

CORE workshops offer for the first time the opportunity for governments and humanitarian agencies worldwide to agree and deliver together the same basic technical training, carrying the messages of the CCCM, Early Recovery, Emergency Shelter, Protection and WASH clusters of the IASC, as a foundation to capacity building and DRR



WORKSHOP REFERENCE MANUAL

1st – 5th September, 2011, Bangkok, Thailand

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“Recommendation 4: Increase the focus of resources for the cluster approach on the local level.

Concrete steps: 1 Strengthen training on facilitation, coordination and cross-cutting issues on the national and sub-national levels”

‘Cluster Approach Evaluation 2, Synthesis Report’

IASC April 2010



CORE
common operational recovery essentials

CORE Workshop reference manual

Delivered by lead partners Benchmark Consulting, RedR India

Staff from the following agencies participate in the Advisory Group:



Implemented by:



CORE workshops designed by:



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Introduction

The CORE workshop is a 5 day course developed to increase the facilitation of basic humanitarian training. Upon completion of the course, participants will receive accreditation which enables them to facilitate the CORE training workshop and further training in DRR, response and recovery. Workshop course participants will be certified from the Advisory Group.

The CORE workshop is supported by the 'CORE learning platform'. The material is open source and is available on-line on the regional CORE learning platform website.

www.coreasia.org

Course material

This manual is part of the material available to the CORE workshop participants.

In addition to this manual and the CORE learning platform website, other materials available during the course are:

- ▶ PowerPoint sessions
- ▶ Case study information
- ▶ Additional literature (on the website)

The screenshot shows the CORE regional learning platform website. At the top, there is a navigation bar with tabs for 'library', 'meeting', 'community', 'training', 'events', 'news', and 'projects'. Below this is a search bar and a 'user login' section with fields for 'username or email' and 'password', along with links for 'create new account' and 'request new password'. The main content area features a map of South-East Asia with a 'click a country to view resources' prompt. Below the map is a calendar for 'trainings end events in SEA' and a section for 'CORE training' with a registration link. The bottom section is titled 'popular resources in SEA' and lists various documents such as 'Shelter after disaster' (2567 downloads), 'Bamboo construction Manual', and 'Transitional Shelter Guidelines consultation document: April 2011'. The footer includes logos for 'sheltercentre' and 'DFID', and a list of advisory group members.

CORE regional learning platform website

The regional learning platform

The training is supported by a 'regional learning platform' website offering a library of regional resources, regional country profiles, and a listing of regional events and training by other initiatives, in addition to a regional jobs listing and forum service for those trained.

The regional learning platform is not intended to compete with any existing resources, but to build upon on them, and harness knowledge; creating a common place where organisations can upload and download materials, sharing knowledge, and navigating users to existing resources. We are currently implementing the South East Asia hub, but the project intends to grow and develop into a series of regional hubs, creating a global collective.

The platform contains a profile of each country in the region that will include information such as:

- ▶ the structure of the government line ministries and their responsibilities;
- ▶ a listing of key national, regional and international coordination bodies;
- ▶ national, regional and international network resources;
- ▶ details of the main stakeholders, including government, civil defence, NGOs, the Red Cross Movement, International Organisations, UN bodies, donors and IFIs;
- ▶ documents key to humanitarian response, such as preparedness plans and building codes, in local languages; and
- ▶ resources key to humanitarian response, such as other national training, events, conferences, centres of excellence and knowledge bases.

1. CONCEPTS OF DISASTER RISK MANAGEMENT

1.1 Hazard

A **Hazard** is 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. (*Source: Living with Risk, UN ISDR 2002*) Earthquakes, flood and, industrial gas leakages are some examples of hazards. Hazards can be single, sequential or combined in their origin and effects. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of on set, spatial dispersion and temporal spacing. Based on their causes, hazards are categorized into two broad types

1. **Natural Hazards:** These are processes or phenomena occurring in the biosphere that may constitute a damaging event, resulting in- loss of life or injury, property damage, social and economic disruption or environmental degradation. Natural hazards can be classified by their origin into:

- Geological Hazards
- Hydro- meteorological Hazards
- Biological Hazards

2. **Human Induced Hazards:** These are processes or phenomena caused primarily due to human activities and may lead to loss of life, injury, property damage, social, economic and political disruption and or environmental degradation. These can be classified into:

- Environmental Degradation and
- Technological Hazards

1.2 Disaster

A disaster is a serious disruption triggered by a hazard, causing human, material, economic or (and) environmental losses, which exceed the ability of those affected to cope. (*Source: Reducing Disaster Risk, UNDP 2004*).

Key Elements of Disasters

Disasters result from the combination of **hazards**, conditions of **vulnerability** and insufficient **capacity** or measures to reduce the potential negative consequences of **risk**. (*Source: Living with Risk, UN ISDR 2002*)

1.3 Vulnerability

Vulnerability is the condition determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. (*Source: Living with Risk, UN ISDR 2002*)

The scale of damage to a community from the impact of a given hazard does not only depend upon the community's physical exposure to that hazard, but also on its vulnerability. Here, physical exposure refers to the elements at risk. These elements may include people, artifacts, infrastructure etc. (*Source: Reducing Disaster Risk, UNDP 2004*). Vulnerability, on the other hand, is determined by aspects in the physical environment, such as nature of housing, available open space etc, as well as aspects in the socio-economic domain such as level of income, nutritional status, marginalization etc.

Some indicators of vulnerability are:

- poverty
- population explosion
- demographic imbalances
- unemployment
- growth of large informal economies in unplanned cities
- increasing migrant flows,
- socio-political tensions and uncertainty
- illiteracy
- women and child development concerns
- absence of sound institutional and legislative/ regulatory practices, and
- Unsustainable environmental practices

1.4 Capacity

Capacity is the 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. (*Source: Living with Risk, UN ISDR 2002*)

Coping capacity: The manner in which people and organisations use resources available to them, to achieve various beneficial ends during unusual, abnormal and adverse conditions of a disaster phenomenon or process. (*Source: Reducing Disaster Risk, UNDP 2004*). Example of coping capacity are, sale of assets like ornaments, extra livestock; extra labour work migration to cities for work etc.

1.5 Resilience

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 is called resilience. This is determined by the degree to which the social system is capable of organising itself, and the ability to increase its capacity for learning and adaptation, including the capacity to recover from a disaster. (*Source: Reducing Disaster Risk, UNDP 2004*)

Resilient communities:

Due to rapid population growth, rapid urbanization, and environmental changes, disasters are becoming increasingly diverse and complicated; and our societies are even more vulnerable to disasters. While many people are aware of the terrible impact of disasters throughout the world, few realize that this is a problem and we can do something about it. Disasters are no more rare events they strike every year with a new face that is why it is important to understand that "Disasters are a problem that we can and must reduce". The concept of resilient communities help us to understand how we can make our communities safe from the risks of disasters and how entire community can come back to the normal course of development after disastrous situation.

The concept of resilient communities can be explained by defining its three key characteristics

- capacity to absorb stress or destructive forces through resistance or adaptation
- capacity to manage, or maintain certain basic functions and structures, during disastrous events
- capacity to recover or 'bounce back' after an event

1.6 Disaster Risk

Disaster Risk is the **probability** of harmful consequences, or expected loss of lives, people injured, property, livelihoods, economic activity disrupted and environment damaged resulting from interactions between natural or human induced *hazards* and *vulnerable* conditions. (Source: *Reducing Disaster Risks, UNDP 2004*).

Risk is conventionally expressed by the equation:

$$\text{Risk} = \text{Hazard} \times \text{Vulnerability} / \text{Capacity}$$

For example, an earthquake hazard of the same magnitude in a sparsely populated village and in the densely populated city of Dhaka will cause different levels of damage to human lives, property and economic activities. This is due to the difference between the two locations in densities of population, types of housing, types of industries, economic cost of infrastructure, geographic profile etc. Thus, earthquake disaster risk is a combination of earthquake hazard and the context (vulnerability and capacity) in which the hazard strikes.

1.7 Prevention

Activities to provide outright avoidance of the adverse impact of hazards and means to minimize related environmental, technological and biological disasters

Depending on social and technical feasibility and cost/benefit considerations, investing in preventive measures is justified in areas frequently affected by disasters. In the context of public awareness and education, related to disaster risk reduction changing attitudes and behaviour contribute to promoting a "culture of prevention".

1.8 Mitigation

Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.

1.9 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.

1.10 Early Warning

The provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response.

Early warning systems include a chain of concerns, namely: understanding and mapping the hazard; monitoring and forecasting impending events; processing and disseminating understandable warnings to political authorities and the population, and undertaking appropriate and timely actions in response to the warnings.

1.11 Response

Actions taken immediately following the impact of a disaster when exceptional measures are required to meet the basic needs of the survivors

1.12 Relief

Measures that are required in search and rescue of survivors, as well to meet the basic needs for shelter, water, food and health care.

1.13 Rehabilitation

Actions taken in the aftermath of a disaster to:

- assist victims to repair their dwellings;
- re-establish essential services;
- revive key economic and social activities

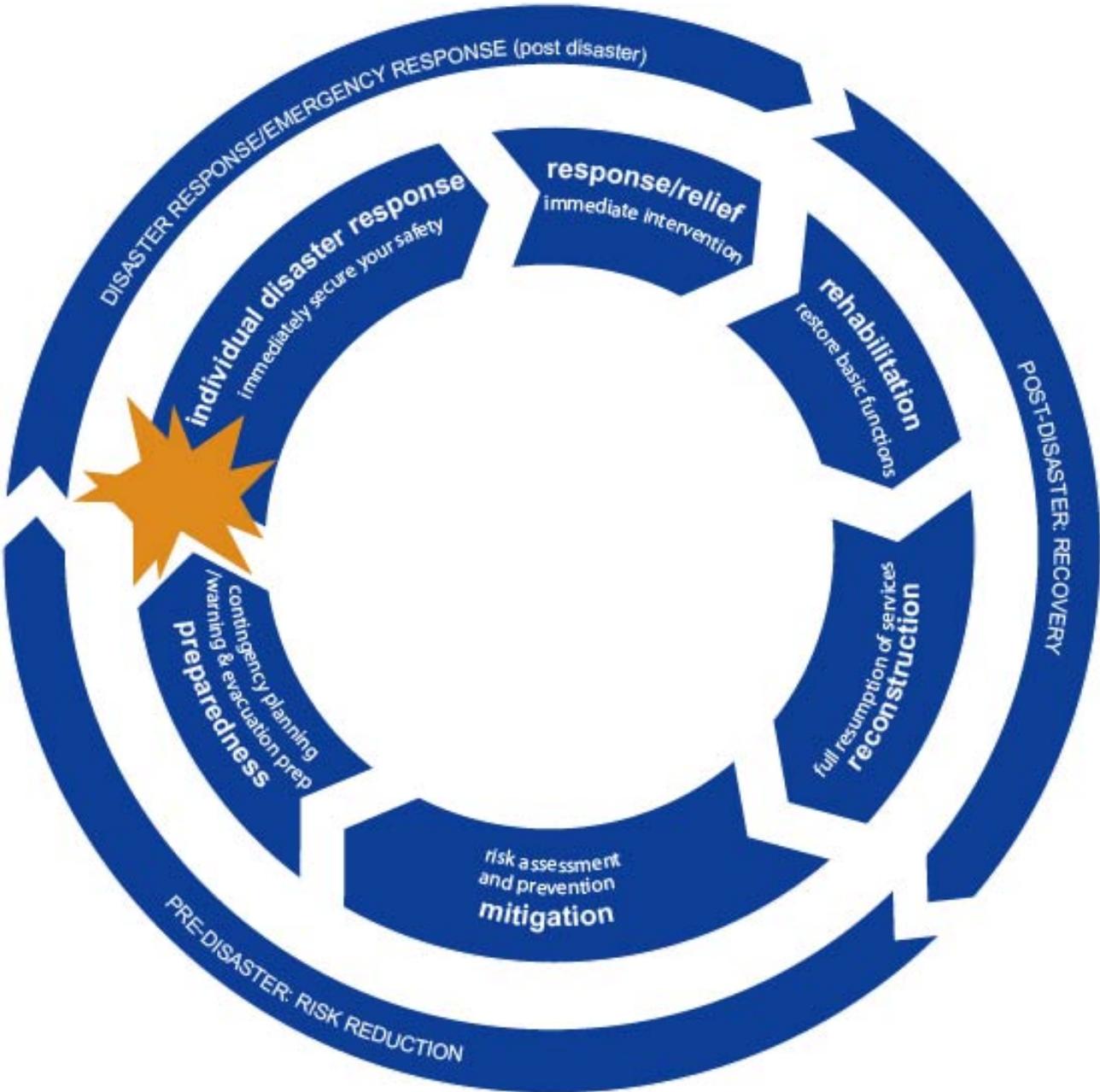
1.14 Reconstruction

Permanent measures to repair or replace damaged dwellings and infrastructure and to set the economy back on course.

1.15 Development

Sustained efforts intended to improve or maintain the social and economic well-being of a community.

1.16 Disaster Management Cycle¹



¹Extracted from hazards, disasters and your community - Version – 1

1.17 Disaster Management

Disaster Management (DM) as a general term covers the range of activities designed to maintain control over disaster/emergency situation and to provide a framework for helping people to avoid, reduce the effects of, or recover from impact of a disaster. These activities may be related to preparedness, mitigation, emergency response, and relief and recovery (reconstruction and rehabilitation) and may be conducted before, during and/or after a disaster. Broadly disaster management can be divided into pre-disaster and post-disaster contexts. There are three key stages of activity that are taken up within disaster management.

1. *before a disaster strikes (**pre-disaster**)*. Activities taken to reduce human and property losses caused by the hazard and ensure that these losses are also minimized when the disaster strikes. Risk reduction activities are taken under this stage and they are termed as mitigation and preparedness activities.
2. *during a disaster (**disaster occurrence**)*. Activities taken to ensure that the needs and provisions of victims are met and suffering is minimized. Activities taken under this stage are called as **emergency response activities**
3. *after a disaster (**post-disaster**)* Activities taken to achieve early recovery and does not expose the earlier vulnerable conditions. Activities taken under this stage are called as **response and recovery activities**

1.18 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.

1.19 Disaster Risk 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:

- *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 organisational, 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.*

2. THE INITIAL ASSESSMENT: A QUICK CHECKLIST

(Excerpts from UNICEF's Emergency Field Handbook)

This checklist is a tool to help guide UNICEF's initial rough assessment, before a more formal rapid assessment by sector can take place. It can be used by non-specialists to get a basic understanding of areas where people might need assistance.

See the 'Assessment and monitoring' chapter for guidance on the organization and logistics of an initial rough assessment or an expanded rapid assessment.

See the 'Rapid assessment matrix', available on the Emergency Field Handbook CD-ROM, for a more extensive list of questions to be used in a formal rapid assessment of needs by sector.

2.1 What To Do

- Rapidly obtain the following information through initial field visits with other UN partners, if possible, and from contacts with UNICEF field and sub-offices, and partners in government, non-governmental organizations (NGOs) and other UN agencies.

2.2 Characteristics of the Crisis and Baseline Data

- What is happening? What do you know about what is happening? What do you not know about what is happening?
- Where is the problem occurring? Include latitude and longitude, if possible.
- What is the geographic extent of the affected area?
- What are the physical and ecological characteristics of the affected area?

- What is the severity of the crisis in different localities?
- What appears to be the major dynamic of this crisis? Is there an expected end to the crisis? When?
- Who has the most reliable and accurate information about what is going on?
- What is the impact of the crisis on the government? What is the expected response of the government and local authorities, if any?
- What was the population in the area before the disaster (size, economic status and location of communities)?
- What political and administrative structures still exist in the affected area?
- What type of development or other aid programmes were or are operating in the area?
- Is there a regional dimension to the emergency? Is there more than one country involved?

2.3 Number and Status of Affected People

- What is the approximate number of people affected by the crisis (with a rough percentage of women, children and children under five)?
- What are the reported numbers of dead, injured and missing persons?
- Are there especially vulnerable groups? Who are they and what are their numbers? Have families separated? What percentage?
- Do most people have shelter, clothing? What percentage?
- What are the ethnic and cultural characteristics of the different groups (language, average family size, typical household living arrangements)?
- What are people doing to help themselves?
- What, if anything, are women doing differently than men to cope?
- Are youth groups and organizations active in development initiatives? If so, what is their role in normal circumstances and are they able to help local communities in this emergency?
- Are traditional coping mechanisms operating? If not, why not?
- Are there coping mechanisms in place that UNICEF could easily support?
- What is the government and its partners (bilateral or multilateral, civil society or NGO) doing to mitigate the impact of the emergency?

2.4 Displacement

- Have people been displaced? If so, from where? What is the cause?
- What is the approximate number of children in the displaced population?

- Is the displaced population growing or expected to grow? Are numbers of children likely to change?
- Are people likely to move farther?
- If so, where are they likely to go and when?
- Is the host community assisting or able to assist those who are displaced?
- Is there enough space for all those likely to arrive?
- What type and quantity of possessions have people brought with them? Did they bring domestic items?

2.5 Access, Security and Threats

- Has the UN done a risk and threat assessment? What phase?
- Is there year-round access to the affected population?
- If not, what is preventing access?
- What are the security threats for the affected population and humanitarian actors? Is there continued fighting? Are there landmines, banditry, blockades, rioting, natural risks, etc.?
- Are people threatened because of their gender or ethnic, political, religious or national identity?
- Are non-state actors involved? Are they recognized by the government?
- Has movement been restricted by the government or by non-state actors?
- Is UNICEF already engaging non-state actors? How? In what circumstances?

2.6 Health and Nutrition

- What are the immediate and obvious health problems (wounds, respiratory infections, gastrointestinal diseases and parasites, malaria, measles)?
- Are health facilities functioning?
- Where are the health centers and hospitals? If possible, use GPS to locate and facilitate mapping of available resources.
- Are there adequate health workers for the facilities?
- Have there been disruptions in supply of medicines, medical equipment or in the cold chain? Of what magnitude?
- Are any groups without food? If so, is this because food is unavailable or because the people lack purchasing power?
- Are households able to prepare food?
- Are there visible signs of malnutrition – children too thin or with oedema (swollen belly)?
- In a quick check using a mid-upper-arm circumference strips, are there children who classify as moderately or severely malnourished? What percentage of those sampled?
- Do people have shelter? Is it cold enough to need blankets?

2.7 Water and Sanitation

- Do people have access to water? Where are the water points? If possible, use GPS to locate and facilitate mapping of available resources.
- Is water sufficient for all beneficiaries?
- Is the water safe for drinking?
- Do people have adequate containers to safely store and transport water?
- Are hygienic items (soap, sanitary protection) available?
- What sanitation facilities are people, especially women, using?
- How are people disposing of excreta?

2.8 Child Protection

- Are there reports or evidence of children being killed, deliberately targeted or caught in the crossfire?
- Are there reports or evidence of separated or unaccompanied children?
- Are there reported cases of rape and sexual abuse?
- Are there reports or evidence of traumatized children?
- Is there anybody in the affected community who is monitoring and responding to these protection issues?
- Are traditional childcare arrangements functioning?
- Are there indications of stigma against any particular group of children? If so, what?
- Are there children orphaned by AIDS among those affected by the crisis?
- Are there reports or knowledge of landmines in the affected area?
- Are there landmine victims? How many? Of what age?

2.9 Education

- Are the schools functioning? Are alternate learning spaces available? Are children going to school? What percentage is in primary and secondary levels?
- Are there facilities and community structures for care of preschool-age children?
- Where are the schools? If possible, use GPS to locate and facilitate mapping of available resources.
- Is there any disparity in attendance between boys and girls? Why?
- Are there teachers in the affected community? Are there customary caregivers for younger children?
- Is there damage to school facilities? How much? Are there alternative places for children to learn?
- Are there other factors hindering school attendance (fear, threats, violence, mines, natural risks, sociocultural factors)?

2.10 HIV/AIDS

- Are there reported cases of rape and sexual abuse?
- What are the normal patterns of behaviour in the community relating to HIV/AIDS affected and infected groups, and is there any sign of stigma and discrimination?
- What is the HIV-prevalence rate in the area or among the affected group? Rapidly collect secondary data from existing sources, including hospitals, NGOs, surveys, health management information systems, etc.
- Is HIV prevalence particularly high within certain population groups affected by the emergency?
- Are minimum universal precautions available (safe blood supply, sterilization or disposal of sharps, gloves, condoms, etc.)?
- Are there groups such as impoverished or displaced people, illegal migrants, children and women (especially unaccompanied) or people depending on food aid or the distribution of other items, that are at particularly high risk of sexual exploitation or violence because of the situation?

2.11 Partners

- Which local or international organizations have a presence in the affected area, and what are their fields of expertise?
- Could these organizations become implementing partners, if necessary?
- Which organizations have good local contacts and counterparts?

2.12 Logistics and Operations

- What is the weather expected to be like in the short- and medium-term?
- Are weather conditions and seasonal changes likely to affect public health or the delivery of assistance?
- How the affected area is best accessed? What are the road conditions to and in the affected area?
- Are UNICEF's usual local suppliers operating? Would they be able to increase their provision of supplies, if needed?
- What means of transport are locally available (trucks, aircraft, animals, boats)?
- Are telecommunications systems functioning?
- Are banking and financial systems functioning in the local area?
- Are they functioning nationally?

3. PLANNING AN ASSESSMENT

3.1 Gantt Chart – Tool for Scheduling Activities

During the era of scientific management, Henry Gantt developed a tool for displaying the progression of a project in the form of a specialized chart. An early application was the tracking of the progress of ship building projects.

Today, Gantt's scheduling tool takes the form of a horizontal bar graph and is known as a Gantt chart, a basic sample of which is shown below:

3.2 Gantt Chart Format

Table 1: Activities

Ser	Activity	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Develop/standardize WES kit for rapid response and prepare technical notes based on CCC													
5.1	Review existing inventories	■	■										
5.2	Develop sanitation kits			■	■								
5.3	Develop water storage kits				■	■							
5.4	Develop water distribution kits					■	■						
5.5	Write technical note							■	■	■			
5.6	Filed/training testing the kits							■	■	■	■	■	■

The horizontal axis of the Gantt chart is a time scale, expressed either in absolute time or in relative time referenced to the beginning of the project. The time resolution depends on the project - the time unit typically is in weeks or months. Rows of bars in the chart show the beginning and ending dates of the individual tasks in the project.

In the above example, each task is shown to begin when the task above it completes. Also, the bars may overlap in cases where a task can begin before the completion of another, and there may be several tasks performed in parallel. For such cases, the Gantt chart is quite useful for communicating the timing of the various tasks.

For larger projects, the tasks can be broken into subtasks having their own Gantt charts to maintain readability.

3.3 Gantt Chart Enhancements

This basic version of the Gantt chart often is enhanced to communicate more information. A vertical marker can be used to mark the present point in time. The progression of each activity may be shown by shading the bar as progress is made, allowing the status of each activity to be known with just a glance. Dependencies can be depicted using link lines or color codes. Resource allocation can be specified for each task. Milestones can be shown.

3.4 Gantt Chart Role in Project Planning

For larger projects, a work breakdown structure would be developed to identify the tasks before constructing a Gantt chart. For smaller projects, the Gantt chart itself may be used to identify the tasks.

The strength of the Gantt chart is its ability to display the status of each activity at a glance. While often generated using project management software, it is easy to construct using a spreadsheet, and often appears in simple ASCII formatting in e-mails among managers.

For sequencing and critical path analysis, network models such as CPM or PERT are more powerful for dealing with dependencies and project completion time. Even when network models are used, the Gantt chart often is used as a reporting tool.

