>
<td>Funding allocated</td>
<td>(certain notes have been designated as ‘cross-cutting’, with application to all processes. These notes are set in bold type)</td>
</tr>
<tr>
<td>• The aim of the sixth process is to measure progress with risk reduction in order to take actions to progressively improve the process</td>
<td>Mechanisms are in place to continually monitor risks, noting changing hazards, vulnerabilities and capacities.</td>
<td>Risk Assessment data</td>
<td></td>
</tr>
<tr>
<td>• The community and all related stakeholders devise a monitoring and evaluation system as a shared task in order to measure progress, and take appropriate actions in the light of emerging findings.</td>
<td>Mechanisms are in place to continually monitor the planning process in a dynamic system.</td>
<td>Monitoring and Evaluation systems in place</td>
<td></td>
</tr>
<tr>
<td>1. Funding is committed to enable Process 6 to take place</td>
<td>Monitor the performance of individuals during their training. Measure enhanced performance by staff who have participated in training courses. Review the performance of the trainers and the training program by conducting in-house evaluations of the performance of staff under simulation conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Mechanisms are in place to continually monitor risks, noting changing hazards, vulnerabilities and capacities.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mechanisms are in place to continually monitor the planning process in a dynamic system.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. Community based training is provided in Participatory Monitoring and Evaluation.</td>
<td></td>
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</tr>
<tr>
<td>5. Evidence is collected concerning the existence and effectiveness of Participatory Monitoring and Evaluation.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Steps in this Process</td>
<td>Key Outcome Indicators</td>
<td></td>
<td></td>
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<tr>
<td>----------------------</td>
<td>------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Evidence is collected concerning the existence and effectiveness of Participatory Monitoring and Evaluation.</td>
<td>Measure the level of enhanced awareness and knowledge of hazards and safety measures within the community.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The monitoring and evaluation of risk reduction measures will strengthen accountability and improve future actions. This will enhance confidence in the business community and in investors in the community.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>All risk reduction projects are designed with built in monitoring and evaluation procedures</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Project evaluation using internal and external evaluators.</td>
<td></td>
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</tr>
</tbody>
</table>

The community and all related stakeholders devise a monitoring and evaluation system as a shared task in order to measure progress, and take appropriate actions in the light of emerging findings.
### OUTCOME 1

**Steps towards this Outcome**

<table>
<thead>
<tr>
<th>Key Outcome Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A community based organization exists to promote CBDRM. The evolution of this organization requires the following actions and processes:</td>
<td><strong>Existing groups or New Groups?</strong></td>
</tr>
</tbody>
</table>
| • Identify social, religious and other natural leaders in the community. Involve them in the risk assessment, action planning and training process. | Care should be taken in order to avoid creating new groups, unnecessarily. First priority should be to strengthen the capacity of existing groups or organizations on CBDRM.  
For example in the case of Cambodia, Lao and Vietnam mass organizations are potential groups; e.g. the women union, youth union, farmers union, elderly union etc. In other communities elected community leadership may exist. Efforts should be made to strengthen their capacity on disaster risk reduction. |
| • Identify any existing social, economic, religious or other groups during the rapport building and community risk assessment stages | However, existing groups might have narrow focus in terms of membership or programming or may not represent the most vulnerable groups. Efforts should be made to expand or enlarge the existing groups in order to include the most vulnerable groups (e.g. elderly, children, poorest of the poor) and ensure gender representation. |
| • If a group exists that can assume CBO tasks then expand the group to ensure representation of various vulnerable social groups and encourage them to form a small sub-group to promote CBDRM. (see Guidance Note in Column 5) | It will be useful to develop sub-groups of the community based organization for specific tasks; e.g. search and rescue, evacuation, first aid, communications, early warning, public awareness, mitigation, etc. In this way skills of different sub-groups can be developed on specific aspects. |
| • In the absence of an existing group that can be expanded, form a CBO through consultations with community members. This can be done during the risk assessment, action planning or training activities. It will be important to ensure the representation of all vulnerable groups in the CBO. | |
| New CBO formed. The indicators of its effective functioning are:  
• Co-operation amongst target groups is enhanced for collective action on disaster risk reduction through organized mechanisms.  
• Decisions on disaster risk reduction activities are made by consensus by the CBO members. | |