4. VULNERABILITY AND CAPACITY ANALYSIS (VCA)

(Excerpts from discussion paper on Social Vulnerability and Capacity Analysis (VCA): An Overview by Ian Davis, Bruno Haghebaert and Davis Peppiatt)

4.1 Introduction: Vulnerability and Capacity

In recent years, there has been an apparent concentration of efforts by both academics and practitioners to understand the complex nature of social vulnerability and capacity. In certain respects, this has been in response to the perceived imbalance of focus of attention on physical vulnerabilities and a neglect of analysis of the social, economic and political factors that so often drive vulnerability. The increased attention to the social dimensions of risk assessment is contributing to a better identification of specific vulnerable groups or individuals as well as an improved analysis of the socio-economic conditions that create vulnerability.

A broad consensus has also emerged within the disaster and development communities that it is essential to consider an assessment of vulnerability in parallel to a measurement of capacity in all sectors. The use of the concept of capacity emerged in response to the negativity of the term vulnerability: to speak of people as being vulnerable was to treat them as passive victims and ignore the many capacities, resources and assets people possess to resist, cope with and recover from disaster shocks they experience. Certain authors as being unnecessary have criticized this distinction between vulnerability and capacity, since the term “vulnerability” is often used as a composite expression to describe both negative as well as positive elements. However, capacity and vulnerability cannot always be considered as two ends of a spectrum. Some capacities are not the opposite of vulnerabilities and certain low-level vulnerability characteristics do not figure on the higher scale of the capacities. For the sake of clarity, we therefore propose to confine all the resources and capabilities of communities under the term “capacity” and to restrict the word vulnerability to factors that contribute to putting people at risk.

A diverse range of vulnerability and capacity assessment tools has been developed and field-tested, mainly by NGOs and community-based organisations, with a particular emphasis on participatory and people oriented approaches. Indeed, the influence of social development methodologies, such as participatory rural assessment techniques, is very much evident in VCA. A key element, therefore, of the VCA approach is the dual interest in both vulnerability and capacity.

Examples include:

- The CVA matrix developed by Mary Anderson and Peter Woodrow’s in “Rising from the Ashes, Development Strategies in Times of Disaster” which has formed the template for many of the currently used assessment tools (see Annex 2).

- IFRC VCA toolkit that has been used for assessing both the capacities and vulnerabilities of the communities in which the RC works as well as the organizational capacities and vulnerabilities of their member National Societies.
- The Citizen's Disaster Response Centre and Network (CDRC/N) in the Philippines has adopted the CVA methodology since the early 1990s, as part of their Citizenry-Based and Development-Oriented Disaster Response (CBDO-DR) approach
- The La Red Network has build up considerable experience in participatory community risk assessment in Latin America.
- The PeriPeri network has actively promoted the use of VCA in southern Africa.
- Tearfund and partner organisations in India, such as the Discipleship Centre in New Delhi and the Evangelical Fellowship PF India Commission on Relief, are currently involved in VCA activities.
- OXFAM developed a Participatory Capacities and Vulnerabilities Assessment (PCVA) tool.
- ActionAid has been engaged in Participatory Vulnerability Analysis (PVA). CARE has developed a Household Livelihood Security Assessment tool kit.

However, despite this growing recognition of the importance and potential benefits of VCA, the methodologies and standard practices are not systematically factored into the main risk assessment process.

One reason is that the data concerning the different assessment methodologies have not been compiled, compared and analysed.

Another reason is the lack of knowledge of their relative accuracy, effectiveness and quality. These important constraints can only be addressed by comparative analysis, interdisciplinary research and, above all, the sharing of knowledge, learning and experience between the communities of actors involved in VCA.

4.2 Purpose of VCA

The primary purpose of an overall vulnerability and capacity analysis is its use as a diagnostic tool to provide analytical data to support better-informed decisions on the planning and implementation of risk reduction measures. An effective VCA will contribute to a greater understanding of the nature and level of risks that vulnerable people face; where these risks come from; who will be the worst affected; what means are available at all levels to reduce the risks and what initiatives can be undertaken to reduce the vulnerability and strengthen the capacities of people at risk. VCA tools are used to identify and measure levels of risk for use in decision making on ways to achieve safe conditions. In addition, VCA has many uses beyond the risk/disaster context, since assessments can provide vital data to communities and

governments that contributes valuable assistance in social planning and resource allocation.

The objective of a social VCA is to identify specific vulnerable groups/individuals, based on key social characteristics such as gender, age, health status, disability, ethnicity and so forth. The process also includes an analysis of patterns of density, livelihood security and occupational activities that increase the vulnerability of certain households and communities. Capacity assessment aims at identifying a wide diversity of resources: community coping strategies, local leadership and institutions, existing social capital, which may contribute to risk reduction efforts, skills, labour, community facilities, preparedness stocks, a local evacuation plan, etc. An additional and often overlooked aspect of a participatory risk assessment is the local perception of risk, which can play a key role in determining risk and community prioritisation of mitigation measures. The workshop will seek consensus on the primary purpose and objectives of a VCA and some definition of the core components of VCA.

4.3 Who should undertake VCA?

A recurring problem to the implementation of VCAs is the observation of government officials and international NGOs that they do not have sufficient trained staff to undertake assessments or to analyse them. This lack of qualified assessors has seriously hampered the development of social vulnerability and capacity assessment over the last decade. A possible solution to this constraint is to seek to de-professionalize the assessment process through the use of skilled and experienced persons who can be found in most communities. These may usefully include community leaders, local teachers, agricultural extensionists, religious leaders, midwives and other civil society groups. However, community involvement does not remove the need for expertise and leadership where experienced professionals will train local assessors and develop good assessment checklists as well as templates for assessment. Clearly, a critical challenge for many organisations active in VCA is the availability of these experienced assessors and how to de-professionalize the assessment process.

4.4 How to measure vulnerability of specific groups?

Over the years, government agencies and NGOs have developed long and detailed checklists of potential vulnerable groups and individuals. Typically, social, demographic and economic characteristics, such as gender, age, health status and disability, ethnicity or race or nationality, caste or religion, and socio-economic status are the focus of attention. The use of the “checklist approach” however is not undisputed:

- Some characteristics and vulnerabilities change over time or change with the life cycle (e.g. age).
- How to be sure that the list of “key social characteristics” is complete?
- When the list is complete, how to weight the different characteristics?

- Some vulnerability may be countered in part by capabilities. The aged as a vulnerable group, for instance, may possess vivid recollections of past disasters that can add to the risk assessment process; they may have a greater life experience to draw from and have better knowledge of coping strategies; they may have a wide network of family and friends.
- Not all seniors, very young, women or people with disabilities are equally vulnerable. Some may in fact be more adept at responding to and recovering from disaster than their general grouping or population category might first indicate. Vulnerability is in most cases not determined by a single taxonomy but by a concatenation of characteristics.
- Social vulnerability is often the result of very complex processes, which can as a result only be adequately assessed through a detailed situational analysis. There is a need to critically review the relative strengths and weaknesses of the checklist and situational analysis approaches in order to determine the most effective and feasible ways to measure vulnerability of specific groups.

4.5 Who can use VCA data?

In principle, all stakeholders involved in the risk assessment and risk reduction process can make use of the data obtained from a vulnerability and capacity assessment, including:

- Disaster planners and disaster managers
- Emergency management staff
- Communities at-risk
- Professional groups such as engineers, geologists, architects, sociologists, economists etc.
- NGO staff
- Political leaders
- Academic bodies
- Private Sector actors

However, in practice, VCA data is not always made readily available often because of the political implications for local or national authorities or because of the organisational interests of those who carry out the assessments. The workshop will promote the need for total transparency in the management of the risk assessment process so that those 'at risk' are made aware of risk information. Can such a policy of transparency be established and maintained? How and where should risk assessment information be stored and disseminated to all stakeholders in a transparent and accountable way?

4.6 Integrating VCA with other assessments

As the above point on livelihoods highlights, the social dimension of VCA does not exist in an isolated vacuum but ideally needs to be integrated with other risk assessment processes:

1. Integration of VCA with physical, economic and environmental assessment

VCA has been used particularly to assess social vulnerability, but it can be usefully extended to cover all key sectors. Social VCA is only one element in the overall process of vulnerability assessment that needs to include a wider range of concerns such as:

- Physical, (buildings, infrastructure, critical facilities)
- Economic, (livelihoods, economic assets, businesses, commercial and industrial sectors)
- Environmental, (forestry, agriculture, animals, fisheries, eco-systems)

A multi and inter-disciplinary approach is therefore essential in order to merge social, technical, economic and environmental data. When integrating data from different sectors, close attention has to be given to the accuracy and consistency of data, as they will often be collected by assessment teams using different survey techniques. This ultimately requires more integrated teamwork and interdisciplinary training in risk assessment. But is this feasible and desirable?

The matrix in Annex 3 attempts to indicate how vulnerability and capacity can be related to all sectors by citing some typical examples in each category. In theory, all need to be integrated into a comprehensive and interdisciplinary review of vulnerability and capacity with an aim to explore the links and synergies between the elements of the natural and human made environment.

2. Integration of VCA with assessment of other risks In societies faced with multiple threats to lives and livelihoods (such as HIV AIDS, conflict, climate change etc.)

VCA has to become a fully integrated process that addresses all threats. These threats are often interrelated, for example HIV/Aids leading to reduced resilience to the threat of drought. This suggests that only an integrated approach dealing in a comprehensive manner with multiple risks to human security will be able to provide adequate protection to lives and livelihoods.

3. Integration between pre-disaster VCA with post-disaster damage and needs assessment

In too many instances, different groups conduct pre and post disaster assessments. This artificial separation is unfortunate and wastes vital knowledge and effort. There are major benefits in the full integration of VCA undertaken pre-disaster with post-

disaster damage and needs assessments. Clearly, the assessments of damage and social needs after disaster represent a far more accurate measurement of vulnerability and resources than any predictive assessment. In addition, the data from VCA, concerning risks as well as resources collected before a disaster, can be of decisive value in the conduct of an effective disaster relief operation. However, it is essential for damage and needs assessment data to be used with caution and discretion in relation to the assessment of vulnerability of unaffected regions of a given country. Therefore, both pre and post disaster assessments need to be under integrated management.

A critical challenge, therefore, will be to avoid the isolation of VCA and ensure that the social dimensions of risk assessment become fully integrated with other assessment processes.

4.7 Connecting VCA to the Cycle of Disaster Planning

From a disaster management perspective, VCA needs to become part of the disaster planning process. In theory, a VCA contribute essential data for action planning that leads into the implementation of risk reduction measures. When VCA is conducted without the expectation of disaster planning or the creation of safety measures it negatively raises local expectations that cannot be fulfilled with consequent long-term community damage.

The traditional Disaster Planning Cycle (illustrated in the diagram below) is a cyclical rather than linear process and involves six fundamental steps or stages:

Stage 1. Initiation of Disaster Planning

Stage 2. Risk Assessment- This is a three stage process with VCA being the second stage:

(i) Hazard Mapping; (ii) VCAs for all key sectors; (iii) Loss Estimation Scenarios

Stage 3. Defining levels of Acceptable Risk- This is a political process where political leaders make decisions on the level of protection to plan for. These decisions are based on the data provided from Risk Assessment. (At this point in the Planning Cycle some societies may be forced to exit from further planning or implementation on grounds of cost)

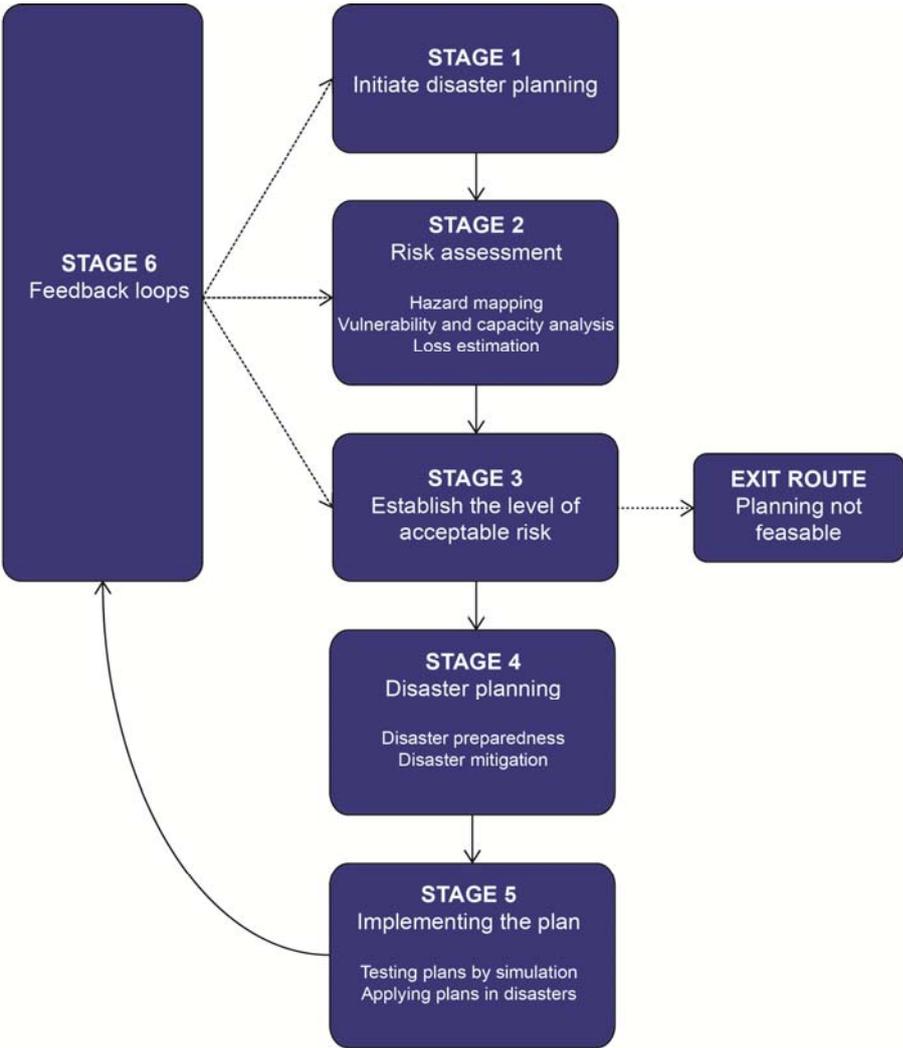
Stage 4. Planning Risk Reduction Measures and Disaster Plans- The planning process covers both structural (physical) and non-structural elements (social/ administrative)

Stage 5. Implementing the Plans- This can be undertaken through the testing of disaster plans through simulation exercises or through their application in disaster situations.

Stage 6. Feedback Loops- As plans are tested or applied key lessons will be fed back into stages 2, 3, 4 and 5 to continually improve the system of disaster planning. VCA is in many cases still considered a stand-alone exercise, which does not necessarily lead to risk analysis, action planning and the implementation of risk reduction measures. What steps need to be taken to ensure that VCA is fully connected to the disaster planning cycle?

4.8 Limitations of VCA

While it has been encouraging to note the strong interest in VCA by the disaster community in recent years, there is a danger of false assumptions being made that VCA can apply in all geographical situations and to all hazards. One of the underlying assumptions is that there is a ‘community’ ready to assess. However, this may not always be the case. For example in the growing number of vast urban conurbations, the rapid turnover of residents prevents the growth of stable communities. Indeed, the very term ‘community’ can prove to be a myth for many urban dwellers and, thus, challenges the notion of community risk assessment and community-based risk reduction.



A further limitation is to recognise that VCA may need to have a low priority concern in relation to certain conditions. For example in assessing seismic vulnerability, social considerations are not the primary area of concern. Since 98% of all earthquake deaths and injuries occur because of building, failure it follows that the key vulnerability and capacity issue relates to an assessment of the physical vulnerability of buildings and human settlements. How people relate to buildings in terms of

patterns of occupancy and density and their means of escape may thus become secondary considerations. Furthermore, gaps in the assessment methodology need to be addressed. These include the lack of an agreed set of indicators of social vulnerability and a lack of understanding and practical experience concerning ways to merge data from a social VCA with other sectors of vulnerability.

Of course, other limitations need to be recognised.

4.9 Conclusion

This paper has discussed the rationale for VCA tools as well as their creation, application and fine-tuning. This workshop offers a unique opportunity to make an important contribution to the global community seeking to reduce disaster risks by giving advice on which future tools, and the way they are used will be most effective in future assessments, and we hope that this paper will stimulate constructive thought and productive discussion. However, it is important to remember that tools have their limitations. They are essentially 'enablers' to serve a purpose, and they should not be confused with a 'product', 'aim' or 'destination'. Therefore the test of this workshop's effectiveness will need to await the use and value of the tools in planning and implementing risk reduction measures that save lives as well as protecting livelihoods and property from future disasters.

5. PUBLIC HEALTH ASSESSMENT

5.1 Purpose

When dealing with public health in a disaster setting, an assessment refers to collecting information in order to measure damage and identify the basic needs of the affected population that require immediate response. The assessment is always meant to be rapid, as it must be performed in limited time, during or immediately after an emergency and often in difficult conditions.

The purpose of a rapid assessment is to:

- assess the scope of the emergency
- describe the type and impact of the emergency
- measure the health impact
- assess the existing response capacity and additional needs
- recommend priority action for immediate response

5.2 Planning the Assessment

Determining what information to gather

The two most important criteria for deciding what information to collect in a rapid assessment are its usefulness for timely decision-making and its public health importance.

If a displaced population is involved, the information should be collected from the host population and the displaced population.

The list below outlines some of the information to be gathered, if possible, in a rapid health assessment. It is important to customize your assessment to the situation at hand.

- **Pre-existing information:** pre-emergency health status of the population from government, organization or facility records. This may or may not be available but is important to obtain if you can.
- **Population size:** See module on Population Surveys for more information on determining population size, again might be difficult to obtain but very important to at least get some estimate of population size.
- **Health Status:** Case Mortality Rate, Under 5 Mortality Rate, Age/Sex Mortality Rate, Case Fatality Rate, Fertility Rates
- **Demographics:** Age and sex distribution of the population, including ethnicity, vulnerable groups, and average household size
- **Sanitation:** adequacy of sanitation measures, number of latrines, water sources, local sanitation practices, breakdown of sanitation systems

- Events of epidemic potential: Infectious diseases that exist in the area, congregation of many people into small areas, access to care, access to medications people are on for chronic illness (TB, or HIV/AIDS medications)
- “Safety and security: Violence, injuries, rape, overall security situation
- Nutritional Status: food supplies and needs, distribution of water and food, quality of water, agricultural status
- Area Resources: Health facilities, health workers, access to medications
- Social Networks: Identify community leaders, neighbours, families, friends
- Political, Economic situation: Government ability and political will to respond
- Logistics: Transport, communication, fuel availability, acquiring storing, and distributing supplies
- Movement patterns: In and out migration patterns, IDP’s versus Refugees, on-going activity related to continued threat (aftershocks, conflict, etc.)
- Shelter and clothing needs, as well as other non-food items (NFI’s): such as soap, jerry cans, cooking supplies

Coordinate with Different Organizations

Members of the rapid health assessment team should contact as many as possible representatives of the organizations delivering emergency response, this is done to coordinate activities and avoid duplicating efforts as well as to provide open communication and a community of information sharing. Coordination and pooling of resources can produce a more complete and rapid assessment.

Selecting Team Members

Ideally, the rapid health assessment should be performed by a multidisciplinary team of qualified personnel, representing an appropriate range of expertise.

The following criteria should be taken into account in selecting team members:

- Familiarity with the region or population affected
- Knowledge of and experience with the type of emergency
- Personal qualities, such as endurance, motivation, and personal health, the capacity for teamwork, and local acceptability for team members recruited abroad
- Analytical skills as well as the ability to make correct decisions on the basis of relatively little information

5.3 Conducting the Assessment

The steps for carrying out the assessment are: collecting data, analyzing the data, presenting results and conclusions, decision-making, and monitoring. This must be done in a short period of time due to the rapid nature of the assessment.

Collecting the Data

Emergencies are often chaotic, and data collection during a rapid health assessment may not proceed in a step-by-step, logical fashion. Yet the plan for data collection and analysis must be systematic. In addition, the limitations of the various sources of information must be kept in mind during data collection and analysis.

When collecting data, it is important to use the same terms and definitions throughout all the stages. This will help make sure the information is accurate and can be compared to other situations.

There are four main methods of collecting data in rapid assessments:

- Review of existing information
- Visual inspection of the affected area
- Interviews with key people (Key informant Interviews)
- Rapid surveys
- If time and resources permit you can do brief convenience sample surveys (please see population estimates and survey module for more on this topic)

Analyzing the Data

The data collected during the rapid assessment must be analyzed quickly and thoroughly, and the results made available to decision-makers as soon as possible to get the most use from the information.

- Analysis should be as specific as possible to ensure the best use of resources and interventions
- Sources of data should always be specified
- Reliability of sources should be evaluated, keep in mind some individual you speak with might have other agendas that could affect the reliability of the reporting

Reliability: whether an experiment or source gives the same results when the action is repeated

Reviewing common sources of error

- Logistic
 - Transportation and fuel are insufficient for the assessment
 - You can access certain areas due to the disaster (road's flooded, bridge collapsed, etc.)
 - Communications are poor or not functioning
 - No translators or you do not take into account cultural considerations that prevent accurate reporting
- Organizational
 - Poor coordination, a lead organization is not designated, the responsibilities of the various organizations are not well defined, and a team leader is not appointed

- Key decision-makers and potential donors are either not informed, or feel pressured to respond to political demands before the findings are known - resulting in inappropriate assistance
- The assessment is too late or it takes too long
- Information is collected that is not needed
- Technical
 - Specialists are not involved in the assessment
 - Programs that could be implemented immediately are unnecessarily delayed until the assessment is complete
 - Assessment conclusions are based on data that do not represent the true needs of the affected population
 - Information received from field-workers and official interviews is taken at face value, without cross-checking all sources
 - Cultural aspects of the assessment are not considered
 - A surveillance system is developed too slowly

Presenting the Results of the Assessment

The following format can be adapted for presenting the results of the assessment for different reporting needs

- Background, this should include the reason for the report:
 - Background of the community in non-emergency situation (baseline information)
 - Onset and evolution of the emergency situation
 - Other additional identified hazards
- Description of the affected area (maps, photos, even sketch maps if no other sources are available)
- Description of the affected population:
 - Location, number of affected people, estimated breakdown by age, sex, and special risk or vulnerability factors, if relevant ethnic groups
 - Estimated total number of deaths and injuries
- Impact (in terms of mortality and morbidity):
 - Daily crude mortality (number of deaths for the day per 10,000 people)
 - Other indicators, such as malnutrition rates, losses in vital infrastructures, financial losses and other socioeconomic data
- Existing response capacity (in terms of human and material resources):
 - Local, sub-national, and national capacity
 - International organizations (bilateral, nongovernmental, and intergovernmental)
- Additional requirements:
 - Immediate vital needs of the affected populations
 - Immediate and medium-term needs for capacity-building
- Recommendations Indicate the following:
 - Priority actions by projects and why

- Responsible office (national focal point, national and international partners)
- Time frame
- Financial estimate for the action, if appropriate
- A section that illustrates the timetable of the assessment, gives a summary of the methods used for collecting and analyzing data, and lists the sources. It will also include maps and a copy of the questionnaires used and the background documents that may have been collected in the field.
- Depending on the needs of your organization a funding grid might also need to be included.

5.4 Special Cases

Epidemics of Infectious Origin

Prevention of an outbreak is the key. In cases where prevention is not possible then an early response to an outbreak or threatened epidemic will often significantly reduce mortality and morbidity in the affected population and limit the spread of the disease to other populations. A rapid public health assessment is a key part of such an early response, both in prevention and containment.

- The potential risk of an epidemic depends on a number of conditions,:
 - Pre-emergency health status: disease levels, degree of immunity, and nutritional status
 - Environmental factors
 - Changes in population density and movement of populations
 - Disruption of water and sewage services
 - Disruption of basic health services
 - Access to health services
- The five most important questions to take into account are:
 - What is the geographical distribution of cases and how many people are at risk?
 - How serious is the clinical course of the disease?
 - Is the epidemic spreading?
 - What could be the possible mode(s) of transmission?
 - Can local health services cope?