**COMMUNITY-BASED ORGANIZATION (CBO)**

- The aim of the first outcome is to establish, strengthen and sustain an organizational mechanism at community level to implement CBDRM activities. This CBO will be comprised upon local residents in the community.
2. Guidelines for good practice in community-based disaster risk management

Outcome 1

Steps towards this Outcome

Key Outcome Indicators (measuring change in individuals and community life)

Guidance Notes to Implement CBDRM

COMMUNITY-BASED ORGANIZATION (CBO)

- The aim of the first outcome is to establish, strengthen and sustain an organizational mechanism at community level to implement CBDRM activities. This CBO will be comprised of local residents in the community.

- A community-based organization exists to promote CBDRM. The evolution of this organization requires the following actions and processes:

  - Existing groups or New Groups?
    - Care should be taken in order to avoid creating new groups, unnecessarily. First priority should be to strengthen the capacity of existing groups or organizations on CBDRM.
    - For example, in Cambodia, Laos, and Vietnam, mass organizations are potential groups; e.g., the women union, youth union, farmers union, and elderly union.
    - In other communities, elected community leadership may exist. Efforts should be made to strengthen their capacity on disaster risk reduction.
    - However, existing groups might have narrow focus in terms of membership or programming or may not represent the most vulnerable groups. Efforts should be made to expand or enlarge the existing groups in order to include the most vulnerable groups (e.g., elderly, children, poorest of the poor) and ensure gender representation.
    - It will be useful to develop sub-groups of the community-based organization for specific tasks; e.g., search and rescue, evacuation, first aid, communications, early warning, public awareness, mitigation, etc. In this way, skills of different sub-groups can be developed on specific aspects.

  - Identify social, religious, and other natural leaders in the community. Involve them in the risk assessment, action planning, and training process.

Indicators of effectiveness are as follows:

- Leaders recognized
- Groups identified
- Group identified and role expanded
- New CBO formed. The indicators of its effective functioning are:
  - Co-operation amongst target groups is enhanced for collective action on disaster risk reduction through organized mechanisms.
  - Decisions on disaster risk reduction activities are made by consensus by the CBO members.

The CBO management includes the following:

- Criteria and procedures for membership in the CBO are established.
- Functions of the CBO are defined.
- CBO is registered with the government to become eligible to receive funding.
- CBO holds regular meetings to discuss disaster risks, vulnerabilities, and identify actions for disaster risk management.
- Training opportunities exist for group members in varied aspects of CBDRM organization.
- Gender & social relations amongst target groups are based upon equality in the CBO and its sub-committees.
- Assistance requests from target groups to the local authorities and other agencies are increased for disaster preparedness and risk reduction.
<table>
<thead>
<tr>
<th>OUTCOME 2</th>
<th>Steps towards this Outcome</th>
<th>Key Impact Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNITY DISASTER</td>
<td></td>
<td>Indicators of effectiveness are as follows:</td>
<td>Seed Money</td>
</tr>
<tr>
<td>RISK REDUCTION FUND</td>
<td></td>
<td>• Funding mechanism in place,</td>
<td>Seed money will be needed to start the fund. This can come from an NGO initiative, the local government or from private sector philanthropy. Or the CBO might seek a loan from a bank. Or it could come from the contributions.</td>
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<tr>
<td></td>
<td></td>
<td>• A community level fund is established to support disaster preparedness and response measures; (e.g. public awareness, community early warning system, drills and storage of relief items)</td>
<td>It is important to consider the capacity of the community organization to absorb and manage the money. Therefore, providing large amounts of money might not be productive at the start.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Criteria on the use of community fund established by the CBO with inputs from the vulnerable social groups.</td>
<td>Criteria for allocation and disbursement of fund</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community fund is supported with contributions from the vulnerable and less vulnerable social groups, and from other sympathizers and stakeholders.</td>
<td>The CBO will have to develop a criteria based upon the local conditions, the nature of the hazards, the requirements of the community members. Criteria should be developed through consultation with vulnerable groups and CBO members. Few considerations to develop criteria are as following.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CBO could mobilize funds on a periodical basis from different sources or through organizing local fund raising campaigns.</td>
<td>• Fund will be provided to those vulnerable groups who may not be able to access funding otherwise from existing borrowing mechanisms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CBO staff are trained in fund management, before the establishment of the fund.</td>
<td>• Fund will be used for hazard mitigation, vulnerability reduction or capacity building activities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CBO operates the account.</td>
<td>• A repayment plan will be submitted by the borrower.</td>
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<tr>
<td></td>
<td></td>
<td>• CBO staff are trained on financial management</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Community fund is managed by the community based organization.</td>
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<td></td>
<td></td>
<td>• Criteria for allocation agreed</td>
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<tr>
<td></td>
<td></td>
<td>• Staff trained on financial management</td>
<td></td>
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<td></td>
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<td>• Report of the community members contributions.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Reports on contributions from other sources</td>
<td></td>
</tr>
<tr>
<td><strong>Steps towards this Outcome</strong></td>
<td><strong>Key Impact Indicators</strong> (measuring change in individuals and community life)</td>
<td><strong>Guidance Notes to Implement CBDRM</strong></td>
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<tr>
<td><strong>OUTCOME 2</strong></td>
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</tr>
<tr>
<td><strong>COMMUNITY DISASTER RISK REDUCTION FUND</strong></td>
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<tr>
<td>The aim of this second outcome is to ensure availability of resources for the implementation of community disaster risk reduction and preparedness measures.</td>
<td>Indicators of effectiveness are as follows:</td>
<td></td>
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</tr>
<tr>
<td>Seed money will be needed to start the fund. This can come from an NGO initiative, the local government or from private sector philanthropy. Or the CBO might seek a loan from a bank. Or it could come from the contributions. It is important to consider the capacity of the community organization to absorb and manage the money. Therefore, providing large amounts of money might not be productive at the start.</td>
<td>Criteria for allocation and disbursement of fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The CBO will have to develop a criteria based upon the local conditions, the nature of the hazards, the requirements of the community members. Criteria should be developed through consultation with vulnerable groups and CBO members. Few considerations to develop criteria are as following.</td>
<td></td>
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<tr>
<td>• Fund will be provided to those vulnerable groups who may not be able to access funding otherwise from existing borrowing mechanisms.</td>
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<tr>
<td>• Fund will be used for hazard mitigation, vulnerability reduction or capacity building activities.</td>
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<tr>
<td>• A repayment plan will be submitted by the borrower.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The local government is committed to create a financial mechanism to strengthen community based disaster risk reduction.</td>
<td>Funding mechanism in place, funding mobilized by the CBO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A community level fund is established to support disaster preparedness and response measures; (e.g. public awareness, community early warning system, drills and storage of relief items) Criteria on the use of community fund established by the CBO with inputs from the vulnerable social groups.</td>
<td>Community fund is managed by the community based organization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBO operates the account. CBO staff are trained in fund management, before the establishment of the fund.</td>
<td>Criteria for allocation agreed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff trained on financial management</td>
<td>Community fund is supported with contributions from the vulnerable and less vulnerable social groups, and from other sympathizers and stakeholders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Report of the community members contributions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBO could mobilize funds on a periodical basis from different sources or through organizing local fund raising campaigns.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reports on contributions from other sources</td>
<td><strong>Criteria agreed for disbursement of funds to vulnerable people.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reports on the fund management and utilization are discussed with community members.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decisions on the use of fund are taken by the CBO on the basis of a defined criteria and through consultation with vulnerable groups.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OUTCOME 3</td>
<td>Steps towards this Outcome</td>
<td>Key Impact Indicators (measuring change in individuals and community life)</td>
<td>Guidance Notes to Implement CBDRM</td>
</tr>
<tr>
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<td>----------------------------------</td>
</tr>
<tr>
<td>COMMUNITY HAZARD, VULNERABILITY, CAPACITY MAP (HVCM)</td>
<td>• To form the basis for community based disaster risk reduction and community learning.</td>
<td>Indicators of effectiveness are as follows:</td>
<td>The purpose of community based mapping exercise is:</td>
</tr>
<tr>
<td></td>
<td>• The government and NGOs are committed to support the production of community HVCA maps periodically.</td>
<td>• Local hazard maps completed</td>
<td>i) to raise awareness of community members about risks, preparedness,</td>
</tr>
<tr>
<td></td>
<td>• Community maps, indicating the hazards, vulnerabilities and capacities to reduce disaster risks and respond to disasters is available.</td>
<td>• High Risk Vulnerable Groups identified</td>
<td>ii) to encourage community level action planning,</td>
</tr>
<tr>
<td></td>
<td>• Community HVCA map is prepared by the community based organization with the active participation of different vulnerable groups.</td>
<td>• High poverty levels identified and mapped. Links between vulnerability and poverty correlated</td>
<td>iii) to develop community capacity for risk reduction.</td>
</tr>
<tr>
<td></td>
<td>• HVCA map is placed at public places for the information of community members; e.g. temples, mosques, churches, schools etc.</td>
<td>• More Individuals and families actively seek information on hazards, vulnerabilities and disaster preparedness and risk reduction from CBO and local authorities/ NGOs.</td>
<td>Therefore, the participation of multiple groups is essential.</td>
</tr>
<tr>
<td></td>
<td>• HVCA exercise is done on a periodical basis, preferably before the start of hazard season; e.g. monsoon, rainy-season, El-Niño, drought periods etc.</td>
<td>• Risk Assessment data on public display</td>
<td>Assistance can be sought from technical experts either within the community or from the commune, municipal or district levels in order to maintain technical accuracy of the HVCA maps.</td>
</tr>
</tbody>
</table>
### OUTCOME 3

**Steps towards this Outcome**

*Key Impact Indicators* (measuring change in individuals and community life)

**Guidance Notes to Implement CBDRM**

<table>
<thead>
<tr>
<th>COMMUNITY DISASTER RISK MANAGEMENT PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure collective action by community for disaster risk reduction through mobilization of local resources.</td>
</tr>
</tbody>
</table>

- Local government is committed to support the production of community disaster risk management plans periodically.
- Funds are allocated for the implementation of the plan.
- A disaster risk reduction and response plan is formulated by the community based organization.
- The plan is developed with active participation of various vulnerable groups in the community.
- The plan describes the hazards, vulnerabilities, and capacities of different groups and the community as a whole.
- The plan provides details on risk reduction measures related to hazards and vulnerabilities.
- It provides description of responsibilities, resources and time frame for the implementation of risk reduction measures.
- Risk reduction planning is organized on a periodical basis, preferably every year before the hazard season.

<table>
<thead>
<tr>
<th>Indicators of effectiveness are as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Income of target groups is increased due to reduction in and control over shocks caused by disasters.</td>
</tr>
<tr>
<td>• Consumption of target groups on re-productive activities is increased; e.g. purchase of livelihood equipment, machinery, raw materials (cows, buffalos, boats, tractors)</td>
</tr>
<tr>
<td>• Consumption of target groups on living facilities and needs is increased; e.g. clothes, transport, food, TV, fridge, fans, air-cons etc.</td>
</tr>
<tr>
<td>• Consumption of target groups on child education and family health is enhanced.</td>
</tr>
</tbody>
</table>

**Planning as a tool**

Focus of the exercise should be on planning as a tool for risk reduction, preparedness and response, rather than on the production of a document as the output.

Exercise should provide opportunity to everybody in the community to share their perceptions, concerns, and views.