The rapid assessment consists of confirming the existence of an epidemic, assessing its impact on health, and assessing the existing response capacity and additional immediate needs.

Sudden Population Displacements

When dealing with internally displaced populations and refugees, it is very important for the rapid health assessment to include the host population because of the additional stress that may be placed on them and local organizations.

Sudden-impact Natural Disasters

Assessing the Impact on Health

- Injuries

A rapid assessment should:

- Estimate the number of persons injured
- Assess the severity and type of injuries and the age and sex distribution of those affected
- Determine possible high risk areas for further injury – unstable buildings, remaining debris, violence

Useful information to gather if possible:

- Types of injuries (such as cuts, rashes, fractures, and burns)
- Injury sites (such as arm, back, leg, and head)
- Approximate age and sex distribution of affected persons

- Illness

Communicable disease outbreaks are quite rare in the days immediately following a sudden natural disaster. However, with continued lack of utilities (such as water supplies and sewage treatment), disrupted health services, and poor environmental conditions, there is an increased risk of communicable disease outbreaks.

The rapid assessment should:

- Identify disease-causing agents already present, or likely to be introduced from outside the affected area (e.g. by external health workers or displaced persons or migrants from other locations)
- Identify the best measures for disease control

Immediately following a disaster, mass immunization campaigns are frequently unnecessary and counterproductive because they divert resources from more essential services. However, attention should be paid to the immunization status of children against measles, pertussis, diphtheria, and polio in densely populated areas.

Complex Humanitarian Emergencies (CHE)

Complex humanitarian emergencies are situations where the causes of the emergency as well as the assistance to the afflicted are bound by intense levels of

political considerations. They are characterized by varying degrees of instability and even collapse of national authority.

One main feature of complex emergencies is generalized violence: against human beings, the environment, infrastructures, and property. Violence has a direct impact in terms of deaths, physical and psychological trauma, disabilities, and the ability to provide aid.

Complex humanitarian emergencies (CHE's) can often be prolonged with varying degrees of access and security. In these situations the security and safety of response staff and assessment teams takes priority over the completion of an assessment. When an assessment is done the limitations of a CHE must be taken into consideration.

The effects of conflict on public health are mediated by a variety of circumstances that include:

- Population displacement: This causes an increase in the risk of acute respiratory infections, diarrhoea and dysentery, measles and other epidemics, including mental health issues. The dependence on food rations entails a parallel and interacting risk of malnutrition.
- Food Shortages: The loss of opportunities and decline of production, food supplies, and purchasing power, usually with the interruption of the commerce can result in diffuse food shortages. The population may resort to migration, on an even larger scale than that directly caused by violence.
- Damage to infrastructure: Armed attacks and landmines, in addition to targeting the civilian population, can damage key infrastructures, such as roads, water plants, communications, and even health facilities.
- Economic crisis: Brought on by decreased production, loss of capital, and increased military expenditure, can force cuts in the budgets for the social sectors.
- Insecurity and military operations: May restrict access to large areas of territory and constrain the delivery of health services, as well as general response and recovery operations.
- Accuracy of assessment: Due to a fear of lack of food and supplies displaced populations might artificially inflate the number in their household

The effects of acute respiratory infection (ARI), diarrhoea, measles, HIV/AIDS, and other epidemics are compounded by the collapse of health services, programs for immunization, and disease control. The overall outcome is a generalized increase in the risk of illness and death that extends beyond the immediate area of conflict, and severe, acute, and chronic psychological traumas. All this must be addressed through emergency and long-term interventions.

A final, major consideration is that health needs will increase as soon as the conflict subsides. Cease-fire may be accompanied by such operations as repatriating

refugees and demobilizing soldiers, who will need special health programs in the quartering areas, and demining, which demands special provisions for medical evacuation.

The health infrastructures, weakened by war and economic crisis, will face new demands for curative care, and a major backlog of preventive measures which could not be implemented for long periods (e.g. measles immunization) and issues surrounding mental health and recovery.

5.5 Sample Checklist for Rapid Health Assessment in Sudden Population Displacements

Characteristics of the Population and Location

Demographic characteristics

- Total population size
- Number of people in the population less than and greater than five years of age
- Size of at-risk groups (female heads of household, elderly, disabled, under 5, pregnant women)
- Average household or family size

Background health information

- Main health and nutritional problems before displacement
- Coverage of public health programs
- Previous sources of medical care
- Number and type of health workers in population
- Health beliefs and traditions – Where do people go to get their health care?
- Social organizations and support systems

Nutrition

- Protein-energy malnutrition
- Micronutrient deficiencies

Mortality

- Crude death rate
- Age-specific death rates (less than and greater than five years of age)
- Cause-specific death rates

Morbidity

- Number of cases (and rates) of specific diseases

Water and sanitation

- Sources
- Quantity
- Quality
- Transport and storage
- Excreta/Sanitation practices
- Soap
- Vectors, including rats
- Burial sites

Material possessions

- Blankets and clothing
- Shelter
- Domestic utensils
- Livestock, money

Location

- Access
- Amount of land
- Other hazards
- Building materials and fuel
- Climate
- Topography and drainage

Response capacity

- Coordination and services by existing organizations

Food available

- Access to local supplies
- Type of food
- Quantity
- Quality
- Feeding programs

Health services available

- Access to and capacity of local services
- Health personnel
- Interpreters
- Type of facilities
- Type of structures

- Water, refrigeration, and generators at facilities
- Drug and vaccine supplies

Other materials available

Logistics

- Transport
- Fuel
- Storage of food, vaccines, and other supplies
- Communication

Coping mechanisms of the community

6. INFORMATION AND COMMUNICATION TECHNOLOGY IN DISASTER RISK REDUCTION²

6.1 Background

Today it is a proven fact that Natural Disasters can happen at any place irrespective of the developed, developing or the least developed status of a country. It can cause massive destruction to the lives and livelihoods of large population and hence, to the national economies. It is experienced that the least developed and developing countries are impacted more severely by large scale natural disasters.

The unique geo-climatic conditions have made India highly vulnerable to natural disasters. In India, 54% of landmass is prone to earthquakes, 40 million hectares of landmass is prone to floods, 8000 km of coastline is prone to cyclones and almost 68% of total geographical area is vulnerable to droughts. The recent occurrence of massive Tsunami on 26.12.2004 has worsened the situation. Though complete prevention of natural disasters is beyond human capabilities, the adverse impact of any disaster on human lives and their livelihoods can be minimized by taking adequate early warning, preparedness and mitigation measures. The state-of-art Information and Communication Technology (ICT) systems play a crucial role for implementing such preventive measures.

6.2 ICT in Disaster Risk Reduction

With advancement in Information & Communication Technology in the form of Internet, GIS, Remote Sensing, satellite-based communication links; it can help a great deal in planning and implementation of disaster risk reduction measures. These technologies have been playing a major role in designing early warning systems, catalyzing the process of preparedness, response and mitigation. ICT tools are also being widely used to build knowledge warehouses using internet and data warehousing techniques. These knowledge warehouses can facilitate planning & policy decisions for preparedness, response, recovery and mitigation at all levels. Similarly, GIS-based systems improve the quality of analysis of hazard vulnerability and capacity assessments, guide development planning and assist planners in the selection of mitigation measures. Communication systems have also become indispensable for providing emergency communication and timely relief and response measures.

6.2.1 The Indian Experience

In order to reduce the risk and vulnerabilities in India the Ministry of Home Affairs, being the Nodal Ministry for Disaster Management, is taking lead on disaster management and mitigation in the country. The Ministry has drawn up a National

²Government of India, Ministry of Home Affairs, National Disaster Management Division. "ICT for Disaster Risk Reduction - The Indian Experience"

Disaster Management Framework for the country. This National Framework covers the prime sectors such as institutional mechanisms at all administrative levels, disaster mitigation/prevention to be mainstreamed into the development process, envisaged legal/policy framework, early warning systems, preparedness & emergency response measures and human resource development. The Ministry has undertaken various nationwide initiatives to strengthen disaster management systems in the country.

United Nations Development Programme (UNDP) has joined hands in this effort of Government of

India and is implementing GoI-UNDP Disaster Risk Management (DRM) programme in 169 most vulnerable Districts of 17 States in India. Information coordination and management is seen as one of the major challenges in India due to the large geography and diversity of language/cultures. The GoI-UNDP DRM Programme addresses these issues very carefully by using Information and Communication Technology tools for faster response, effective decision making and develop well informed practitioners. There are number of ICT based initiatives, tools and applications developed to help the disaster managers function efficiently.

6.3 Online Inventory of Emergency Resources

It has been observed that a comprehensive database of disaster management related inventory and organized information dissemination system on availability of specialized resources is very essential for mobilizing the specialized equipment and skilled human resources to respond immediately during disaster. Lack of adequate information about availability has hampered quick and measured response resulting in delays which could be critical in case of sudden eventualities. Therefore, a need to prepare a database of such resources, from District to State level was strongly felt. When disasters strike, the disaster managers at the District/State level respond with the resources at their command. While the Disaster Manager (District Magistrate/Collector) is generally aware of the resources at his command within the District, he may not be aware of the resources available in the neighbouring Districts or in the neighbouring States. The disaster manager at the State level [the Relief Commissioner] does not have an inventory of resources available within the State. Therefore, all the resources available within the State are not brought to bear for saving lives, and when some specialist equipment is required, there is a lack of knowledge as to the whereabouts of the equipment either in the neighbouring District or in the



Figure 1 - IDRN homepage

neighbouring State. Lives can be lost because of such delays or lack of required resources.

6.3.1 What is IDRN?

The IDRN (**India Disaster Resource Network – www.idrn.gov.in**) is a nation-wide electronic inventory of essential and specialist resources for disaster response, covering specialist equipment, specialist manpower resources and critical supplies. IDRN has been initiated by Ministry of Home Affairs (MHA) in collaboration with United Nations Development Program (UNDP) to systematically build the disaster resource inventory as an organized information system for collection and transmission of information about specific equipments, human expertise and critical supplies database from District level to State level to provide availability of resources for disaster response, so that disaster managers can mobilize the required resources within least response time

The IDRN lists out the equipment and the resources by type and by the functions it performs and it gives the contact address and telephone numbers of the controlling officers in-charge of the said resources so that the equipment can be promptly mobilized. The IDRN is a live system providing for updating of inventory every quarter. Entries into the inventory are made at two levels – District and State level.

This online information system can be accessed by authorized Government officials, District level nodal persons, corporate bodies and public sector units. District nodal authority will be responsible for collecting, compiling and updating their inventory data to the central server with the help of concerned District departments. Adequate authorization and security has been in-built and is being maintained in the portal to prevent unauthorized access to this inventory. The user may avail the facilities like analyzing or querying the information resource inventory through given user friendly interfaces to get a list of resources available in the District and State level.

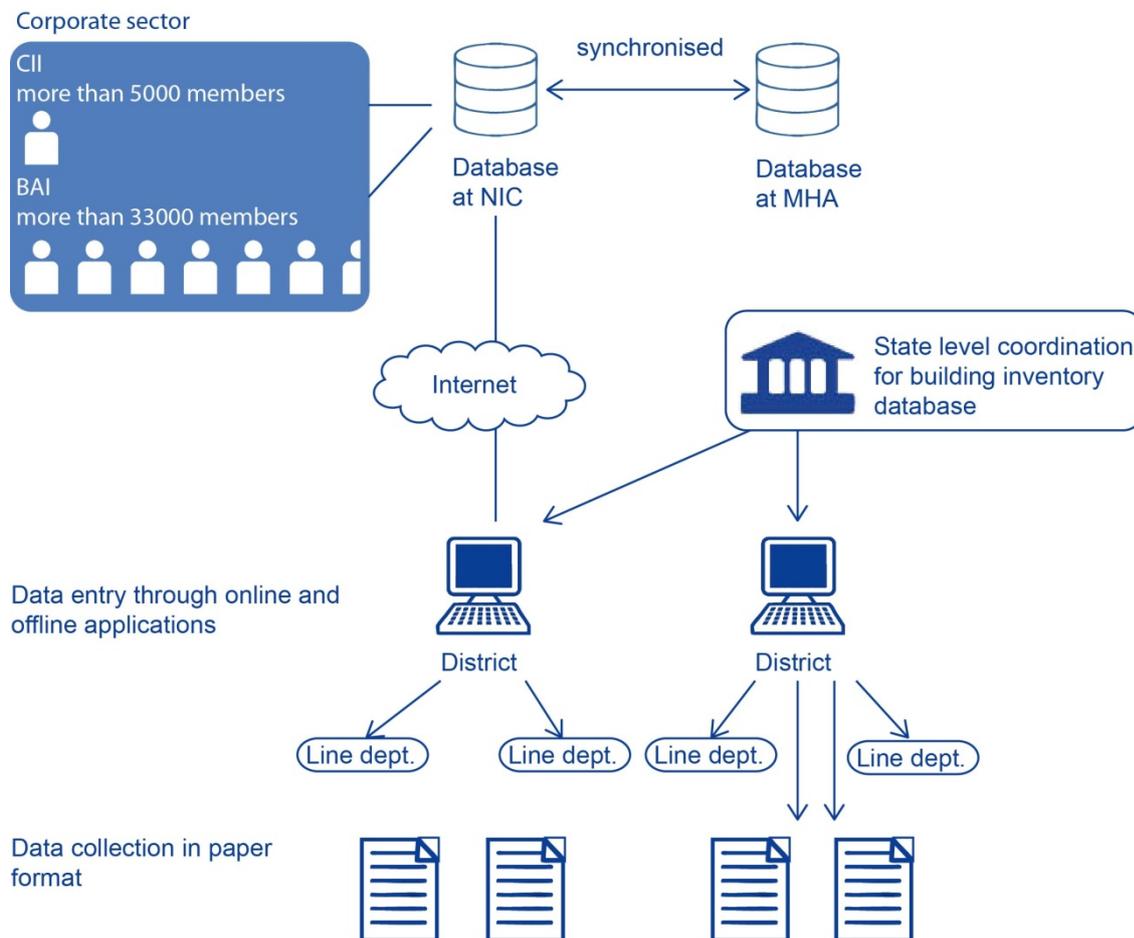
6.3.2 Target Audience

The users and partners of IDRN initiative are: 602 **District administrations** of 35 States and UTs, all 35 **State/ UT administration** of India, around 5000 member **corporate bodies** with **Confederation of Indian Industry (CII)**, around 33,000 builders, contractors and construction companies with **Builders' Association of India (BAI)**, the entire **Indian Railways** and numerous **public sector undertakings** in the country.

6.3.3 How it works?

The India Disaster Resource Network is a web-based application with controlled access to the database. 226 items mainly consisting of equipments, human resources and critical supplies are categorized in the system. The data related to these items are collected from the line departments and various organizations at the District level. The data is entered in to the portal at the District level.

Work process



6.3.4 Description of the Portal

The authorized users can enter the portal through the User ID and Password provided to them by the IDRN Administrator, Ministry of Home Affairs. Various users can access the portal based on their access level predefined viz. user from the Ministry can access the administration of part of the portal, whereas a State disaster management department user can view only the data in the database.

6.3.5 Capturing Inventory

The inventory data of the specified item are collected from various departments below District level in a paper format and Data is entered at the District level through the IDRN portal www.idrn.gov.in.

6.3.6 Locating Resources

The database can be queried by using various options available in the portal viz. Country wide query, summary report, department wise report, common query, date based report etc. The most commonly used report to access country wide data is shown below. The user can choose one or multiple Activity, category, item and State, District and the source of the equipment and find the details in a report.

The screenshot displays the IDRN (India Disaster Resource Network) data entry interface. At the top, the logo 'idrn.gov.in' is visible, along with navigation tabs: ADD TO INVENTORY, MODIFY INVENTORY, QUERY INVENTORY, VIEW ITEMS, CONTACT, LOGOUT, and MENU. A user profile box on the right identifies the user as DM - Sri D.K. Singh, IAS, Collector, Cuttack, with a link to 'Modify DM - Notal Person Details'. Below this is a search bar with the text 'ENTER ITEM CODE HERE' and an 'OK' button. The main form is divided into two sections: 'DEPARTMENT/AGENCY DETAILS' and 'EQUIPMENT OR SUPPLIES OR HR Details - Type'. The first section includes fields for Dept/Agency Name, Contact Person Desg., Contact Telephone 1, 2, and 3, and Dept/Agency Addr, Contact Person Addr, Contact Mobile, Contact Fax No., and Contact E-Mail. The 'Source' is selected as 'Govt'. The second section includes a dropdown for 'Item/Skill Description', 'Quantity Available' (with a unit dropdown), 'Item Location', 'Operator provided' (Yes/No/NA), and 'Transportation Mode' (Road/Rail/Air/Water/NA). There are also checkboxes for 'Prior training exp in emergency response' and 'Prior exp in emergency response'. A note at the bottom states: 'Note : Above Description field is mandatory for all the items of Equipments/Supplies type. (For HR Type, only if team enters composition as Item)'. The form has 'Cancel' and 'Create' buttons at the bottom.

Figure 3: The data entry interface in IDRN

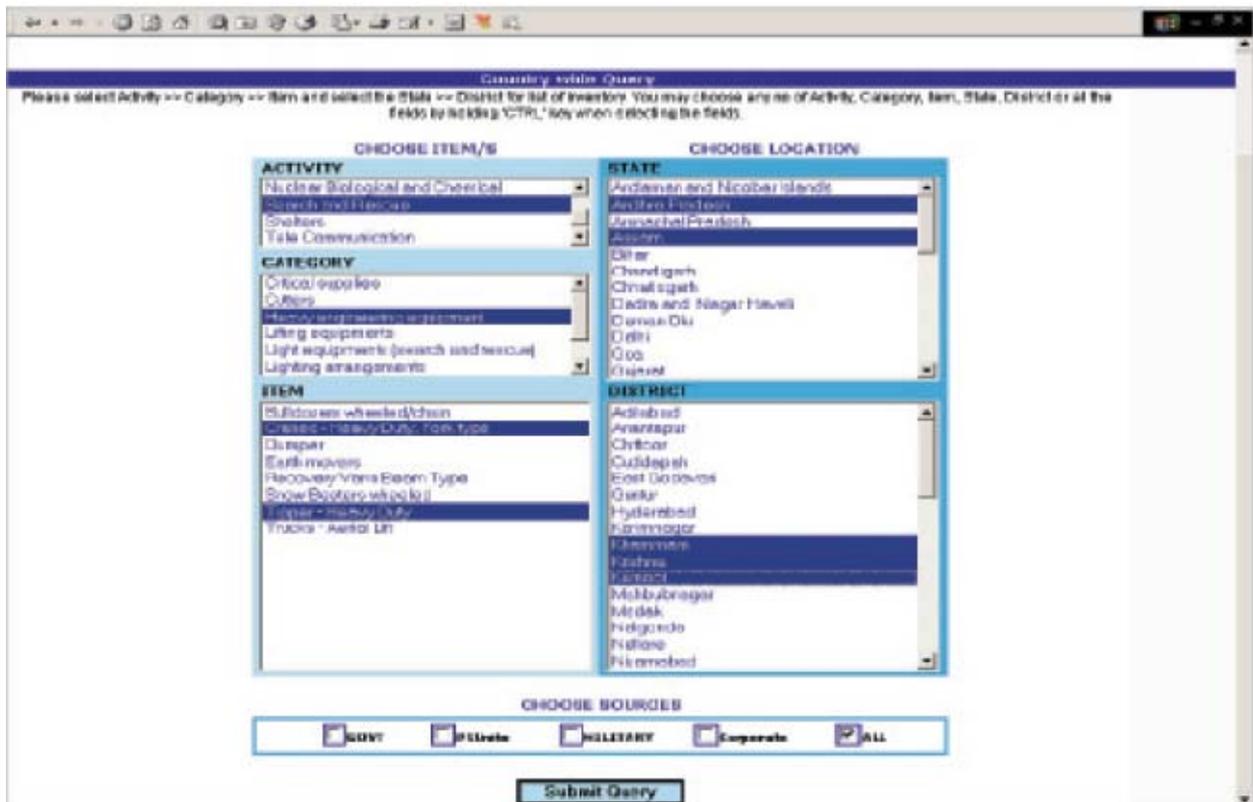


Figure 4: Query Interface in IDRN

The reports generated by the system gives a detail of the equipment, human resource or critical supplies in terms of its availability, contact person details, quantity available, location, operators provided or not, transport options etc.

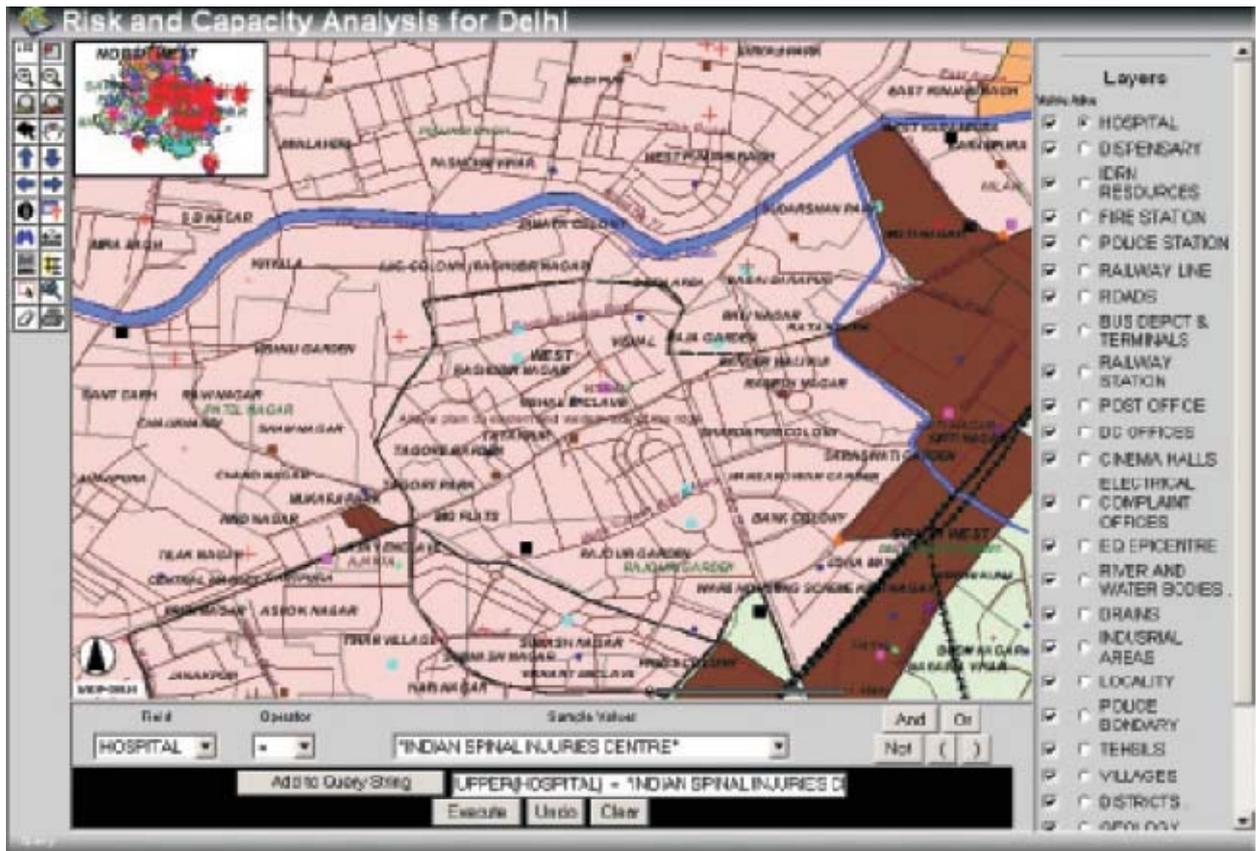
COUNTY-WIDE DISASTER MANAGEMENT RESOURCE INVENTORY - QUERY RESULT			
ITEM DESCRIPTION	DEPARTMENT & CONTACT ADDR	QUANTITY, LOCATION & SOURCE	DM NAME
ITEM: Cranes - Heavy Duty, Fork type DESCRIPTION: Cranes - Heavy Duty, Fork type (76 Tons)	DEPT NAME: Bhyarat Heavy Electricals CONTACT ADDR: General Manager TELEPHONE: 04172241141, DIST: Vellore STATE: Tamil Nadu	QUANTITY: 1 Nos SOURCE: Govt LOCATION: BHEL Factory DATE OF UPDATE: 9/2/2003 DISTRICT MAP... STATE MAP	DM NAME: I CONTACT C 2222000,04
ITEM: Cranes - Heavy Duty, Fork type DESCRIPTION: Cranes-Heavy duty, Fork Type	DEPT NAME: POLICE CONTACT ADDR: Superintendent of police TELEPHONE: 04146-223555, 04146-2281 33 DIST: Viluppuram STATE: Tamil Nadu	QUANTITY: 1 Nos SOURCE: Govt LOCATION: Armed Reserve , Kakkuppam DATE OF UPDATE: 9/23/2004 DISTRICT MAP... STATE MAP	DM NAME: I CONTACT C 222450,041
ITEM: Cranes - Heavy Duty, Fork type DESCRIPTION: Heavy engineering equipment	DEPT NAME: Transport Department CONTACT ADDR: Muthu Anand TELEPHONE: 04562-252089, DIST: Virudhunagar STATE: Tamil Nadu	QUANTITY: 1 Nos SOURCE: Govt LOCATION: At the Department DATE OF UPDATE: 9/1/2003 DISTRICT MAP... STATE MAP	DM NAME: I Aslam I.A.S CONTACT 2
ITEM: Cranes - Heavy Duty, Fork type DESCRIPTION: Cranes - Heavy Duty Fork Type (100 Tons)	DEPT NAME: Bhyarat Heavy Electricals CONTACT ADDR: General Manager TELEPHONE: 04172241141, DIST: Vellore STATE: Tamil Nadu	QUANTITY: 1 Nos SOURCE: Govt LOCATION: BHEL Factory DATE OF UPDATE: 9/2/2003 DISTRICT MAP... STATE MAP	DM NAME: I CONTACT C 2222000,04

Figure 5: Detailed Report in IDRN

6.4 GIS in Disaster Management

During any emergency situation, the role of a reliable Decision Support System is very crucial for effective response and recovery. Geographic Information System (GIS) provide most versatile platform for Decision Support by furnishing multilayer geo-referenced information which includes hazard zoning, incident mapping, natural resources and critical infrastructure at risk, available resources for response, real time satellite imagery etc. GIS-based information tools allow disaster managers to quickly assess the impact of the disaster/emergency on geographic platform and plan adequate resource mobilization in most efficient way. Thus, a reliable GIS-based database will ensure the mobilization of right resources to right locations within least response time. Such database would also play a fundamental role in planning and implementation of large scale preparedness and mitigation initiatives.

The Ministry of Home Affairs have initiated the development of a GIS-based National Database for Emergency Management (NDEM) in collaboration with various Govt. Ministries/agencies such as Dept. of Space, Dept. of Science & Technology and Ministry of Communications & IT. The Ministry with technical support from UNDP is also in process of developing GIS based tools for emergency management on pilot basis. The resources available, the critical infrastructures etc. are mapped for the national capital as demonstrative system (Figure-6).



Map for Illustration Not to Scale

Figure 6: Internet enabled GIS based Decision Support System

6.5 National Emergency Communication Plan

In emergency response and management, it is extremely important to have the communication links *operational* between decision makers at various levels and operational response teams/personnel on the site. Unfortunately at the time of emergency situations such as natural or man-made disasters, the first casualty is the regular telecommunications infrastructure of public wired and wireless (GSM/CDMA) telephones. Considering the crucial role of MHA during such emergencies, it is essential to set-up reliable information and communication network employing both

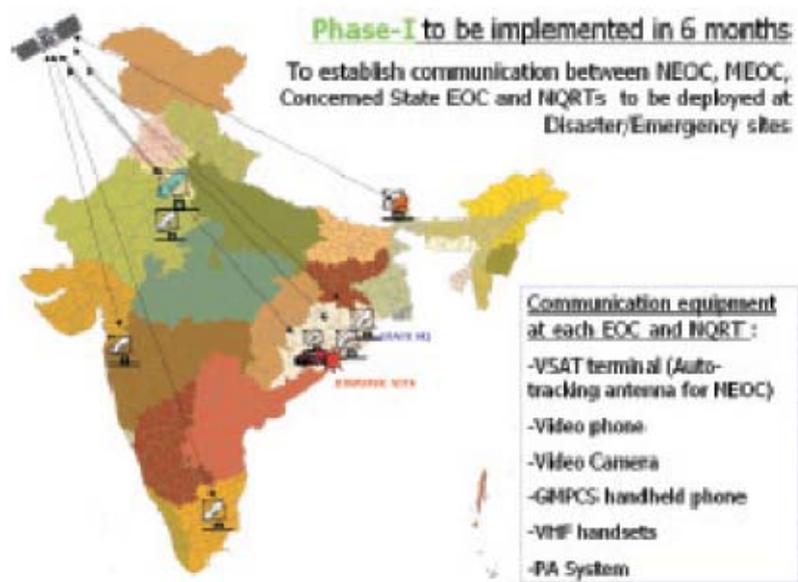


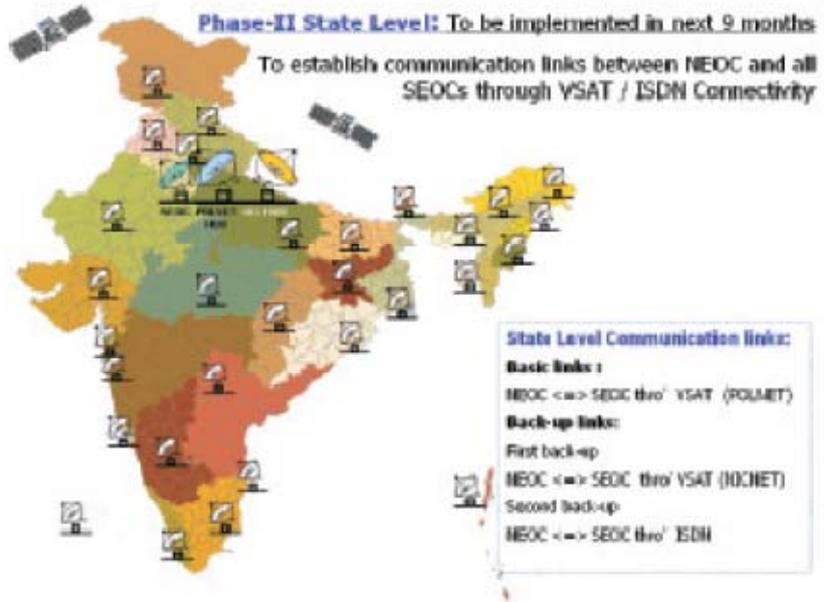
Figure 7: Phase I – National Emergency Communication Plan

terrestrial and satellite-based communication technologies with redundancies to establish a network for emergency communications

The Ministry of Home Affairs is planning to execute the communication plan in two phases.

Phase – I

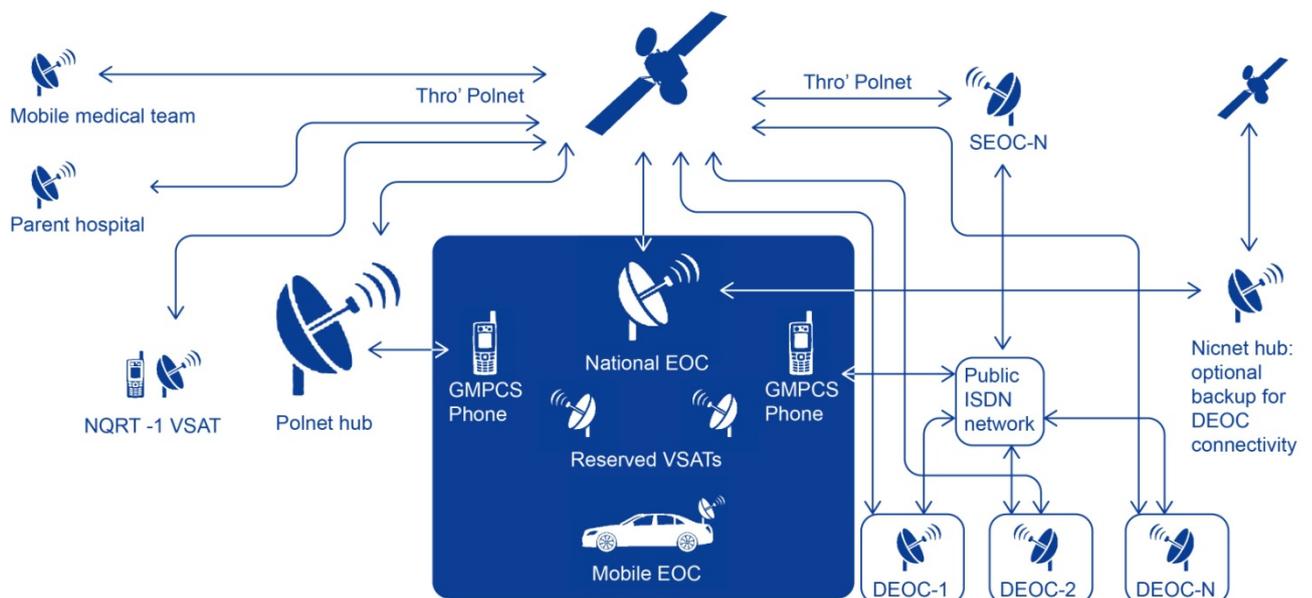
In the first phase, the VSAT network in the first phase will use resources only from POLNET and will provide required communication links between National Emergency Operations Centre (NEOC), remote Disaster sites and respective State Emergency Operations Centre (SEOC).



Phase – II

The second phase envisages integrated network of all EOCs at national, State and District levels as well as transportable terminals deployed at emergency/disaster sites, using satellite and terrestrial communication networks.

Phase - II National Emergency Communication Plan



6.6 Conclusion

Information and Communication Technologies in form of Internet, GIS, Remote Sensing, Satellite communication etc. are indispensable in planning and successful implementation of most Disaster Risk Reduction initiatives. However, the potential of most advanced technologies is required to be harnessed in early warning, preparedness and response systems along with adequate emphasis on building human capacities to use these tools and technologies.

7. HUMANITARIAN PRINCIPLES

7. 1International Humanitarian Law and International Human Rights Law³

Both international humanitarian law (IHL) and international human rights law (IHRL) strive to protect the lives, health and dignity of individuals, albeit from a different angle. It is therefore not surprising that, while very different in formulation, the essence of some of the rules is similar, if not identical. For example, the two bodies of law aim to protect human life, prohibit torture or cruel treatment, prescribe basic rights for persons subject to a criminal justice process, prohibit discrimination, comprise provisions for the protection of women and children, and regulate aspects of the right to food and health. On the other hand, rules of IHL deal with many issues that are outside the purview of IHRL, such as the conduct of hostilities, combatant and prisoner of war status and the protection of the red cross and red crescent emblems. Similarly, IHRL deals with aspects of life in peacetime that are not regulated by IHL, such as freedom of the press, the right to assembly, to vote and to strike.

What is international humanitarian law?

IHL is a set of international rules, established by treaty or custom, which are specifically intended to solve humanitarian problems directly arising from international or non-international armed conflicts. It protects persons and property that are, or may be, affected by an armed conflict and limits the rights of the parties to a conflict to use methods and means of warfare of their choice.

IHL main treaty sources applicable in international armed conflict are the four Geneva Conventions of 1949 and their Additional Protocol I of 1977. The main treaty sources applicable in non international armed conflict are article 3 common to the Geneva Conventions and Additional Protocol II of 1977.

....and what is international human rights law?

IHRL is a set of international rules, established by treaty or custom, on the basis of which individuals and groups can expect and/or claim certain behaviour or benefits from governments. Human rights are inherent entitlements which belong to every person as a consequence of being human. Numerous non-treaty based principles and guidelines ("soft law") also belong to the body of international human rights standards.

IHRL main treaty sources are the International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights (1966), as well as Conventions on Genocide (1948), Racial Discrimination (1965), Discrimination Against Women (1979), Torture (1984) and Rights of the Child (1989). The main regional instruments

³ ICRC (2003): International Humanitarian Law and International Human Rights Law - Similarities and differences

are the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950), the American Declaration of the Rights and Duties of Man (1948) and Convention on Human Rights (1969), and the African Charter on Human and Peoples' Rights (1981).

While IHL and IHRL have historically had a separate development, recent treaties include provisions from both bodies of law. Examples are the Convention on the Rights of the Child, its Optional Protocol on the Participation of Children in Armed Conflict, and the Rome Statute of the International Criminal Court.

When are they applicable?

IHL is applicable in times of armed conflict, whether international or non international. International conflicts are wars involving two or more states, and wars of liberation, regardless of whether a declaration of war has been made or whether the parties involved recognize that there is a state of war.

Non-international armed conflicts are those in which government forces are fighting against armed insurgents, or rebel groups are fighting among themselves. Because IHL deals with an exceptional situation – armed conflict – no derogations whatsoever from its provisions are permitted.

In principle, IHRL applies at all times, i.e. both in peacetime and in situations of armed conflict. However, some IHRL treaties permit governments to derogate from certain rights in situations of public emergency threatening the life of the nation. Derogations must, however, be proportional to the crisis at hand, must not be introduced on a discriminatory basis and must not contravene other rules of international law – including rules of IHL.

Certain human rights are never derogable. Among them are the right to life, prohibition of torture or cruel, inhuman or degrading treatment or punishment, prohibition of slavery and servitude and the prohibition of retroactive criminal laws.

Who is bound by these bodies of law?

IHL binds all actors to an armed conflict: in international conflicts it must be observed by the states involved, whereas in internal conflict it binds the government, as well the groups fighting against it or among themselves. Thus, IHL lays down rules that are applicable to both state and non-state actors.

IHRL lays down rules binding governments in their relations with individuals. While there is a growing body of opinion according to which non state actors – particularly if they exercise government-like functions – must also be expected to respect human rights norms, the issue remains unsettled.

Are individuals also bound?

IHL imposes obligations on individuals and also provides that persons may be held individually criminally responsible for "grave breaches" of the Geneva Conventions and of Additional Protocol, and for other serious violations of the laws and customs of war (war crimes). IHL establishes universal jurisdiction over persons suspected of having committed all such acts. With the entry into force of the International Criminal Court, individuals will also be accountable for war crimes committed in non-international armed conflict.

While individuals do not have specific duties under IHRL treaties, IHRL also provides for individual criminal responsibility for violations that may constitute international crimes, such as genocide, crimes against humanity and torture. These crimes are also subject to universal jurisdiction.

The ad hoc International Criminal Tribunals for the former Yugoslavia and Rwanda, as well as the International Criminal Court, have jurisdiction over violations of both IHL and IHRL.

Who is protected?

IHL aims to protect persons who do not, or are no longer taking part in hostilities. Applicable in international armed conflicts, the Geneva Conventions deal with the treatment of the wounded and sick in the armed forces in the field (Convention I), wounded, sick and shipwrecked members of the armed forces at sea (Convention II), prisoners of war (Convention III) and civilian persons (Convention IV). Civilian persons include internally displaced persons, women, children, refugees, stateless persons, journalists and other categories of individuals (Convention IV and Protocol I).

Similarly, the rules applicable in non-international armed conflict (article 3 common to the Geneva Conventions and Protocol II) deal with the treatment of persons not taking, or no longer taking part in the hostilities.

IHL also protects civilians through rules on the conduct of hostilities. For example, parties to a conflict must at all times distinguish between combatants and non-combatants and between military and non-military targets. Neither the civilian population as a whole, nor individual civilians may be the object of attack. It is also prohibited to attack military objectives if that would cause disproportionate harm to civilians or civilian objects.

IHRL, being tailored primarily for peacetime, applies to all persons.

What is the system of implementation.....at the national level ?

The duty to implement both IHL and IHRL lies first and foremost with states.

States have a duty to take a number of legal and practical measures – both in peacetime and in armed conflict situations – aimed at ensuring full compliance with IHL, including :

- translating IHL treaties;
- preventing and punishing war crimes, through the enactment of penal legislation;
- protecting the red cross and red crescent emblems;
- applying fundamental and judicial guarantees;
- disseminating IHL;
- training personnel qualified in IHL and appointing legal advisers to the armed forces.

IHRL also contains provisions obliging states to implement its rules, whether immediately or progressively. They must adopt a variety of legislative, administrative, judicial and other measures that may be necessary to give effect to the rights provided for in the treaties. This may include enacting criminal legislation to outlaw and repress acts prohibited under IHRL treaties, or providing for a remedy before domestic courts for violations of specific rights and ensuring that the remedy is effective.

...at the international level?

As regards international implementation, states have a collective responsibility under article 1 common to the Geneva Conventions to respect and to ensure respect for the Conventions in all circumstances. The supervisory system also comprises the Protecting Power mechanism, the enquiry procedure and the International Fact-Finding Commission envisaged in Article 90 of Protocol I. States parties to Protocol I also undertake to act in cooperation with the United Nations in situations of serious violations of Protocol I or of the Geneva Conventions.

The ICRC is a key component of the system, by virtue of the mandate entrusted to it under the Geneva Conventions, their Additional Protocols and the Statutes of the International Red Cross and Red Crescent Movement. It ensures protection and assistance to victims of war, encourages states to implement their IHL obligations and promotes and develops IHL. ICRC's right of initiative allows it to offer its services or to undertake any action which it deems necessary to ensure the faithful application of IHL.

The IHRL supervisory system consists of bodies established either by the United Nations Charter or by the main IHRL treaties. The principal UN Charter-based organ is the UN Commission on Human Rights and its Sub-Commission on the Promotion and Protection of Human Rights. "Special procedures" have also been developed by the Commission over the last two decades, i.e. thematic or country specific special reporters, and working groups entrusted with monitoring and reporting on the human rights situations within their mandates.

Six of the main IHRL treaties also provide for the establishment of committees of independent experts charged with monitoring their implementation.

A key role is played by the Office of the High Commissioner for Human Rights which has primary responsibility for the overall protection and promotion of human rights. The Office aims to enhance the effectiveness of the UN's human rights machinery, to increase UN system-wide implementation and coordination of human rights, to build national, regional and international capacity to promote and protect human rights and to disseminate human rights texts and information.

...at the regional level?

The work of regional human rights courts and commissions established under the main regional human rights treaties in Europe, the Americas and Africa is a distinct feature of IHRL, with no equivalent in IHL. Regional human rights mechanisms are, however, increasingly examining violations of IHL.

The European Court of Human Rights is the centerpiece of the European system of human rights protection under the 1950 European Convention. The main regional supervisory bodies in the Americas are the Inter-American Commission on Human Rights and the Inter-American Court of Human Rights. The African Commission on Human and Peoples' Rights is the supervisory body established under the 1981 African Charter. A treaty establishing an African human rights court has not yet come into force.

7.2 A Summary of United Nations Agreements on Human Rights

Contents

- Universal Declaration of Human Rights
- Covenant on Civil and Political Rights
- Optional Protocol to the Covenant on Civil and Political Rights
- Covenant on Economic, Social, and Cultural Rights
- Convention Against Torture
- Convention Against Genocide
- The Geneva Conventions
- Convention on the Rights of the Child
- Convention on Elimination of Discrimination Against Women
- Charter of the United Nations

Universal Declaration of Human Rights

The UDHR is the first international statement to use the term "human rights", and has been adopted by the Human Rights movement as a charter. It is short, and worth reading in its entirety

(a summary would be about as long as the document itself)

Covenant on Civil and Political Rights

This covenant details the basic civil and political rights of individuals and nations. Among the rights of nations are:

- the right to self determination
- the right to own, trade, and dispose of their property freely, and not be deprived of their means of subsistence.

Among the rights of individuals are:

- the right to legal recourse when their rights have been violated, even if the violator was acting in an official capacity
- the right to life
- the right to liberty and freedom of movement
- the right to equality before the law
- the right to presumption of innocence til proven guilty
- the right to appeal a conviction
- the right to be recognized as a person before the law
- the right to privacy and protection of that privacy by law
- freedom of thought, conscience, and religion
- freedom of opinion and expression
- freedom of assembly and association
- The covenant forbids torture and inhuman or degrading treatment, slavery or involuntary servitude, arbitrary arrest and detention, and debtor's prisons. It forbids propaganda advocating either war or hatred based on race, religion, national origin, or language.
- It provides for the right of people to choose freely whom they will marry and to found a family, and requires that the duties and obligations of marriage and family be shared equally between partners. It guarantees the rights of children and prohibits discrimination based on race, sex, colour, national origin, or language.
- It also restricts the death penalty to the most serious of crimes, guarantees condemned people the right to appeal for commutation to a lesser penalty, and forbids the death penalty entirely for people under 18 years of age.

- The covenant permits governments to temporarily suspend some of these rights in cases of civil emergency only, and lists those rights which cannot be suspended for any reason. It also establishes the UN Human Rights Commission.
- After almost two decades of negotiations and rewriting, the text of the Universal Covenant on Civil and Political Rights was agreed upon in 1966. In 1976, after being ratified by the required 35 states, it became international law.

Optional Protocol to the Covenant on Civil and Political Rights

The protocol adds legal force to the Covenant on Civil and Political Rights by allowing the Human Rights Commission to investigate and judge complaints of human rights violations from individuals from signatory countries.

Covenant on Economic, Social, and Cultural Rights

This covenant describes the basic economic, social, and cultural rights of individuals and nations, including the right to:

- self-determination
- wages sufficient to support a minimum standard of living
- equal pay for equal work
- equal opportunity for advancement
- form trade unions
- strike
- paid or otherwise compensated maternity leave
- free primary education, and accessible education at all levels
- copyright, patent, and trademark protection for intellectual property
- In addition, this convention forbids exploitation of children, and requires all nations to cooperate to end world hunger. Each nation which has ratified this covenant is required to submit annual reports on its progress in providing for these rights to the Secretary General, who is to transmit them to the Economic and Social Council.

The text of this covenant was finalized in 1966 along with that of the Covenant on Civil and Political Rights, but has not been ratified yet.

Convention against Genocide

- This convention bans acts committed with the intent to destroy, in whole or in part, a national, ethnic, racial or religious group. It declares genocide a crime

under international law whether committed during war or peacetime, and binds all signatories of the convention to take measures to prevent and punish any acts of genocide committed within their jurisdiction. The act bans killing of members of any racial, ethnic, national or religious group because of their membership in that group, causing serious bodily or mental harm to members of the group, inflicting on members of the group conditions of life intended to destroy them, imposing measures intended to prevent births within the group, and taking group members' children away from them and giving them to members of another group.

- It declares genocide itself, conspiracy or incitement to commit genocide, attempts to commit or complicity in the commission of genocide all to be illegal. Individuals are to be held responsible for these acts whether they were acting in their official capacities or as private individuals. Signatories to the convention are bound to enact appropriate legislation to make the acts named in Article 3 illegal under their national law and provide appropriate penalties for violators.
- People suspected of acts of genocide may be tried by a national tribunal in the territory where the acts were committed or by a properly constituted international tribunal whose jurisdiction is recognized by the state or states involved. For purposes of extradition, an allegation of genocide is not to be considered a political crime, and states are bound to extradite suspects in accordance with national laws and treaties. Any state party to the Convention may also call upon the United Nations to act to prevent or punish acts of genocide.
- The remainder of the Convention specifies procedures for resolving disputes between nations about whether a specific act or acts constitute(s) genocide, and gives procedures for ratification of the convention.