It is good to have a small written plan, which could be referred to for action. The plan must be available to everybody in the community for their information.
### OUTCOME 5

**Steps towards this Outcome**

<table>
<thead>
<tr>
<th>CBO TRAINING SYSTEM</th>
<th>Key Impact Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
</table>
| • To enhance the technical and organizational capability of the community based organization and its committees on CBDRM first aid, search and rescue, evacuation management, relief operations management and emergency shelter management, damage and needs assessment, and safer construction | • The government is committed to establish a community training center at the community, sub-district or district levels drawing upon the resources of local NGOs, academic institutions, government officials and community level leaders and experts. | Specialized agencies  
The involvement of specialized agencies in the community training center will be important; e.g. fire services, police, Red Cross, hospitals, engineering institutes, research centers, universities in order to draw upon the expert knowledge from multiple sectors.  
The community training center should provide training to various professionals in the community to enhance their skills regarding disaster risk reduction. For example:  
• masons’ training on safer construction,  
• para-medics training on post-disaster first aid, search and rescue,  
• teachers’ training on community awareness,  
• farmers/fishers’ training on early warning etc. |
| • Funds are allocated for the community training center for disaster risk reduction. | • Construction of the community disaster reduction training center completed  
• Staff hired | |
| • Local government officials are trained on community based disaster risk reduction and on training of trainers. | • Funds allocated in local government budget | |
| • Training manuals on community based disaster risk reduction training are available in the local language for use at the center. | • Report of the training | |
| • Periodical Training is conducted for community based organization, its sub-committees and common community members. | • Copy of the training manuals | |
| • Periodical review of the effectiveness and application of training is conducted through individual and household surveys. | • Copy of the community training calendar | |
| • New training is designed upon the basis of training needs assessment in the community. | • Community survey reports | |
| | | |

### OUTCOME 6

**Steps towards this Outcome**

<table>
<thead>
<tr>
<th>Community Drills System</th>
<th>Key Impact Indicators (measuring change in individuals and community life)</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
</table>
| • The aim of this outcome is to ensure the readiness of communities for disaster response. | Community level drills are the key for the sustainability of community level preparedness action.  
Encourage and emphasize the use of local resources for the conduct of drills.  
If possible invite and involve the local/commune government officials in the conduct of community drills. | |
<p>| • Local government and community organization are committed to hold periodical community drills. | More cooperation exists at the family and community levels for mutual assistance for disaster response; e.g. assistance to neighbours; e.g. evacuation, search/rescue, lending money, sharing labour for re-construction, assistance to family members in food storage, house level raising, evacuation etc. | |
| • People follow agreed procedures and steps in emergency situations; e.g. immediate evacuation after hearing the warning, following agreed route, reaching agreed destination etc. | Loss of life is reduced due to enhanced emergency response assistance. | |
| • Funds are allocated by the local government and community based organization for conduct and management of drills. | Periodical community drills are organized by the community based organization. | |
| • Periodical community drills are organized by the community based organization. | Train the community organization on conduct of community drills. | |
| • Train the community organization on conduct of community drills. | Community drills on evacuation, first aid, search and rescue are held on a periodical basis by the community based organization. | |
| | Local governments’ emergency response system is explained to the community members during the drills. | |
| | Community drills emphasize upon the needs of special vulnerable groups; e.g. children, elderly and or disabled people, or pregnant mothers. | |
| | Lessons learnt sessions must be held after the completion of drills, in order to identify areas needing improvement. | |</p>
<table>
<thead>
<tr>
<th>OUTCOME 6</th>
<th>Steps towards this Outcome</th>
<th>Key Impact Indicators (measuring change in individuals and community life)</th>
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</thead>
<tbody>
<tr>
<td>COMMUNITY DRILLS SYSTEM</td>
<td>• The aim of this outcome is to ensure the readiness of communities for disaster response.</td>
<td>Indicators of effectiveness are as follows:</td>
<td>Community level drills are the key for the sustainability of community level preparedness action.</td>
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<td>• Local government and community organization are committed to hold periodical community drills.</td>
<td>• More cooperation exists at the family and community levels for mutual assistance for disaster response; e.g. assistance to neighbours; e.g. evacuation, search/rescue, lending money, sharing labour for re-construction, assistance to family members in food storage, house level raising, evacuation etc.</td>
<td>Encourage and emphasize the use of local resources for the conduct of drills.</td>
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<tr>
<td></td>
<td>• Funds are allocated by the local government and community based organization for conduct and management of drills.</td>
<td>• People follow agreed procedures and steps in emergency situations; e.g. immediate evacuation after hearing the warning, following agreed route, reaching agreed destination etc.</td>
<td>If possible invite and involve the local/commune government officials in the conduct of community drills.</td>
</tr>
<tr>
<td></td>
<td>• Periodical community drills are organized by the community based organization.</td>
<td>• Loss of life is reduced due to enhanced emergency response assistance.</td>
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<td></td>
<td>• Train the community organization on conduct of community drills.</td>
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<tr>
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<td>• Community drills on evacuation, first aid, search and rescue are held on a periodical basis by the community based organization.</td>
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<td>• Local governments’ emergency response system is explained to the community members during the drills.</td>
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<td>• Community drills emphasize upon the needs of special vulnerable groups; e.g. children, elderly and or disabled people, or pregnant mothers.</td>
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<tr>
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<td>• Lessons learnt sessions must be held after the completion of drills, in order to identify areas needing improvement.</td>
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</table>
### OUTCOME 7