Convention against Torture

- This convention bans torture under all circumstances and establishes the UN Committee against Torture. In particular, it defines torture, requires states to take effective legal and other measures to prevent torture and declares that no state of emergency, other external threats, nor orders from a superior officer or authority may be invoked to justify torture. It forbids countries to return a refugee to his country if there is reason to believe he/she will be tortured, and requires host countries to consider the human rights record of the person's native country in making this decision.
- The CAT requires states to make torture illegal and provide appropriate punishment for those who commit torture. It requires states to assert jurisdiction when torture is committed within their jurisdiction, either investigate and prosecute them, or upon proper request extradite suspects to face trial

before another competent court. It also requires states to cooperate with any civil proceedings against accused torturers.

- Each state is obliged to provide training to law enforcement and military on torture prevention, keep its interrogation methods under review, and promptly investigate any allegations that its officials have committed torture in the course of their official duties. It must ensure that individuals who allege that someone has committed torture against them are permitted to make an official complaint and have it investigated, and, if the complaint is proven, receive compensation, including full medical treatment and payments to survivors if the victim dies as a result of torture. It forbids states to admit into evidence during a trial any confession or statement made during or as a result of torture. It also forbids activities which do not rise to the level of torture, but which constitute cruel or degrading treatment.
- The second part of the Convention establishes the Committee against Torture, and sets out the rules on its membership and activities.
- The Convention was passed and opened for ratification in February, 1985. At that time twenty nations signed, and five more signed within the month. At present sixty five nations have ratified the Convention against torture and sixteen more have signed but not yet ratified it.

Convention on Elimination of Discrimination against Women

- This convention bans discrimination against women.

Convention on the Rights of the Child

- This convention bans discrimination against children and provides for special protection and rights appropriate to minors.

Charter of the United Nations

- The Charter of the United Nations contains some important human rights provisions, in addition to containing the framework for the organization as a whole.

The Humanitarian Charter affirms the fundamental importance of the following principles:

1.1 The right to life with dignity

This right is reflected in the legal measures concerning the right to life, to an adequate standard of living and to freedom from cruel, inhuman or degrading treatment or punishment. We understand an individual's right to life to entail the right to have steps taken to preserve life where it is threatened, and a corresponding duty

on others to take such steps. Implicit in this is the duty not to withhold or frustrate the provision of life-saving assistance. In addition, international humanitarian law makes specific provision for assistance to civilian populations during conflict, obliging states and other parties to agree to the provision of humanitarian and impartial assistance when the civilian population lacks essential supplies.

Universal Declaration of Human Rights, 1948

Article 3

Everyone has the right to life, liberty and security of person.

Article 5

No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

International Covenant on Civil and Political Rights, 1966

Article 6

General comment on its implementation

1. Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life.
2. In countries which have not abolished the death penalty, sentence of death may be imposed only for the most serious crimes in accordance with the law in force at the time of the commission of the crime and not contrary to the provisions of the present Covenant and to the Convention on the Prevention and Punishment of the Crime of Genocide. This penalty can only be carried out pursuant to a final judgement rendered by a competent court.
3. When deprivation of life constitutes the crime of genocide, it is understood that nothing in this article shall authorize any State Party to the present Covenant to derogate in any way from any obligation assumed under the provisions of the Convention on the Prevention and Punishment of the Crime of Genocide.
4. Anyone sentenced to death shall have the right to seek pardon or commutation of the sentence. Amnesty, pardon or commutation of the sentence of death may be granted in all cases.
5. Sentence of death shall not be imposed for crimes committed by persons below eighteen years of age and shall not be carried out on pregnant women.
6. Nothing in this article shall be invoked to delay or to prevent the abolition of capital punishment by any State Party to the present Covenant.

Article 7

General comment on its implementation

No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment. In particular, no one shall be subjected without his free consent to medical or scientific experimentation.

Common Article 3 of the Four Geneva Conventions of 1949

Article 3

In the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties, each Party to the conflict shall be bound to apply, as a minimum, the following provisions:

(1) Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed hors de combat by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, colour, religion or faith, sex, birth or wealth, or any other similar criteria.

To this end, the following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above-mentioned persons:

- (a) Violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and torture;
- (b) Taking of hostages;
- (c) Outrages upon personal dignity, in particular humiliating and degrading treatment;
- (d) The passing of sentences and the carrying out of executions without previous judgement pronounced by a regularly constituted court, affording all the judicial guarantees which are recognized as indispensable by civilized peoples.

(2) The wounded and sick shall be collected and cared for.

An impartial humanitarian body, such as the International Committee of the Red Cross, may offer its services to the Parties to the conflict.

The Parties to the conflict should further endeavour to bring into force, by means of special agreements, all or part of the other provisions of the present Convention.

The application of the preceding provisions shall not affect the legal status of the Parties to the conflict.

Convention (IV) relative to the Protection of Civilian Persons in Time of War

Article 23

Each High Contracting Party shall allow the free passage of all consignments of medical and hospital stores and objects necessary for religious worship intended only for civilians of another High Contracting Party, even if the latter is its adversary. It

shall likewise permit the free passage of all consignments of essential foodstuffs, clothing and tonics intended for children under fifteen, expectant mothers and maternity cases.

The obligation of a High Contracting Party to allow the free passage of the consignments indicated in the preceding paragraph is subject to the condition that this Party is satisfied that there are no serious reasons for fearing:

- (a) that the consignments may be diverted from their destination,
- (b) that the control may not be effective, or
- (c) that a definite advantage may accrue to the military efforts or economy of the enemy through the substitution of the above-mentioned consignments for goods which would otherwise be provided or produced by the enemy or through the release of such material, services or facilities as would otherwise be required for the production of such goods.

The Power which allows the passage of the consignments indicated in the first paragraph of this Article may make such permission conditional on the distribution to the persons benefited thereby being made under the local supervision of the Protecting Powers.

Such consignments shall be forwarded as rapidly as possible, and the Power which permits their free passage shall have the right to prescribe the technical arrangements under which such passage is allowed.

Article 55

To the fullest extent of the means available to it, the Occupying Power has the duty of ensuring the food and medical supplies of the population; it should, in particular, bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate.

The Occupying Power may not requisition foodstuffs, articles or medical supplies available in the occupied territory, except for use by the occupation forces and administration personnel, and then only if the requirements of the civilian population have been taken into account. Subject to the provisions of other international Conventions, the Occupying Power shall make arrangements to ensure that fair value is paid for any requisitioned goods.

The Protecting Power shall, at any time, be at liberty to verify the state of the food and medical supplies in occupied territories, except where temporary restrictions are made necessary by imperative military requirements.

Article 59

If the whole or part of the population of an occupied territory is inadequately supplied, the Occupying Power shall agree to relief schemes on behalf of the said population, and shall facilitate them by all the means at its disposal.

Such schemes, which may be undertaken either by States or by impartial humanitarian organizations such as the International Committee of the Red Cross, shall consist, in particular, of the provision of consignments of foodstuffs, medical supplies and clothing.

All Contracting Parties shall permit the free passage of these consignments and shall guarantee their protection.

A Power granting free passage to consignments on their way to territory occupied by an adverse Party to the conflict shall, however, have the right to search the consignments, to regulate their passage according to prescribed times and routes, and to be reasonably satisfied through the Protecting Power that these consignments are to be used for the relief of the needy population and are not to be used for the benefit of the Occupying Power.

Protocol I Additional to the Geneva Conventions, 1977

Article 69

Basic needs in occupied territories

1. In addition to the duties specified in Article 55 of the Fourth Convention concerning food and medical supplies, the Occupying Power shall, to the fullest extent of the means available to it and without any adverse distinction, also ensure the provision of clothing, bedding, means of shelter, other supplies essential to the survival of the civilian population of the occupied territory and objects necessary for religious worship.
2. Relief actions for the benefit of the civilian population of occupied territories are governed by Articles 59, 60, 61, 62, 108, 109, 110 and 111 of the Fourth Convention, and by Article 71 of this Protocol, and shall be implemented without delay.

Article 70

Relief actions

1. If the civilian population of any territory under the control of a Party to the conflict, other than occupied territory, is not adequately provided with the supplies mentioned in Article 69, relief actions which are humanitarian and impartial in character and conducted without any adverse distinction shall be undertaken, subject to the agreement of the Parties concerned in such relief actions. Offers of such relief shall not be regarded as interference in the armed conflict or as unfriendly acts. In the distribution of relief consignments, priority shall be given to those persons, such as children, expectant mothers, maternity cases and nursing mothers, who, under the Fourth Convention or under this Protocol, are to be accorded privileged treatment or special protection.

2. The Parties to the conflict and each High Contracting Party shall allow and facilitate rapid and unimpeded passage of all relief consignments, equipment and personnel provided in accordance with this Section, even if such assistance is destined for the civilian population of the adverse Party.
3. The Parties to the conflict and each High Contracting Party which allows the passage of relief consignments, equipment and personnel in accordance with paragraph 2:
 - (a) shall have the right to prescribe the technical arrangements, including search, under which such passage is permitted;
 - (b) may make such permission conditional on the distribution of this assistance being made under the local supervision of a Protecting Power;
 - (c) shall, in no way whatsoever, divert relief consignments from the purpose for which they are intended nor delay their forwarding, except in cases of urgent necessity in the interest of the civilian population concerned.
4. The Parties to the conflict shall protect relief consignments and facilitate their rapid distribution.
5. The Parties to the conflict and each High Contracting Party concerned shall encourage and facilitate effective international co-ordination of the relief actions referred to in paragraph 1.

Article 71

Personnel participating in relief actions

1. Where necessary, relief personnel may form part of the assistance provided in any relief action, in particular for the transportation and distribution of relief consignments; the participation of such personnel shall be subject to the approval of the Party in whose territory they will carry out their duties.
2. Such personnel shall be respected and protected.
3. Each Party in receipt of relief consignments shall, to the fullest extent practicable, assist the relief personnel referred to in paragraph 1 in carrying out their relief mission. Only in case of imperative military necessity may the activities of the relief personnel be limited or their movements temporarily restricted.
4. Under no circumstances may relief personnel exceed the terms of their mission under this Protocol. In particular they shall take account of the security requirements of the Party in whose territory they are carrying out their duties. The mission of any of the personnel who do not respect these conditions may be terminated.

Protocol II Protocol Additional to the Geneva, 1977

Article 18

Relief societies and relief actions

1. Relief societies located in the territory of the High Contracting Party, such as Red Cross (Red Crescent, Red Lion and Sun) organizations may offer their services for the performance of their traditional functions in relation to the victims of the armed conflict. The civilian population may, even on its own initiative, offer to collect and care for the wounded, sick and shipwrecked.
2. If the civilian population is suffering undue hardship owing to a lack of the supplies essential for its survival, such as food-stuffs and medical supplies, relief actions for the civilian population which are of an exclusively humanitarian and impartial nature and which are conducted without any adverse distinction shall be undertaken subject to the consent of the High Contracting Party concerned.

Convention on the Rights of the Child, 1989

Article 6

1. States Parties recognize that every child has the inherent right to life.
2. States Parties shall ensure to the maximum extent possible the survival and development of the child.

Article 24

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
 - (a) To diminish infant and child mortality;
 - (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;
 - (c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
 - (d) To ensure appropriate pre-natal and post-natal health care for mothers;
 - (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;
 - (f) To develop preventive health care, guidance for parents and family planning education and services.

3. States Parties shall take all effective and appropriate measures with a view to abolishing traditional practices prejudicial to the health of children.
4. States Parties undertake to promote and encourage international co-operation with a view to achieving progressively the full realization of the right recognized in the present article. In this regard, particular account shall be taken of the needs of developing countries

Article 37

States Parties shall ensure that:

- (a) No child shall be subjected to torture or other cruel, inhuman or degrading treatment or punishment. Neither capital punishment nor life imprisonment without possibility of release shall be imposed for offences committed by persons below eighteen years of age;
- (b) No child shall be deprived of his or her liberty unlawfully or arbitrarily. The arrest, detention or imprisonment of a child shall be in conformity with the law and shall be used only as a measure of last resort and for the shortest appropriate period of time;
- (c) Every child deprived of liberty shall be treated with humanity and respect for the inherent dignity of the human person, and in a manner which takes into account the needs of persons of his or her age. In particular, every child deprived of liberty shall be separated from adults unless it is considered in the child's best interest not to do so and shall have the right to maintain contact with his or her family through correspondence and visits, save in exceptional circumstances;
- (d) Every child deprived of his or her liberty shall have the right to prompt access to legal and other appropriate assistance, as well as the right to challenge the legality of the deprivation of his or her liberty before a court or other competent, independent and impartial authority, and to a prompt decision on any such action.

Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment

1.2 The distinction between combatants and non-combatants

This is the distinction which underpins the 1949 Geneva Conventions and their Additional Protocols of 1977. This fundamental principle has been increasingly eroded, as reflected in the enormously increased proportion of civilian casualties during the second half of the twentieth century. That internal conflict is often referred to as 'civil war' must not blind us to the need to distinguish between those actively engaged in hostilities, and civilians and others (including the sick, wounded and prisoners) who play no direct part. Non-combatants are protected under international humanitarian law and are entitled to immunity from attack.²

Convention on the Status of Refugees, 1951

Article 33

Prohibition of expulsion or return ("refoulement")

1. No Contracting State shall expel or return ("refouler") a refugee in any manner whatsoever to the frontiers of territories where his life or freedom would be threatened on account of his race, religion, nationality, membership of a particular social group or political opinion.
2. The benefit of the present provision may not, however, be claimed by a refugee whom there are reasonable grounds for regarding as a danger to the security of the country in which he is, or who, having been convicted by a final judgement of a particularly serious crime, constitutes a danger to the community of that country.

Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 1984

Article 3

General comment on its implementation

1. No State Party shall expel, return ("refouler") or extradite a person to another State where there are substantial grounds for believing that he would be in danger of being subjected to torture.
2. For the purpose of determining whether there are such grounds, the competent authorities shall take into account all relevant considerations including, where applicable, the existence in the State concerned of a consistent pattern of gross, flagrant or mass violations of human rights.

Convention on the Rights of the Child, 1989

Article 22

1. States Parties shall take appropriate measures to ensure that a child who is seeking refugee status or who is considered a refugee in accordance with applicable international or domestic law and procedures shall, whether unaccompanied or accompanied by his or her parents or by any other person, receive appropriate protection and humanitarian assistance in the enjoyment of applicable rights set forth in the present Convention and in other international human rights or humanitarian instruments to which the said States are Parties.
2. For this purpose, States Parties shall provide, as they consider appropriate, co-operation in any efforts by the United Nations and other competent intergovernmental organizations or non-governmental organizations co-operating

with the United Nations to protect and assist such a child and to trace the parents or other members of the family of any refugee child in order to obtain information necessary for reunification with his or her family. In cases where no parents or other members of the family can be found, the child shall be accorded the same protection as any other child permanently or temporarily deprived of his or her family environment for any reason, as set forth in the present Convention.

Notes

- 1) Articles 3 and 5 of the Universal Declaration of Human Rights 1948; Articles 6 and 7 of the International Covenant on Civil and Political Rights 1966; common Article 3 of the four Geneva Conventions of **1949**; Articles 23, 55 and 59 of the Fourth Geneva Convention; Articles 69 to 71 of Additional Protocol I of 1977; Article 18 of Additional Protocol II of 1977 as well as other relevant rules of international humanitarian law; Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 1984; Articles 10, 11 and 12 of the International Covenant on Economic, Social, and Cultural Rights 1966; Articles 6, 37, and 24 of the Convention on the Rights of the Child 1989; and elsewhere in international law.
- 2) The distinction between combatants and non-combatants is the basic principle underlying international humanitarian law. See in particular common Article 3 of the four Geneva Conventions of 1949 and Article 48 of Additional Protocol I of 1977. See also Article 38 of the Convention on the Rights of the Child.
- 3) Article 33 of the Convention on the Status of Refugees 1951; Article 3 of the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 1984; Article 22 of the Convention on the Rights of the Child 1989.

Sources

The following instruments inform this Charter:

- Universal Declaration of Human Rights 1948.
- International Covenant on Civil and Political Rights 1966.
- International Covenant on Economic, Social and Cultural Rights 1966.
- The four Geneva Conventions of 1949 and their two Additional Protocols of 1977.
- Convention on the Status of Refugees 1951 and the Protocol relating to the Status of Refugees 1967.
- Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 1984.
- Convention on the Prevention and Punishment of the Crime of Genocide 1948.
- Convention on the Rights of the Child 1989.
- Convention on the Elimination of All Forms of Discrimination Against Women 1979.
- Guiding Principles on Internal Displacement 1998.

Putting together the Emergency and Humanitarian Accountability Map

OBJECTIVE: To fulfill our mandate and legal obligations as humanitarian agencies by providing the best possible assistance to people affected by disaster

OUR RESPONSIBILITY: People affected by disaster have a right to assistance that reflects and upholds rights enshrined in International Human Rights Law

We will do this through an integrated framework of accountability initiatives based on:

Accountability Obligations					
<p>Consistency with International Law:</p> <p>We seek to ensure our practice is consistent with the international legal rights of the:</p> <ul style="list-style-type: none"> 1948 Universal Declaration of Human Rights & 1976 Bill of Rights (old 1969 Covenants on Civil & Political Rights & Social, Economic and Cultural Rights (Human Rights Law) 1949 Geneva Conventions & additional protocols (International Humanitarian law) 1951 Refugee Convention (Refugee law) <p>We also seek to promote an understanding of and respect for, these international legal tenets.</p>	<p>Code of Conduct for the International Red Cross & Red Crescent Movement & NGOs in Disaster Relief:</p> <p>The principles of the Code of Conduct hold us to maintaining high standards of independence, effectiveness and impact to which disaster response NGOs and the International Red Cross and Red Crescent Movement aspire.</p> <p>In the event of a armed conflict, the Code of Conduct will be interpreted and applied in conformity with international humanitarian law.</p>	<p>The Sphere Project Humanitarian Charter:</p> <p>We affirm our commitment to the Humanitarian Charter principles:</p> <ul style="list-style-type: none"> The right to life with dignity. The distinction between combatants and non-combatants The principle of non-refoulement. <p>Our commitment to these principles and to achieving the Minimum Standards is based on an appreciation of our ethical obligations.</p>	<p>Humanitarian Accountability Principles:</p> <p>We pursue and demonstrate accountability by:</p> <ul style="list-style-type: none"> Respecting and promoting the rights of humanitarian claimants Setting the standards that apply to our work Informing beneficiaries of these standards Meaningfully involving beneficiaries in all aspects Demonstrating our compliance through monitoring and reporting Enabling complaints to be made in safety Promoting these principles in working with partners 	<p>Do No Harm:</p> <p>We will design our humanitarian and/or development programs to ensure we do not exacerbate and worsen any conflict but instead help local people distinguish from fighting and develop systems for resolving conflict within their societies.</p>	<p>Building Strong and Accountable Organisations</p> <p>People in Aid</p> <p>We will improve the quality of our human resources management.</p> <p>Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP):</p> <p>We will promote a culture of learning across the humanitarian sector in order to improve performance.</p>
Accountability Standards					
<p>The International legal framework:</p> <p>IHL regulates the protection of persons and the conduct of hostilities in armed conflict and establishes the various rights and duties of a citizens in a conflict including relief organisations. All parties to a conflict, both state and non state, are bound by IHL and a State at war must accept impartial humanitarian assistance carried out without discrimination subject to agreement of the parties concerned.</p> <p>Human Rights law and Refugee law apply at all times and in any context (conflict, natural disaster etc)</p> <p>Human Rights Law imposes standards that governments must abide by in their treatment of persons both in peace time and war.</p> <p>International Refugee Law prohibits people who have fled their country due to persecution or other serious violations of human rights or a armed conflict.</p> <p>See The Geneva Conventions: http://www.icrc.org/Web/Eng/steainq01.nsf/html4/genevaconventions International human rights declarations and covenants: http://www.hchr.org/eng/ihl/law</p>	<p>Code of Conduct Principles:</p> <p>We will ensure our standards of behaviour by:</p> <ul style="list-style-type: none"> Putting the humanitarian imperative first Giving aid regardless of race, creed, nationality and without diverse distinction of any kind, on the basis of need alone Not using aid to further religious or political standpoint Not acting as instruments of foreign policy Respecting culture and custom Attempting to build disaster response on local capabilities Involving beneficiaries in management of relief aid Striving to reduce future vulnerabilities Holding ourselves accountable to both those we seek to assist and those from whom we accept resources Recognizing disaster victims as dignified humans in our publicity <p>See International Committee of the Red Cross: http://www.icrc.org/web/eng/steainq01.nsf/html4/57JMN6</p>	<p>The Sphere Project Minimum Standards:</p> <p>Through The Sphere Project we set ourselves Minimum Standards Common to All Sectors:</p> <ul style="list-style-type: none"> Participation Initial Assessment Response Targeting Monitoring Evaluation Aid worker competencies and responsibilities Supervision, management and support of personnel <p>And Minimum Standards in the following technical sectors:</p> <ul style="list-style-type: none"> Water, Sanitation and Hygiene Promotion Food Security, Nutrition and Food Aid Shelter, Settlement and Non Food Items Health Services <p>See The Sphere Project: http://www.sphereproject.org</p>	<p>Guaranteeing and demonstrating accountability:</p> <p>We will demonstrate our accountability by:</p> <ul style="list-style-type: none"> Establishing a humanitarian quality management system Making information on our agency's background, commitment to principles, program plan, reports and complaints handling procedure available to those we aim to assist Fostering beneficiary participation in decision making and ensuring their informed consent Determining the competencies, attitudes and development needs of staff required Establishing and implementing an effective, accessible and safe complaints handling mechanism for affected people, partners and staff Establishing a process of continual quality and accountability improvement in our work <p>See HAP Standard: http://www.hapinternational.org</p>	<p>Do No Harm:</p> <p>We strengthen our accountability by minimising the negative impact of our work by better understanding:</p> <ul style="list-style-type: none"> Assistance becomes a part of the conflict context There are dividers and connectors in any conflict situation Our assistance will impact on both dividers and connectors Our impact occurs through two mechanisms – resource transfer and implicit messages Details of our assistance matter: what, why, who, by whom, when, where, and how We always have options for changing our programs to eliminate negative impacts or to improve positive contributions to peace <p>See CDA Collaborative Learning Project: http://www.cda-c.com</p>	<p>Effectively supporting our people:</p> <p>We recognize the centrality of our staff in achieving quality and accountability and support them by:</p> <ul style="list-style-type: none"> Ensuring their health, safety and security Promoting learning, training and development Appropriate recruitment and selection Consultation and communication Support, management and leadership Appropriate policies and practices Strong human resources strategy <p>See People in Aid: http://www.peopleinaid.org/code/</p> <p>Learning for better practice</p> <p>We improve our practice through documenting and sharing learnings and through participating in peer evaluations.</p> <p>See ALNAP: http://www.od.org.uk/ALNAP/</p>

Key tools, approaches and links to help us:

Our own Agency Policies, Strategies, Guiding Principles and Tools including but not limited to: Vision and Mission statements, Agency toolkits and manuals, Agency policies and/or strategies including: Child Protection, Civil Military Relations, Gender, Protection, People living with HIV/AIDS, People with Disability, Environment and Benefit /Harm Tools

International Guiding Principles for Internal Displacement: http://www.reliefweb.int/ocha_ol/pub/ldp_gpldp.html

The Good Enough Guide: <http://www.globalpolicy.org/hqos/aid/2007/0209goodenough.pdf>

The Antares Foundation: <http://www.antaresfoundation.org>

Quality Compass: <http://www.projectquality.org/en/indext/index.php>

ALNAP Protection Guidelines & Handbook for Participation in Emergencies: <http://www.od.org.uk/ALNAP/>

Inter Agency Standing Committee (IASC): Inter-agency coordination for UN and non-UN partners <http://www.humanitarianinfo.org/iasc>

Steering Committee for Humanitarian Response (SCHR): eight international networks <http://www.humanitarianinfo.org/iasc/content/about/schr.asp>

Reliefweb: United Nations website providing information to humanitarian relief organizations <http://www.reliefweb.int>

An initiative of the ACFID Humanitarian Reference Group

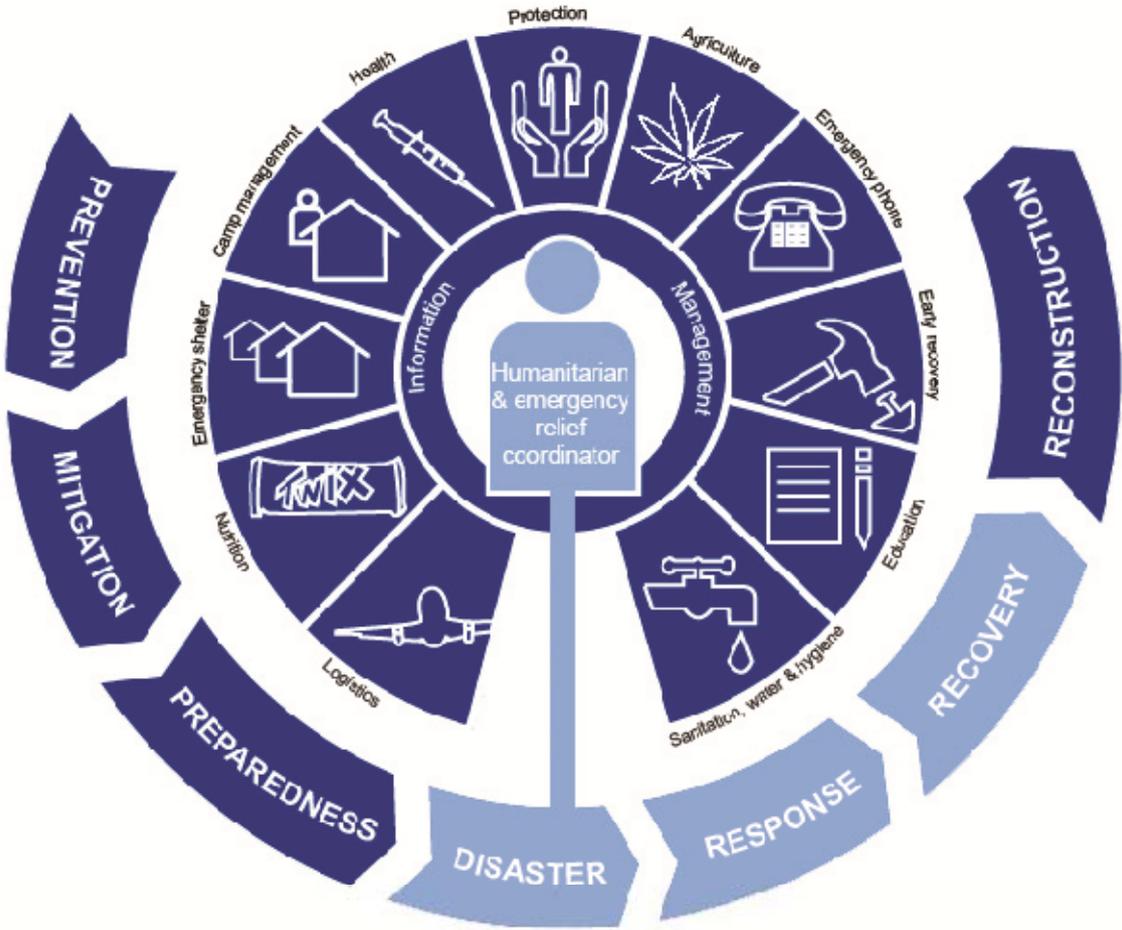


The logos shown are: Caritas Australia, World Vision, Austcare (Humanitarian Aid), care, ACFID CODE (Accountability), Habitat for Humanity Australia, Oxfam Australia, and Australian Red Cross (The Power of Humanity).

8. HUMANITARIAN COORDINATION

8.1 Cluster Approach⁴

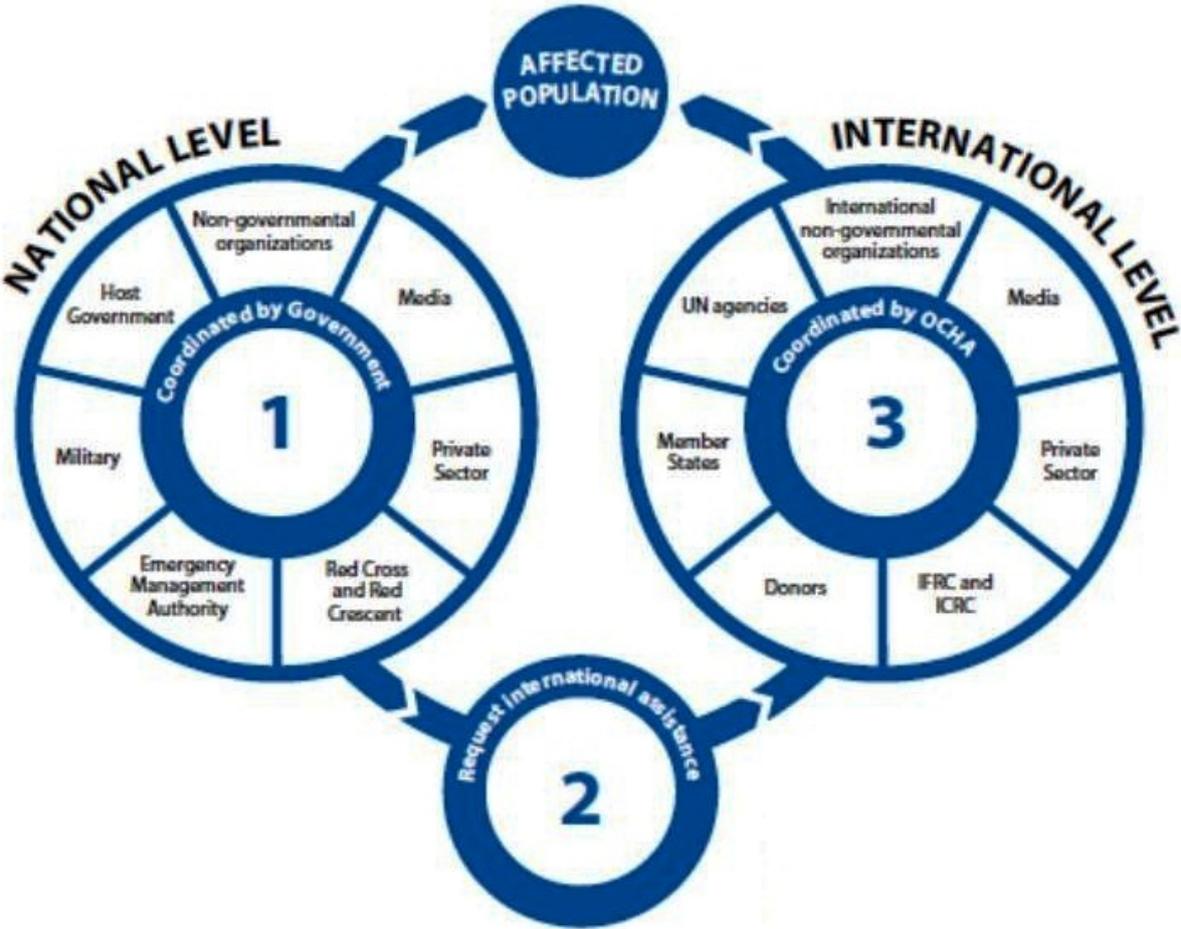
The aim of the cluster approach is to strengthen partnerships and ensure more predictability and accountability in international responses to humanitarian emergencies, by clarifying the division of labour among organisations, and better defining their roles and responsibilities within the key sectors of the response.



8.2 Key Actors

⁴ OCHA: How are disaster relief efforts organised?

The United Nations General Assembly has established the UN Office for the Coordination of Humanitarian Affairs (OCHA) to assist governments in mobilizing international assistance when the scale of the disaster exceeds the national capacity. OCHA manages a number of tools to facilitate coordination of multiple actors and resources. In particular it chairs a forum of the most experienced relief agencies and prepares common humanitarian action plans and joint appeals with them.



9. RELIEF LOGISTICS

This part of the module introduces the subject of relief logistics. After reading it you should be able to identify: the variables affecting a relief logistics operation the constraints to effective operations planning tools and resource agencies

9.1 Introduction

Most relief workers and development officials get only a limited view of emergency logistics. Although logistics is often the largest and most complex element of relief operations, it is normally seen only as a series of local, disconnected activities. In reality, emergency (or relief) logistics is a systems exercise, involving integrated and coordinated performance from widely scattered groups of skilled specialists. Much of this activity, particularly the work of the control and support staff, is hardly visible to the outsider. There are many different types of logistics programs, but they all have common features, and they need a systematic and professional approach. This module gives a broad overview of the range of logistics activities in disaster relief, how they can best be organized, and the plans that can be made beforehand.

9.2 Relief Logistics

The basic task of a logistics system is to deliver the appropriate supplies, in good condition, in the quantities required, and at the places and time, they are needed. Although mostly concerned with the movement of goods and equipment, relief logistics also encompass the relocation of disaster-affected people, transfer of casualties, and the movement of relief workers. A great proportion of the relief logistics operation never receives international attention. ***A whole range***

of transport and distribution-related activities will usually be improvised at the local level during emergencies. Examples include marshalling of local vehicles for casualty transport, or actions by a transport firm or bus company to aid evacuation. Locally organized actions are often the most effective and appropriate. Some of the most effective official planning focuses on ways to support and reinforce local spontaneous responses.

Persian Gulf War. Thousands fleeing Kuwait and Iraq were evacuated, assisted by locally-provided trucks in Jordan. Refugees, March 1991, UNHCR/L. Astrom



Some emergencies generate **a limited need for very rapid, and very specific deliveries from outside the area**, and sometimes from outside the country. This can include the re-supply of small quantities of critical medical items in some major emergencies; delivery of communications equipment or generators to key facilities; or provision of specific repair items for “lifeline” systems such as urban water supply, sanitation, electric power, or public service broadcasting. Small teams, in one or two vehicles, delivering specifically requested or pre-designated supplies to a particular location, often accomplish this. The choice of items is determined by the risks to particular groups of people, and the precise strategies needed to reduce or eliminate those risks. These small, precise actions are among the most effective. They can be planned in detail at all levels. International organizations can play an important supporting role. This is also an area where neighbouring countries can give valuable mutual support. The conditions in which large amounts of external relief are needed are usually more limited than most observers believe. Consistently, many of the internationally supplied relief goods flown into countries affected by sudden natural disasters prove to be inappropriate and unnecessary. These goods may even be a barrier to more important deliveries. Sometimes, a major management challenge is to find ways to **limit and prioritize relief inputs**. Preventing the delivery of unnecessary items can itself contribute substantially to a more effective management of relief and recovery. Some sudden

Emergencies eventually do generate a need for organized transport and materials handling on a large scale, but usually at a late stage. In cyclones and earthquakes, much of the demand for logistics services is related to debris clearance, rehabilitation of services, and the movement of material and resources for reconstruction.

9.3 Moving Bulk Commodities

Large quantities of relief food and other basic items will mainly be needed in situations where famine or conflict has already resulted in massive population displacement or in areas cut-off for long periods by conflict. There may also be a need in areas where (for a variety of reasons) increasing numbers of people cannot afford to purchase food, but where population movement has not yet occurred.

However, additional approaches involving market interventions, livestock purchase, or cash distribution are now also routinely considered, especially where a crisis has been anticipated and

where operating agencies have extensive local knowledge and contacts. Bulk commodity transport for large populations is a major planning and management challenge. Operations of this type are extremely expensive and usually take several months to assemble. Highly experienced staff are needed. Nonetheless, bulk



Refugees from Somalia in Ethiopia. Hartisheik Camp food distribution. This emergency aid was airlifted from Europe and Asia.

commodity logistics for refugees and displaced people have the potential to save more lives than almost any other relief activity.

Bulk commodity logistics for refugees and displaced people have the potential to save more lives than almost any other relief activity.

11.4 Moving People

Recently, there have been several internationally managed logistics operations to ***relocate large numbers of people*** affected by emergencies. Before the Gulf War, there was a huge operation to repatriate foreign workers fleeing from Iraq. In addition, there have been several large refugee repatriation programs involving the organized return of hundreds of thousands of people.



Military involvement

A further dimension has been added to relief logistics with the increasing involvement of ***UN peacekeeping forces and other military units*** in both an escort and a relief transport role. There is an increasing tendency to use military transport aircraft to move bulk relief supplies, especially to supply areas where road access is too difficult or too dangerous. How the very high costs of such operations are allocated is a subject of considerable controversy in the relief community. With the growing number of relief operations to support victims of civil conflict,

Honduras. Salvadoran refugees in voluntary repatriation to El Salvador. UNHCR/D. Bregnard

Military involvement in humanitarian logistics is now high on the international agenda. Perhaps the biggest overall lesson has been the need for mutual understanding and trust between partners whose natural inclination has often been to dismiss each other.

9.5 The Operating Environment

Relief logistics often need to be organised quickly under severe constraints. These include the pre-existing logistics infrastructure in the affected area, political factors, the damage caused by the disaster, and sometimes the security environment in operating areas. The overall effectiveness of relief logistics often depends on ***the level of prior investment*** in both the transport and communications infrastructure

and how far relief requirements have been considered in the planning of that investment. Effectiveness often also depends on how far the vulnerability of those elements to various hazards has been considered and compensated for.

Capacity

In many less-developed countries, the physical and economic infrastructure may be a serious barrier to effective relief logistics. Among the problems encountered are limitations in port and airfield capacity, shortages of secure warehousing space, and difficulties with commodity handling and packaging. The road and rail transport systems are often in poor condition, with bridge weight or height limits and other bottlenecks. Parts of the route may be impassable during rains. On railways, locomotive and wagon shortages, signalling problems, and track deterioration all limit emergency

Supply Chain Management

Supply chain logistics in emergency situations, the purpose of which is to "deliver the right supplies, in good condition and the quantities requested, in the right places and at the time they are needed".³ The links in this logistics chain are not necessarily sequential or linear; indeed, they are often carried out in parallel. However, they must not be considered as separate activities but integrally, due to their complex interrelationships. Although a general coordinator must keep track of all the threads, no one could expect a single individual to micromanage the entire process. Accordingly, someone should be responsible for procurement, transport, storage, and distribution, as outlined below.

Procurement

The purpose of the procurement process is to make sure that the organizations involved in relief management have the resources needed to ³ *Ibid.* meet identified needs. This in turn requires identifying the sources of those goods and services and the way in which they will be acquired. Transport is the means whereby supplies reach the places where they are needed. A transport strategy must not only take into account the means of transport but also the actual possibilities of getting supplies from point A to B, as well as alternatives for the prompt, safe delivery of relief assistance. Storage The purpose of storage is to protect the emergency supplies in an organized, Systematic fashion until they can be delivered to their ultimate recipients. It must also take into account reserve supplies, or stockpiles, for future or unforeseen needs.

Distribution

The chief goal of the logistics chain in relief operations is delivering aid to the people affected by a disaster, or at least to the organizations entrusted with managing

emergency supplies, in a way that is proportional to existing needs, fair, and properly controlled to prevent abuses or waste.

9.6 Putting it All Together

It is important to underscore the fact that all of the above components are closely linked. The failure or ineffective functioning of any of the links in the chain will affect overall performance. For instance, if the transport of a load of supplies has been organized correctly, but upon arrival, it turns out that no provisions were made for storage, the efficiency of the transport effort will have been to no avail. Alternatively, if there are enough resources to cover the needs of an affected area, but no transport to take them where they are needed, the success of the other efforts will be, for all practical purposes, moot, because they were not properly synchronized with the transport component. One missing link is all that is needed for the chain to break.

10. SHELTER AND SETTLEMENT PLANNING

10.1 Introduction

Why launch a phased response?

Post disaster priorities for reconstruction and other forms of responses can be of mammoth proportions which will require appropriate strategies for effective handling of work over space and time. Experience suggest that post disaster reconstruction by its very nature may span over two to three years. One of the key questions before we deal with the reconstruction issues is how do we (including affected people) handle the situation before the permanent housing is delivered. This essentially defines the logic of phased response. Working in two phases or increments before reconstruction is accepted as an effective practice for post disaster shelter and settlement response. It starts with rapid shelter response termed as 'emergency shelter'. The next increment comes in the form of transitional shelter which involves relatively broad -



Two phase response prior to reconstruction: the model that has proven successful in many disaster situations worldwide. Affected population needs shelter, settlement, NFI and other services in all the phases to survive homelessness. Shelter Response constantly supports family's journey from the situation of inadequate shelter back to a durable house with additional features to make it hazard resistant; **Build Back Better.**

Shelter as a family asset is closely linked with collective issues of settlement, livelihoods, access to resources etc...

based discussions and response with support of various stakeholders.

Loss of shelter, settlement and human habitat can have serious threat to physical and mental wellbeing of displaced population. As stated above, risk can be reduced in a step by step approach and may require diverse set of strategies to

reduce/manage the risk effectively. We have to plan on the basis of a staged approach; identify priority actions and get going. Plan to upgrade facilities and services, and improve people's access to services and benefits. Therefore, progression of risk reduction should feature in the response strategy.

What is the shelter sector in the context of emergency response?

In an emergency people may lose their homes: the structure may be damaged or the people may have to leave their homes, their area or even their country. The shelter sector covers the process of supporting communities to house themselves again. It is essential to consider sheltering communities as a process so that they are provided with the support they need all the way home, not just until the plastic sheets have been distributed.

This support can involve many different kinds of interventions, ranging from helping manage planned camps and distributing family tents through to repairing or constructing houses or community buildings, or providing water, drainage and roads.

When an emergency causes people to lose their homes they lose security for themselves and their belongings. They lose the dignity that comes from having privacy. They lose one of their largest assets in terms of financial and social capital, as both collateral and family heritage. If it is also the place where they work they may lose the ability to earn. So when people lose their homes there are many knock-on effects. People may become physically ill because they are exposed to the weather or because they do not have access to washing facilities. They may become mentally ill because they are anxious because their environment is unfamiliar and they have no privacy. They may experience poverty because they are unable to work and they need more resources to build a new house.

For these reasons supporting shelter activities can have multiple positive effects in an emergency. Restoring housing can improve physical and mental health and it can also empower people to provide for themselves through livelihoods activities. In addition, shelter activities themselves create further positive benefits. Mass construction often creates temporary employment for those who are unable to access their normal livelihoods through construction labouring and building materials manufacture. This can boost the economy that has been affected by the emergency. The activities of repairing and reconstruction can also boost the morale of the community. Emergencies can also provide the opportunity to sensitively redress inequalities in property and land ownership.

The method of shelter intervention most appropriate to each situation will vary according to whether people can stay in their original location or have moved away to settle elsewhere as displaced persons. Section 1.3 and 1.4 provide more details.

Emergency shelter support to people in their original location

Families who can stay on their own land may be able to reconstruct their houses and other buildings quickly because they are able to stay in the same place that they lived in before the emergency. These communities have advantages over those who have been displaced because they have access to local networks, they know the area, they may have rights to local services and they are therefore likely to recover more quickly.

However, they still require transitional shelter support as they may need to convert damaged buildings temporarily or construct a transitional shelter until they are ready to reconstruct permanently. In many cases families are often unable to start repairing or rebuilding their homes immediately after the emergency because the weather is bad, it is the wrong season to harvest building materials, further hazards may be expected, conflict may prevent people returning permanently to their own land or there may be delays in support from Government or others to permanent shelter solutions. All of these factors contribute to a need to ensure appropriate transitional shelter is available to bridge the gap.

Where a natural hazard has caused the loss of homes and buildings, reconstruction must mitigate future vulnerabilities through disaster risk reduction measures. This may mean that although people may be able to return to their original location, solutions need to be found to mitigate the risks affecting that location.

Emergency shelter support to displaced people

When people leave their homes they are called 'displaced persons'. If it is not possible for them to return home they may require support in order to access land and materials to make transitional shelter and advocacy to uphold their rights.

If people are displaced inside their own country they are called 'internally displaced persons' or 'IDPs'. Where people are forced to leave their homes and their property and seek refuge elsewhere, it is vital that suitable transitional shelter be made available to reduce human suffering and vulnerability, before longer-term settlement solutions can be worked out. This could include support to a range of different types of settlements, including planned camps, self settled camps or mass collective shelters (public buildings like schools, religious places etc.).

The provision of well-planned and well managed camps and collective centres in emergencies is crucial. Well-planned and managed camps and collective centres can have positive impacts by strengthening physical protection and supporting livelihoods; minimising natural hazards and the spread of disease; and by managing natural resources in a sustainable way.

10.2 Phase-I: Emergency Shelter or temporary shelter

The primary purpose of shelter and settlement response during this phase is to contribute to survival by providing protection from the elements of nature: rain, wind, cold or sun and some level of security and privacy. The critical success factor of

emergency shelter is the speed at which it is made available; too late simply means increased risk to life. At its most rudimentary level emergency shelter might be plastic sheeting⁵, or blankets which are distributed together with other non food related items (NFIs). Accommodation in mass shelters (schools, religious places, public buildings etc.) or distributions of family tents⁶ are other forms of emergency shelter provision. Sometimes this may take the shape of a planned camp. The critical question is how does one decide on which is the best options. A rapid assessment of needs, resources and capacity in consultation with all the stakeholders including affected people can help arrive at appropriate decision. If preventing loss of life from environmental exposure is considered as the key performance indicator for emergency shelter, the situation in regions known to experience very low temperature during winter will need specialised inputs. ‘Post October 2005 earthquake, there was an inconclusive debate as to whether the risk of burns, smoke inhalation and fire from heating stoves posed a greater risk than cold temperatures.’⁷ It is always useful to find localised solutions in discussion with the affected population.

There is always a need for strong logistics capacity for the delivery of shelter NFIs of appropriate specifications. The speed and proportionality of first phase response is also closely linked to the level of preparedness and contingency planning. Many regions that face cyclic emergencies resort to prepositioning of emergency relief material. Planning, organisation and rehearsal/practice during pre-disaster phase will lead to swift and adequate response. Adequate Phase I response (emergency shelter) helps create mental space for decision makers to initiate a consultative process to arrive at a broad reconstruction strategy along with identification of policy gaps to support the reconstruction process.

Performance requirements of emergency shelter or 1st Phase response can be agreed by the concerned actors (including affected people) through coordination mechanism and consultation with the affected people. Specialised staff and responders can be advice to use annexure 1 and submit the response in a format similar to the one given below.