#### COMMUNITY LEARNING SYSTEM
- The aim of this outcome is to enhance the understanding of individuals, families and communities about hazards, disasters, vulnerabilities, risk reduction and preparedness.

#### Steps towards this Outcome
- CBO is committed to community orientation building on an on-going basis.
- Local government is committed to support the CBO in its efforts on community learning. It is included in the legal mandate of the local government.
- Funds are allocated for periodical production of awareness materials and community orientation sessions.
- Risk communication messages are developed on the basis of an assessment of information needs of multiple social groups.
- A pre-test is conducted to get feedback of target groups on the suitability of messages.
- Target group focused learning sessions are held by the community based organization on periodical basis.
- Community HVCA map is placed at public places in the community for everybody's information; e.g. temples, mosques, schools, community centers, hotels, bus and train stations etc.
- Locally appropriate communication channels are used in the orientation building initiatives.
- Learning sessions provide information on disaster risks, vulnerabilities and risk reduction and preparedness actions.

#### Key Impact Indicators
- Target groups follow hazard resilient construction practices.
- Environment friendly practices are adopted by target group members.
- Target group apply hazard resistant cropping practices.
- Target groups have sustained income levels due to avoidance of disaster related shocks.
- Target groups enjoy health safety due to better hygienic practices in post-disaster situations.
- Target groups stress levels are reduced due to better preparedness and effective response practices.

#### Guidance Notes to Implement CBDRM

**Target Groups**
It would be important to consider the cultural, social and economic context of the community while developing and implementing the community orientation campaigns. What is the level of education of various target groups, What kind of modes of communication are appropriate to different groups, who has influence on forming people's opinion? These are some of the issues to be considered.

Teachers, religious leaders, mass organization representatives might be some of the people who are highly effective in influencing and forming people's opinions.
<table>
<thead>
<tr>
<th>OUTCOME 8</th>
<th>Steps towards this Outcome</th>
<th>Key Impact Indicators</th>
<th>Guidance Notes to Implement CBDRM</th>
</tr>
</thead>
</table>
| COMMUNITY EARLY WARNING SYSTEM | • Local government is committed to the development of community level warning system, linked to the national warning system. Funds are allocated for the establishment of community level warning system. | • Individuals, families and community members take appropriate precautionary actions to avoid disaster impact. | Proven Warning System  
In order to ensure that the early warning is effective in saving losses to lives and property, it is important that facilities for community action are available; e.g. safer evacuation routes, emergency evacuation facilities to take refuge, search and rescue teams. In the absence of these facilities at the community level, the early warning might not be a productive process. An early warning system having all the above characteristics would be a proven warning system. |
| | • A system for issuing early warning to the community members about impending hazards is established under the community based organization in collaboration with the local government. | • Target groups commend the positive role of religious and social institutions in life saving through early warning: e.g. temples, mosques, churches, schools etc. | |
| | • A warning system is comprised upon following elements.  
1. Forecast on hazard occurrence  
2. Communication of warning  
3. Action by community members | | |
| | • Community early warning system is established on the basis of knowledge of the community about the occurrence of hazards. | | |
| | • Community early warning system is linked to the warning system at the district, province and or national levels. | | |
| | • Community members are oriented about the meaning of warning signals and messages. | | |
| | • Channels used for issuance of warning messages are accessible to different vulnerable groups in the community | | |