Performance Criteria	Key performance indicator	Content of response including material	Mode, approach, mechanism of delivery
Habitability			
Stability			
Durability			

Typical shelter responses in 1st Phase:

⁵ ‘A guide to the specification and use of plastic sheeting in humanitarian relief’ www.plastic-sheeting.org/ref/Plastic_Sheeting_2007.pdf

⁶ Useful guidance on types of tents, their performance and selection criteria can be downloaded from <http://www.sheltercentre.org/shelterlibrary/index.htm>

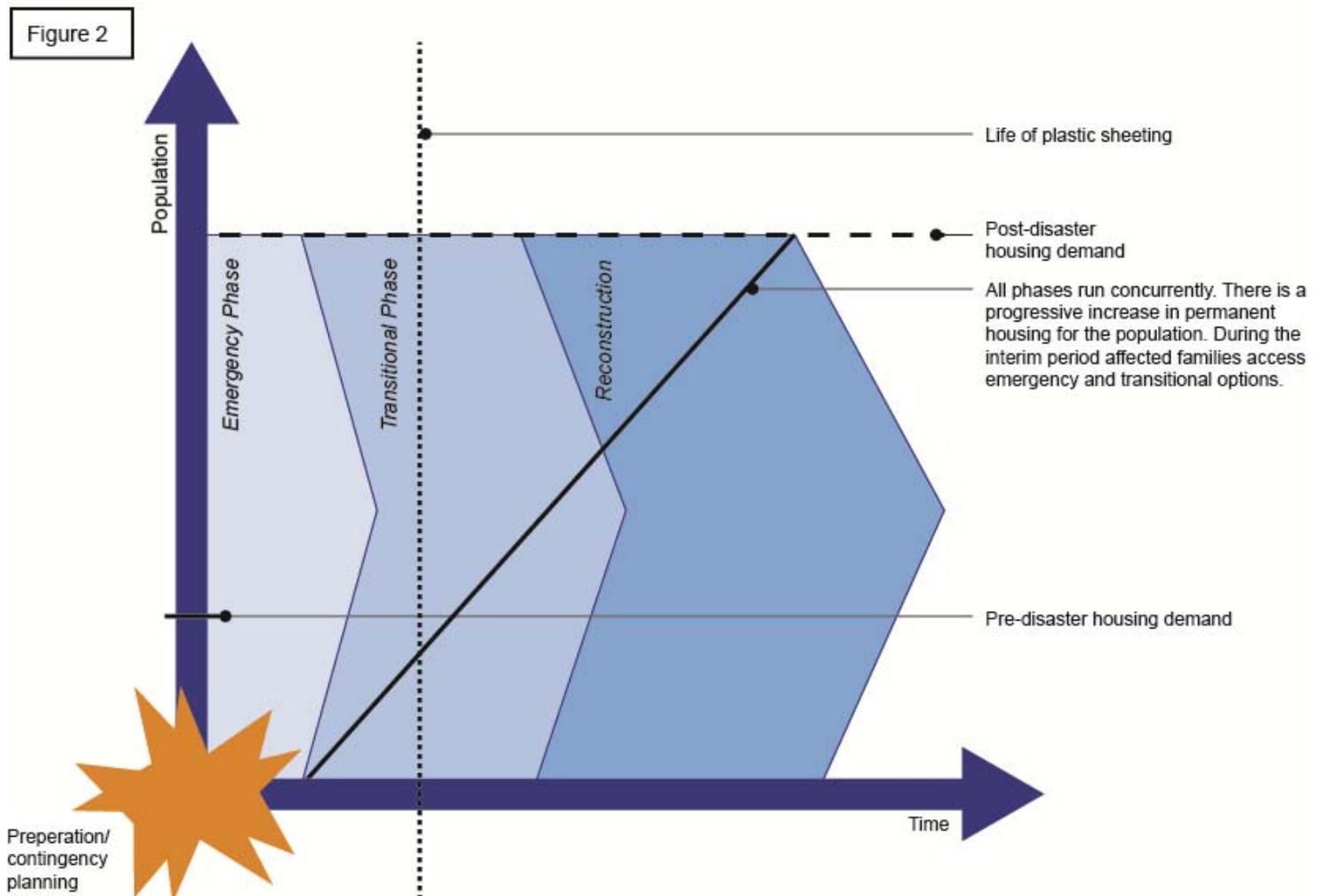
⁷ Jo da Silva, Arup International Development

- Distribution of two sheets of tarpaulin or plastic sheet (along with ropes) per family.
- Distribution of family tents.
- Distribution of blankets and clothing. Content will depend on culture and expected climatic conditions.
- Distribution of local building materials that can help avoid distribution of plastic sheeting.
- Affected people get sheltered in collective shelters like schools, religious places, flood/cyclone shelters and other public buildings for short duration.
- Affected families exercise host family and rental options.
- Distribution of non-food household items like cooking utensils, water storage containers, mats, mattresses, cooking fuel etc.
- Tools and materials for repair where repairs are an important option/possibility.
- Temporary camps with lifeline services like water and sanitation.
- Distribution of cash grants.
- Provision of credible information on issues of concern to affected population.

Key administrative priorities in first phase:

- Reach the affected people.
- Estimate the number and background of people in need of assistance and quantification of needs.
- Rapid mapping of affected areas including reconnaissance survey.
- Write appropriate sitrep (situation report) and assessment report.
- Organise response/relief.
- Activate the emergency management team and assignment of roles and responsibilities (geographic, sectoral etc.).
- Coordination of early responders.
- Monitoring of effectiveness of response.
- Requisition of appropriate support from various authorities.
- In some cases, there will be need for declaration of emergency.
- Identify the policy needs to facilitate response to the changed environment; consultative process.
- Manage VVIP visits.
- Grievances hearing, consultation etc.

- **Phase review:** While we review the current phase we plan for the subsequent phase including preparation of list of people in need of shelter assistance. It is vital to initiate parallel process to manage priorities of different phases- Ref. figure-2. Phase I offers time/space to initiate consultative process to arrive at a reconstruction strategy.
- Prepare reconstruction strategy.



10.3 Phase-II: Transitional Shelter

As a priority the emergency shelter response (relief NFIs, mass shelter etc.) have to be rapid and climate responsive. This provides adequate support to the affected population before the next incremental response is mobilised. The next increment of

shelter response is transitional shelter; a vital habitable space which has enough durability to last until a more durable shelter and settlement solution is reached. The aim is to deliver a **habitable (culturally appropriate) and durable covered living space**, that helps affected families get back to the normal way of living (restoration of livelihoods). This type of response requires adequate consultation with various stakeholders and has to be part of a larger sheltering strategy. Therefore this needs some investment of time for negotiations and discussions. The general rule is not to rush decisions at this stage, once the decision on design, location etc. is reached, implement it with good speed and capacity. The transitional response has to be an organised and well-coordinated with other sectors like WatSan etc. The coordination system should provide platform to quickly initiate technical, legal and social discussions around shelter and reach a broad based consensus on the shelter sector response. Reconstruction and housing response, post disasters of recent years has shown that it takes a long time, sometimes a few years, before people get a durable solution. Hence it is important to monitor the living conditions in the transitional shelters and look for the up-gradation needs.

Transitional phase lasts till people move into their permanent shelter/homes. Hence transitional shelter strategy will be closely linked to the reconstruction (permanent shelter) phase. When relocation looks eminent then transitional and permanent shelter can be organised in the same location. **It is important to note that all the policy formulation and planning has to be completed in this phase as the next phase is predominately about implementation/rebuilding/reconstruction.** Prior to designing permanent shelters it is imperative to engage the community in the planning process. It is also important that communities understand the context of the changes and future risks they will have to face as a result of the disaster.

Performance requirements of transitional shelter or 2nd Phase response can be agreed by the concerned actors (including affected people) through coordination mechanism and consultation with the affected people. Specialised staff and responders can be advice to use annexure 1 and submit the response in a format similar to the one given below.

Performance Criteria for transitional shelter and settlement	Key performance indicator*	Content of response including material	Mode, approach, mechanism of delivery	Compliance needs
Habitability				
Stability				
Durability				

While the transitional shelter and settlement response happens, the preparation for the reconstruction phase has to start in complete earnestness. A consultative process with communities and experts should lead to setting of performance standards for the

permanent shelter. A technical working group composed should be entrusted the job for the same, they can report using the format give above.

Performance Criteria for permanent shelter and settlement	Key performance indicator**	Technology options and design for DRR	Mode, approach, mechanism of delivery, cost	Compliance needs
Habitability				
Stability				
Durability				

Typical shelter responses in 2nd Phase:

- Site selection: Identification of resettlement sites.
- Settlement planning, land-use planning in relocation sites.
- Site preparation and installation of transitional lifeline services.
- Distribution of local materials like bamboo, rough wooden poles etc. for structure and coconut/palm leaves, tiles etc. for roofing, walling material and fastening material.
- Retrofitting of building and physical infrastructure.
- Support of host family and rental options.
- Participatory physical planning with social, economic and environmental priorities.
- Ensure smooth transition from emergency to transitional shelter by provision of appropriate information and other assistance.
- Distribution of cash grants.
- Full service transitional camps.
- Training of engineers, masons, architects etc. and awareness building on safe construction and planning. It continues into the reconstruction phase.
- Technology demonstration for risk reduction including building of sample dwelling units.

Key administrative priorities in 2nd phase:

- Provide re-assurance and inspire confidence amongst affected people and responders.
- Make assessments and entitlement lists public.
- Detailed mapping of affected areas including damage assessment and vulnerability assessment.
- Write appropriate sitrep and assessment report.
- Organise response and up-gradation in-line with the reconstruction strategy.

- Enhance and sustain the capacity of emergency management team and manage their performance against assigned roles and responsibilities (geographic, sectoral etc.). Address linkage with various line departments.
- Coordination of responding agencies (including line departments) to achieve coordinated response.
- Monitoring of effectiveness of response against indicators*. Specifically monitor reconstruction strategy.
- Establish regular (short cycle, daily, weekly..) water quality and health surveillance.
- Compliance framework: Finalise policies, Codes and Guidelines for planning and reconstruction.
- Grievances hearing, consultation etc.
- **Phase Review:** While we review the current phase we plan for the implementation of the next phase.
- Create clear framework for public private partnership.
- Post occupancy monitoring and identification of gaps in assistance and maintenance needs of transitional shelter and settlement.

10.4 Phase-III: Permanent Shelter-Durable Solution-Housing

The housing process is fairly complex and detailed. Transitional phase creates the requisite time for planning and design, testing and adjustment prior to large-scale efforts during reconstruction phase. Some of the permanent shelter related work that would have been completed during the previous phase would include:

- **Dialogue** (with the community and CBOs) to understand the post disaster lifestyles and aspirations.
- **Consensus** with the implementing organisations on possible interventions. (Agreement on partnerships, the commitments of each partner, and the duration of each commitment need to be clearly specified).
- **Family consultation** on the core housing option and plot layout (family occupation details, ages, gender, special needs, interests, ownership verification, finalising the orientation of the layout).
- **Facilitating design choices** (creating awareness among beneficiaries of the design options, enabling participatory decision making on the design choices, making available information on various technology choices with regard to the use of material and other appropriate technologies such as renewable energy sources (e.g. biogas) and water capture units (e.g. rain water harvesting units).
- **Housing designs:** should be developed based on the availability of building materials, skills and the local environment.

- **Training:** Create awareness and train masons and local artisans on the available technologies and best practices in construction and how to adhere to socio-cultural practices.

Reconstruction phase is about construction of housing, social infrastructure (school, health facilities etc.) and physical infrastructure (Roads, culverts, bridges, water works etc.). For housing, use of owner driven construction management can help in timely delivery of housing. Establish collective supervision and monitoring practices, set in motion a mechanism for regular monitoring and reviews between house owners and implementing organisations.

Reconstruction efforts should encompass not only the building of houses but also the provision of effective access to physical and social infrastructure and services such as;

- Access-ways - Roads, culverts, bridges.
- Renewable energy facilities – generating energy through wind, water, biomass.
- Waste management techniques and facilities.
- Governance, commercial, communication facilities.
- Water capture, storage and distribution methods – such as rain water harvesting.
- Healthcare, education, recreation facilities.

Collaboration among local authorities, civil society actors, private sector service providers and government organizations will finally deliver against the priorities of reconstruction phase.

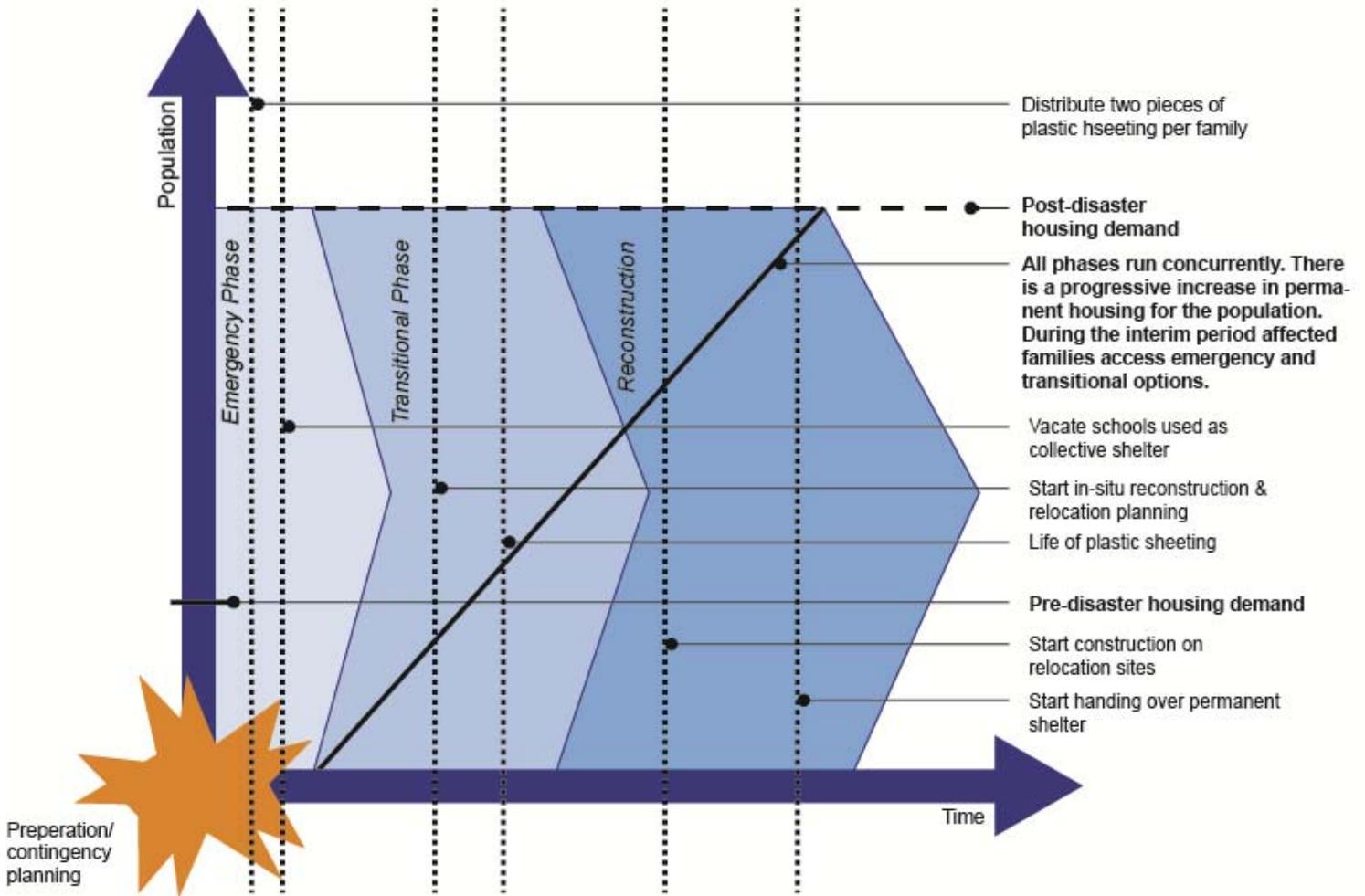
Typical shelter responses in 2nd Phase:

- Technical support for supervision and implementation.
- Provision/supply of building materials and equipment.
- Organised construction
- Participatory monitoring.
- Ensure smooth transition from transitional shelter to permanent by provision of appropriate information and other assistance.
- Distribution of cash grants.
- Training of engineers, masons, architects etc. and awareness building on safe construction and planning with good focus on institutional capacity building.

Key administrative priorities in 2nd phase:

- Provide re-assurance and inspire confidence amongst affected people and responders.
- Make assessments and entitlement lists public.
- Write appropriate sitrep and assessment report.
- Organise construction.
- Organise third party audit of construction.
- Sustain the capacity of emergency management team and manage their performance against assigned roles and responsibilities (geographic, sectoral etc.). Address linkage with various line departments.
- Coordination of responding agencies (including line departments) to achieve coordinated response.
- Monitoring of effectiveness of response against indicators**.
- Establish regular (short cycle, daily, weekly..) water quality and health surveillance.
- Grievances hearing, consultation etc.
- Post occupancy evaluation, impact assessment and identification of gaps in assistance.

Figure 3 - Outline of sample reconstruction strategy



10.5 Phased Planning & Tracking post disaster response.

How different phases of response interoperate, is the backbone of reconstruction strategy. The figure-3 captures a sample strategy that links different priorities and phases of response.

At operational level the 'Phase Review' is one of the important opportunities that open the decision making Gateways for the planning of next Phase. Apart from that, Phase review definitely provides scope for systematic check on the effectiveness of the current phase. This process will be done at various levels like public hearing can be organised to get feedback from the affected people.

As we think about what the upcoming phase entails, begin by reviewing our original plans and where we are now. Here's a list of what we might want to look at or think about:

- **Original plan for the upcoming phase:** Back at the beginning of the project, what did you think you would be doing in this phase? Are the Government and other actors' commitments and goals still valid?
- **Status and accomplishments from the prior phase:** As you wrap up the current phase, where are you? What did you accomplish? Was that more or less than you planned? How should the outcome of the current phase affect the next phase?
- **Lessons learned:** Study both your successes and shortcomings.
- **Management strategy and plans:** What do you need to acquire (H.R., equipments, policies...) ? What's the philosophy (owner driven....) that guides how you will accomplish the targets? What else?
- **Staffing:** Identify any problem areas or needs.
- **Constraints:** Are there any new regulations or external forces that should be accounted for as you update the plan for this phase?
- **Issues, Action Items, Decisions:** Revisit what you've said before; face the issues that affect this phase; make sure action items that involve the objectives for this phase have been closed. *Figure-4 provides extra guidance on the same.*

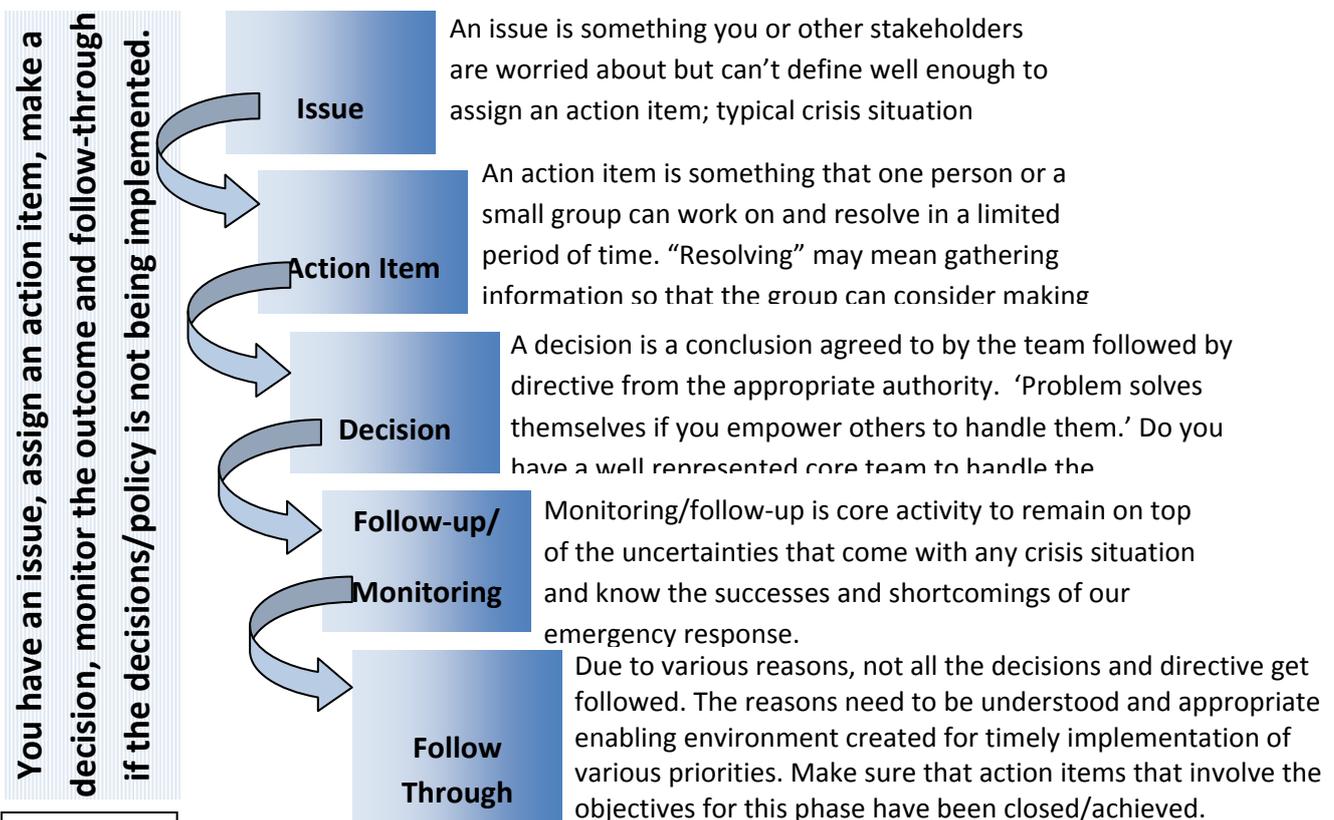


Figure-4

Annexure-1 Performance of a shelter

Habitability, durability and stability are three key aspects that define the performance of any type of shelter or dwelling unit in any phase of response. The information in this annexure can help manager's list key performance indicators for shelter programme.

A 1.1- Criteria for Habitability:

S. No.	Criteria for habitability of shelters	An output of
1	Weather proof:	It is an output of the building envelop. It essentially means that house should be able to offer desired living conditions round the year and protection from rain, wind, heat, cold.... Building envelop is also dictated by need for privacy and cultural preferences. Climatic conditions will dictate the forms of building envelop and building materials used will have a significant impact as well. Building envelop and weather proofing will invariably be governed by national laws (building codes, building byelaws etc.), there might be compliance issues.
2	Indoor temperature :	Material selection, ventilation and general design. Combination of number of parameters like air movement, humidity etc. the thermal comfort need to be achieved. Thermal comfort is the sense of well-being with respect to temperature depending on the balance between the heat produced by the body and the loss of heat to the surroundings. This balance is influenced by seven parameters: metabolism, clothing and skin temperature are related to the individual, while the air temperature, relative humidity, and mean radiant temperature and air speed to the surrounding environment.
3	Ventilation	Size and location of openings (windows, doors, ventilators etc.) with respect to the wind direction. Sil height and lintel height are other parameters that may play-in. Climatic conditions will dictate the ventilation requirement. For quick lessons review the vernacular architecture in the affected area. Compliance with local building byelaws will be important consideration.
4	Day Lighting	Size and location of openings (windows, doors, ventilators etc.)
5	Privacy	Building envelopes, layout/design, size of opening, detailing of doors and windows. E.g. a bed room will need a door to suffice the privacy needs. In certain climate and cultures houses would open inwards into a courtyard while in others majority of the day time is spent outdoors or in shade of a semi-open veranda. Every culture would have different conception of private and public space. Settlement planning, particularly location and scale of open spaces can have significant impact on defining the public and private domain. For quick lessons

		review the vernacular architecture in the affected area.
6	Vector Control	Site preparation, effectiveness of surface drainage and handling of waste water will have impact on the density of vectors. Design of opening (fixing of fly/mosquito screens) can be helpful in controlling vector movement. Access to impregnated mosquito nets (distributed as household NFI) can be important factor in control of vectors, wellbeing and malaria control. Health and hygiene promotion and public health response would be the critical success factors. Use of appropriate IEC material should be considered.
7	Safety (fire, toxicity)	At shelter level, material selection, type of fuel and stove, construction would have significant impact. Smoke can be an health hazard, which has to be removed using ventilation system like a chimney or just use fuel and stove that produces no or less smoke. Community capacity or settlement level capacity to manage household fires can be important for reducing fire risk. Settlement planning can effectively address the fire risk by location of appropriately sized fire breaks. Adequate provision of land, particularly in emergency and transitional settlement would be a critical success factor. Sphere indicator for adequate provision of land is 45 sq. mt. per person. Use of appropriate IEC material may be considered to communicate about the fire risk and its management. Where the risk is significant organise fire management task forces and have regular mock drills.
8	Security (personal and possessions)	Building envelop, design and detailing of doors (lockable) and windows. Settlement planning can have huge impact on safety and security. Sometimes unmet needs like cooking fuel can create unsecure situations.
9	Cooking	Adequate provision of NFIs (utensils, stove, cooking fuel etc.) and culturally and climatically appropriate space for cooking. Use of appropriate IEC material may be considered to deal with the problem of smoke and the related disease like ARIs etc.
10	Access to Water and Sanitation	Public health Engineering response and hygiene promotion in general and access to latrines, clean drinking water, adequate household storage capacity (provision of NFIs).
11	Internal Space: Cultural and climatic appropriateness	'People have sufficient covered space to provide dignified accommodation. Essential household activities can be satisfactorily undertaken, and livelihood support activities can be pursued as required.- Sphere manual.
12	Structural integrity	Sound structural design giving sense of safety. Refer criteria for stability. Sharing of adequate information before construction by use of models, drawings, bill of quantities, estimates, specifications etc. can greatly enhance the sense of security. Similarly participatory design development, material selection, technology selection etc. can be very empowering process and can inspire confidence in the built structure.