Instituto de Estudios Ambientales, *Disaster Risk and Risk Management, Benchmarking A Methodology based on Indicators at National Levels*, Inter-American Development Bank and Universidad Nacional de Colombia- Sede Manizales Instituto de Estudios Ambientales (IDEA): Manizales, 2004


Parker I., *Criteria for Evaluating the Condition of a Tropical Cyclone Warning System*, Disasters, 23(3) 193-216, 1999


Tearfund, *Mainstreaming Disaster Risk Reduction within Institutional Donors: Performance Targets and Indicators*, Teddington, Tearfund, 2004


Capacity
A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the 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. Capacity may also be described as capability.

Capacity building
Efforts aimed to develop human skills or societal infrastructures within a community or organization needed to reduce the level of risk.

In extended understanding, capacity building also includes development of institutional, financial, political and other resources, such as technology at different levels and sectors of the society.

Disaster
A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

Disaster risk management
The systematic process of using administrative decisions, organization, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards.
Disaster risk reduction (disaster reduction)
The conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

The disaster risk reduction framework is composed of the following fields of action, as described in ISDR’s publication 2002 “Living with Risk: a global review of disaster reduction initiatives”, page 23:

- Risk awareness and assessment including hazard analysis and vulnerability/capacity analysis;
- Knowledge development including education, training, research and information;
- Public commitment and institutional frameworks, including organizational, policy, legislation and community action;
- Application of measures including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments;
- Early warning systems including forecasting, dissemination of warnings, preparedness measures and reaction capacities.

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

Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity, frequency and probability.

Hazard analysis
Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behavior.

Natural hazards
Natural processes or phenomena occurring in the biosphere that may constitute a damaging event.

Natural hazards can be classified by origin namely: geological, hydro meteorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.

Preparedness
Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Public awareness
The processes of informing the general population, increasing levels of consciousness about risks and how people can act to reduce their exposure to hazards. This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster.
Public awareness activities foster changes in behavior leading towards a culture of risk reduction. This involves public information, dissemination, education, radio or television broadcasts, use of printed media, as well as, the establishment of information centers and networks and community and participation actions.

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

Conventionally risk is expressed by the notation
Risk = Hazards x Vulnerability. Some disciplines also include the concept of exposure to refer particularly to the physical aspects of vulnerability.

Beyond expressing a possibility of physical harm, it is crucial to recognize that risks are inherent or can be created or exist within social systems. It is important to consider the social contexts in which risks occur and that people therefore do not necessarily share the same perceptions of risk and their underlying causes.

**Risk assessment/analysis**
A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihoods and the environment on which they depend.

The process of conducting a risk assessment is based on a review of both the technical features of hazards such as their location, intensity, frequency and probability; and also the analysis of the physical, social, economic and environmental dimensions of vulnerability and exposure, while taking particular account of the coping capabilities pertinent to the risk scenarios.

**Sustainable development**
Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of “needs”, in particular the essential needs of the world’s poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and the future needs. (Brundtland Commission, 1987).

Sustainable development is based on socio-cultural development, political stability and decorum, economic growth and ecosystem protection, which all relate to disaster risk reduction.

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

For positive factors, which increase the ability of people to cope with hazards, see definition of capacity
### List of participants of the Regional Workshop on CBDRM standards

<table>
<thead>
<tr>
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<th>organisation</th>
<th>email</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

Reference:

Appendix 2