A1.2- Criteria for Stability:

Stability is primarily the output of engineering design and construction. The quality of construction can be achieved by application of ‘**ABCD of structures**’. **Whatever may be the materials or size of the building, ABCD has to be followed.**

S. No.	Factors Governing Structural Stability	Output of
1	Anchorage	Solid foundation and broad base
2	Bracing	Reinforcing with additional structural elements / cross members.
3	Continuity/Connectivity	Structural connectivity of wall to wall, wall to roof, wall to foundation.
4	Ductility	The material property that can prevent sudden breakage, rather it allows deformity

A 1.3- Durability:

Apart from material used, durability is hugely impacted by construction quality, design and detailing. Maintenance/upgrading can be a critical success factor in ensuring longevity of the asset. In permanent construction NGOs are invariably seen to flounder at the finishing stages, hence adequate energy, focus and resources need to be saved for the finishing stage of the dwelling unit.

S. No.	Factors affecting Durability	Output of
1	Design	<ul style="list-style-type: none"> • Cultural preferences conditioned by local climate • Access to building skills and its cost • Access to technical assistance.
2	Material choice	<ul style="list-style-type: none"> • Cultural preferences conditioned by local climate • Access to and control of resources • Technology selected for DRR • Access to specific skills like carpentry, masonry etc. • Quality of materials as per design requirements (written specifications) • Affordability • Environmental impact assessment of reconstruction
3	Construction, detailing and finishing	<ul style="list-style-type: none"> • Access to building skills • Access to technical knowhow/assistance. • Access to tools and equipment • Access to skill upgradation programme

4	Repair and maintenance	<ul style="list-style-type: none"> • Access to tools and equipment • Access to building skills • Shelter promotion. • Use of IEC
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11. STATE AND CIVIL SOCIETY COLLABORATION IN DISASTER MITIGATION

11.1 Introduction

The increasing frequency, intensity and impact of disasters, both natural and otherwise have given rise to a global concern for risk reduction- focusing on committed participation of all the stakeholders in disaster management initiatives. That India, with its sub-continental dimensions and severe multi-hazard vulnerability needs concerted efforts from all sections of the society to reduce risk remains a foregone conclusion. Though the process of disaster management began early here, the administrative response, by and large, suffered from a sectoral and exclusive outlook, rather than the inclusive and comprehensive approach required. It is only recently that a paradigm shift has come into disaster management thinking, putting into focus the individual and the community as integral players in disaster management.

Effective disaster management entails the involvement of the entire country at all levels, from the national, state, district, village/urban area to the community and individual at risk. Each individual has a responsibility for his/her own safety as also the safety of family and community and are thus an integral part of the disaster management system. The challenge is to integrate each individual into an effective, cooperative network, incorporated into an organizational system.

The role of NGOs and civil society organizations in disaster management can never be overemphasized. The NGOs provide the necessary link between the government and the community. The role of the civil society organizations in response and relief has been commendable in India in all disaster situations, large or small. The NGO sector is now active in community based preparedness and mitigation measures including awareness generation. What is required is an integrated and coordinated institutional mechanism where the NGOs and other civil society organizations along with the community forms a disaster resilient nation.

In India, the non-governmental and voluntary sector has been instrumental in providing social service in diverse fields like health, education, literacy, nutrition, trauma counseling etc. In the field of disaster management, however, primary focus was towards the relief and rehabilitation aspects, rather than on preparedness, mitigation and overall risk reduction. Moreover, the efforts of the voluntary sector

have suffered from lack of inter-agency coordination, both within the NGO sector and with the Government agencies. However, in view of the all-encompassing nature of disasters and their impact on all sections of society, the crucial and responsible role played by civil society organizations have been greatly appreciated and recognized, although no formal networking efforts have been undertaken. In rural technology development, a network of NGOs under the aegis of CAPART is functioning, but no such network exists for managing disasters.

Recognizing this, the High Powered Committee (HPC) on Disaster Management, constituted in 1999 identified a prominent role for the voluntary sector. The HPC held six regional consultations with NGOs working in the field of disaster management, through nodal NGOs identified as regional coordinators. In these consultations, the lack of a well-coordinated network between the NGO sector and the Government was repeatedly pointed out. The general perception was that lack of coordination among the NGOs was responsible for lack of information about the exemplary work done by some NGOs at the grassroots level, and duplication of efforts in some areas with near total absence in others.

An effort was made by the HPC to address this problem by organising a nationwide network of NGOs with the acronym VASUDEVA (Voluntary Agencies for Sustainable Universal Development and Emergency Voluntary Action) with the intention of creating a bridge between the NGOs and the Government sector as also within the NGOs working in the field of disaster management.

11.2 Role of NGOs in Different Stages of Disaster Management

Based on the identified types of NGOs and their capabilities, organised action of NGOs can be very useful in the following activities in different stages of disaster management:

<i>Stage</i>	<i>Activity</i>
Pre Disaster:	<ul style="list-style-type: none"> • Awareness and information campaigns • Education of vulnerable groups • Training of local volunteers • Formation of village level Task Force • Assigning roles and specific tasks to the Force • Identifying and assembling resources • Documenting disaster related information, events, intensity of disaster, specific items of importance, lessons learnt during disaster.

	<ul style="list-style-type: none"> • Village mapping to identify hazards, vulnerabilities, resources, risky areas and safe areas • Inventory of skills and knowledge in community • Rehearsing the steps to be taken in the event of disaster viz. organizing community kitchen, assembling the task force, transmitting suitable message to the community, contacting the various concerned departments of the government and NGOs. • Identify vulnerable groups in the community and prepare a list of persons to be given special attention in the event of disaster. • Taking stock of current warning system and designing effective warning/communication system • Advocacy and planning
During Disaster:	<ul style="list-style-type: none"> • Immediate rescue and first-aid including psychological aid • supply of food, water, medicines, and other immediate need materials • Ensuring sanitation and hygiene • Assistance to external agencies coming for aid • Damage assessment
Post Disaster:	<ul style="list-style-type: none"> • Technical and material aid in safe reconstruction • Ensuring essential requirements such as food, water, health and civil supplies • Provision of emotional and psychological needs • Assistance in seeking financial aid • Revival of educational institutions/livelihoods • Preparing documentation

NGO participation forms a vital part of a Disaster Management strategy. This becomes clear from the multifarious functions the NGOs can be expected to perform before, during and after disaster scenarios. Characteristics unique to NGOs such as their short response time and close link with the community make them the most suitable agencies for specific activities of disaster management.

In order to fully capitalise on the strengths of the Non-Governmental sector there is a need to organise its structure and document it. At the same time, the government's role vis-à-vis the NGOs' role needs to be clearly identified and set so that such a mechanism can be made operational within a short span of disaster occurrence. Caution should however be exercised that the government and the NGO sector do not duplicate each other's efforts, rather they should complement each other.

NGO operations can thus be in several special areas, and these can be networked to provide a comprehensive overall response to disasters. NGOs can specialize in specific areas, types of disasters, and functions.

They can help in disaster prevention, mitigation, preparedness, evacuation, search and rescue, relief, maintenance of order, provision of local information, availability of volunteers, safe practices in development.

11.3 Linkages within NGOs and between NGOs and Private Sector

The co-ordination of activities within the voluntary sector is of prime importance. Much of the problems faced due to lack of coordination, whether in Uttarkashi, Latur, or Orissa, have been due to an overwhelming NGO response in the absence of coordinated efforts. This led to over-abundance of men and material in certain locations, while other areas, mostly remote ones were ignored. A system of information exchange and activity coordination amongst NGOs is urgently required.

For this purpose, lessons can be learnt from practices in the recent past, and certain operational and proposed fora can be made platforms for synergy. The Orissa Disaster Mitigation Mission, active in the aftermath of the Orissa Super Cyclone of 1999, is an example of how local NGOs themselves can come together to set up a centre that can cater to the coordination needs of all NGOs, local as well as those coming to the state from other parts of the country and the world to extend support.

A similar network came up in Gujarat in the aftermath of the 1998 cyclone, and worked for a long duration, covering immediate relief to long term rehabilitation activity coordination.

11.4 NGOs and Government

The role of the government is often made more complex because of the fast pace of changes as also because of the flood of new problems joining the already troubled waters. The scarcity of time (most natural disasters do not allow even time to think), the fast shrinking resource base and the non-availability of reliable information (there is usually a dearth of information as such), together compound the problem.

And it is here that the role of the NGO sector gains crucial significance. NGO-Government cooperation has been desired and talked about for long.

The NGOs are being increasingly recognised as important catalytic agents in the society. The NGOs are valuable facilitators in bringing about closer grassroots beneficiary involvement in development, have the capacity to target on specific population groups in specific locations and the flexibility to become creative with capacity for experimentation and innovation etc. Hence, **Appropriate and effective capacity building of NGOs can be effective in preparing them to meet the challenges**. NGOs are in a better position to assess the impact of development intervention on the people and get adequate feedback from them. This can be helpful in designing new strategies.

The role of the government is often made more complex because of the fast pace of changes as also because of the flood of new problems joining the already troubled waters. The scarcity of time (most natural disasters do not allow even time to think), the fast shrinking resource base and the non-availability of reliable information (there is usually a dearth of information as such), together compound the problem.

There are different types of GO-NGO relationships that come into play within the disaster management field. There could be situations where NGOs to get permission from Government to act, as in case of relief and rehabilitation operations in certain situations. In other situations, the government could invite NGOs to interact and give their inputs towards joint initiatives, as being carried out through nationwide NGO consultations under the HPC mission. Governments also deal with NGOs for information exchange, as done under the NGO resource book development initiative of the NCDM, as well as NGO information booklets and training programs of NCDM, Hudco etc. Finally, there is also a type of relationship wherein the government invites proposals from NGOs for funding of community level activities, as done by the NDM Division of the Ministry of Agriculture.

Various mechanisms for achieving enhanced GO-NGO cooperation have been tried, but these need to be further refined and strengthened. The GOI-NGO committee has not yielded tangible results thus far. If NGO contributions are to be channelled constructively to grass-root poverty alleviation efforts, the government needs to devise ways of responding to and accommodating their roles. Involving NGOs should no longer remain a matter of choice, since the costs of not involving them are too high. The scope of this effort needs to be expanded, as has been initiated under the HPC NGO consultations.

12. DEVELOPING A LOG FRAME

(Adapted in part from “Designing Projects and Project Evaluations Using the Logical Framework Approach” by Bill Jackson)

12.1 Objectives

- To introduce Logical Framework Analysis (LFA) and its uses
- To become familiar with the main steps involved in conducting an LFA
- To provide the necessary background for the working group exercise on the Project Planning Matrix

12.2 Main Points

Logical Framework Analysis is one of several methodologies for developing programmes or projects.

LFA consists of 4 main steps:

- Situation Analysis
- Strategy Analysis
- Project Planning Matrix
- Implementation

Within each of these steps are a number of activities that help in formulating the logic and sequence of the intended programme or project.

LFA has a strong participatory component in the situation analysis calling for the involvement of different actors in formulating and developing a programme or project. In this regard it is in keeping with the principles of the bottom-up approach in the CCD.

Log-Frame Approach

- (1)** Methodology to structure the project planning process
 - (2)** Planning is an iterative element of Project Cycle Management
 - (3)** Emphasis on the analytical steps within the planning process
 - (4)** Organises all relevant information in a systematic overview
- Taken from Martin Krause, UNDP-GEF, Monitoring and Evaluation Co-ordinator*

12.3 What is LFA?

There is no set methodology for developing and implementing a dry land management programme. There are many techniques and methodologies available but there is not, and most likely never will be, a single blueprint. The logical framework (or logframe) approach provides a set of designing tools that, when used creatively, can be used for planning, designing, implementing and evaluating projects. The purpose of LFA is to undertake participatory, objectives-oriented planning that spans the life of project or policy work to build stakeholder team commitment and capacity with a series of workshops.

The technique requires stakeholders to come together in a series of workshops to set priorities and plan for implementation and monitoring. It provides in-depth analysis of

project objectives, outputs, and activities. A major component of it (the project-planning matrix or PPM) results from stakeholder workshops that are scheduled through the life of a project to encourage brainstorming, strategizing, information gathering, and consensus building among stakeholders.

As such, LFA provides a structured, logical approach to setting priorities and determining the intended results and activities of a project.

12.4 Steps in an LFA

There are 4 major steps in conducting an LFA, each with a set of activities to be carried out as outlined below:



What follows is an introduction to the first three steps to understand the general principles in undertaking an LFA.

12.5 Situation Analysis

The LFA approach begins by analysing the existing situation and developing objectives for addressing real needs. A situation analysis has as its core task to find out the actual state of affairs with respect to an issue to be analysed; it is focused by problems and an attempt to understand the system, which determines the existence of the problems. As problems are always connected to unfulfilled objectives, a situation analysis comprises of an Objectives'- as well as a Problems'- Analysis. And as it is always people's problems and objectives which make up a situation, the analysis includes a Participants'-Analysis.

The analysis phase is the most critical, yet most difficult, phase of the logframe approach. The analysis phase consists of three stages,

- I. Analysis of stakeholders
- II. Analysis of problems
- III. Analysis of objectives.

The situation of the proposed project or programme needs to be analysed. Answers to the following questions are needed:

- What are the general areas of concern, or themes, that the project will focus on?
- What is the project aiming to achieve?
- At what spatial levels will the project focus, in terms of subject (broad/macro to specific/micro) and or geography (local to global)?
- What political, socio-economic, technological and biophysical environment will the project operate within?
- Who are the major stakeholders?
- How will stakeholders be involved in the process of design, implementation, monitoring, evaluation and reporting?
- Who is working on the issues already? What are they doing?
- What is the niche of the project?
- Who will implement the project?
- What is the intended duration of the project?
- What is the anticipated level of funding?
- Who will fund the project?

I. Stakeholder Analysis

Many actors influence projects. Their different interests, potentials, deficiencies and other characteristics play a role in the process of designing and implementing a project. It has been a frequent experience in development that marginal groups were not sufficiently considered in the planning, and hence caused poor implementation. Thus, it is usually necessary and expedient to analyse stakeholders in a project as part of the planning process. In using the LFA approach, the stakeholder analysis is an analysis of the problems, fears, interests, expectations, restrictions and potentials of all:

- Important groups
- Organisations and institutions
- Other projects and individuals who may have an influence on a situation/(intended) project or are themselves affected by it.

Those analysed in detail should be limited to those who are perceived to:

- be able to contribute to questions to be answered
- be important with regard to decisions to be taken.

They should constantly be referred to in developing the LFA. Key questions to ask in preparation for developing the logframe are:

- Who will be involved in the logframe development?
- Where will the development be conducted?

- Who will facilitate the development of the logframe?
- What background materials, papers and expertise may be needed?
- What materials and logistics are required?

II. The Analysis of Problems

The analysis phase usually begins with an analysis of problems. The problem analysis is undertaken by identifying the main problems and developing a 'problem tree' through an analysis of cause and effects.

The guiding principle in the Analysis of Problems is: *problem focused analysis combined with a systems' understanding.*

Problem-focused analysis means:

- analyse only those issues, which are identified to be problematic, be guided by problem view
- narrowing the focus with respect to the scope of analysis and at the same time digging deep into these problems and their causal factors.

System's understanding means:

- understand how the system (in which the problem and its causing factors occur) operates
- widening the view with respect to analysing the interlinkages and feed-back mechanisms between components of the system

Brainstorming techniques can be used to identify the main problems. Before the brainstorming exercise commences it is important that the facilitator explain the process and the group agrees on some rules for brainstorming.

The Brainstorming Exercise:

(1) Commences by asking workshop participants to identify the main problems that the project will address

(2) The main problems should be written on small pieces of card, and stuck on the wall.

(3) High order problems should not be described as 'lack of' something, for example lack of knowledge, but instead they should be described as an effect, for example lack of knowledge may become 'destructive forest harvesting practices'

(4) After all of the problems are displayed on the wall they should then be clustered into groups of similar issues

(5) Problems that are duplicated can be discarded

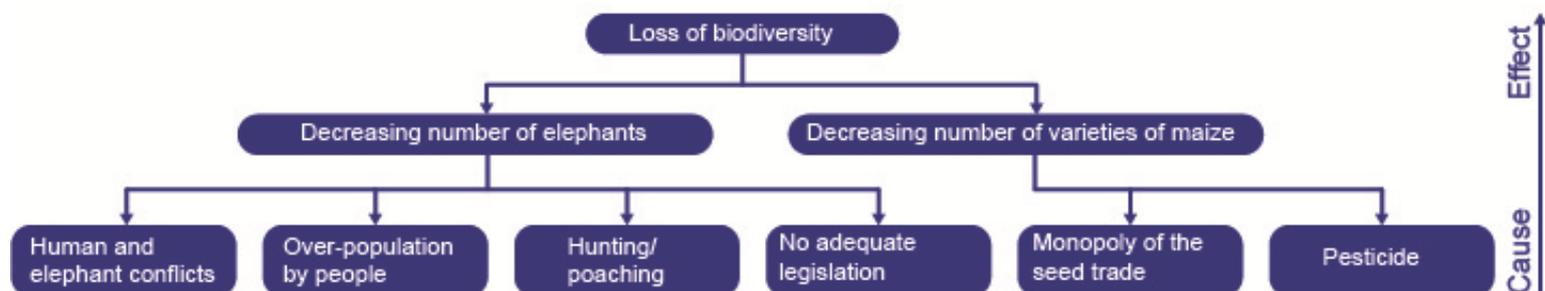
(6) At this stage, a simple 'weeding' exercise can be undertaken. The aim of the weeding exercise is to remove any problems that are clearly not problems that can be addressed by the project.

Developing the Problem Tree

The problem tree is developed by moving problems from the clusters of problems on the wall and by adding new problems that emerge as the tree is developed. Problems can be moved up or down the tree as required. The tree should end up with one main problem and a series of lower order problems that branch out below the main problem. The problem tree is constructed by selecting a problem from the list and relating this problem to a starter problem using the cause-effect rationale described below:

- If the problem is a cause of the starter problem it is placed below the starter Problem
- If the problem is an effect of the starter problem it goes above
- If it is neither a cause or effect it goes at the same level

Problem tree

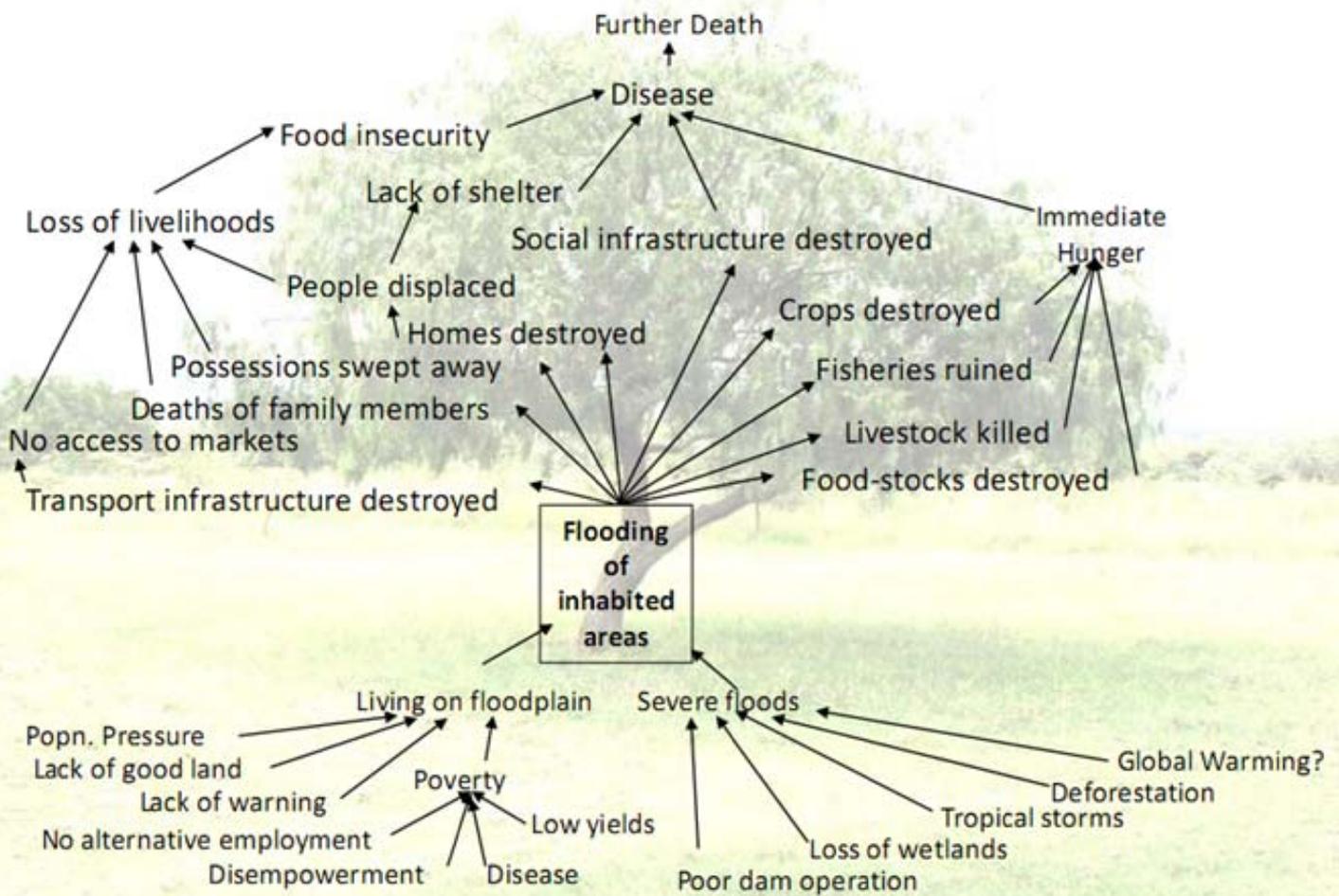


III. Objectives Analysis

An objectives'-analysis in a wide sense is a procedure for systematically identifying, categorising, specifying and - if required - balancing out objectives of all parties involved in a specific situation (for which those objectives apply).

The problem tree is transformed into an objectives tree by restating the problems as objectives. The objectives tree can be viewed as the positive mirror image of the problem tree. It is usually necessary to reorder the position of objectives as you develop the tree. The objectives tree can also be considered as an 'ends - means' diagram. The top of the tree is the end that is desired and the lower levels are the means to achieving the end.

An example of an objectives tree is shown below:



12.6 Strategy Analysis

A strategy analysis or analysis of alternatives is a systematic way of searching for and deciding on problem solutions. It follows the problems and objectives analysis and is a prerequisite to designing action strategies. Choices among different solutions to problems may concern

- overall concepts, strategic plans, objectives
- people, target groups, organisations, agencies
- methods, procedures, processes
- technologies, services, products, outputs

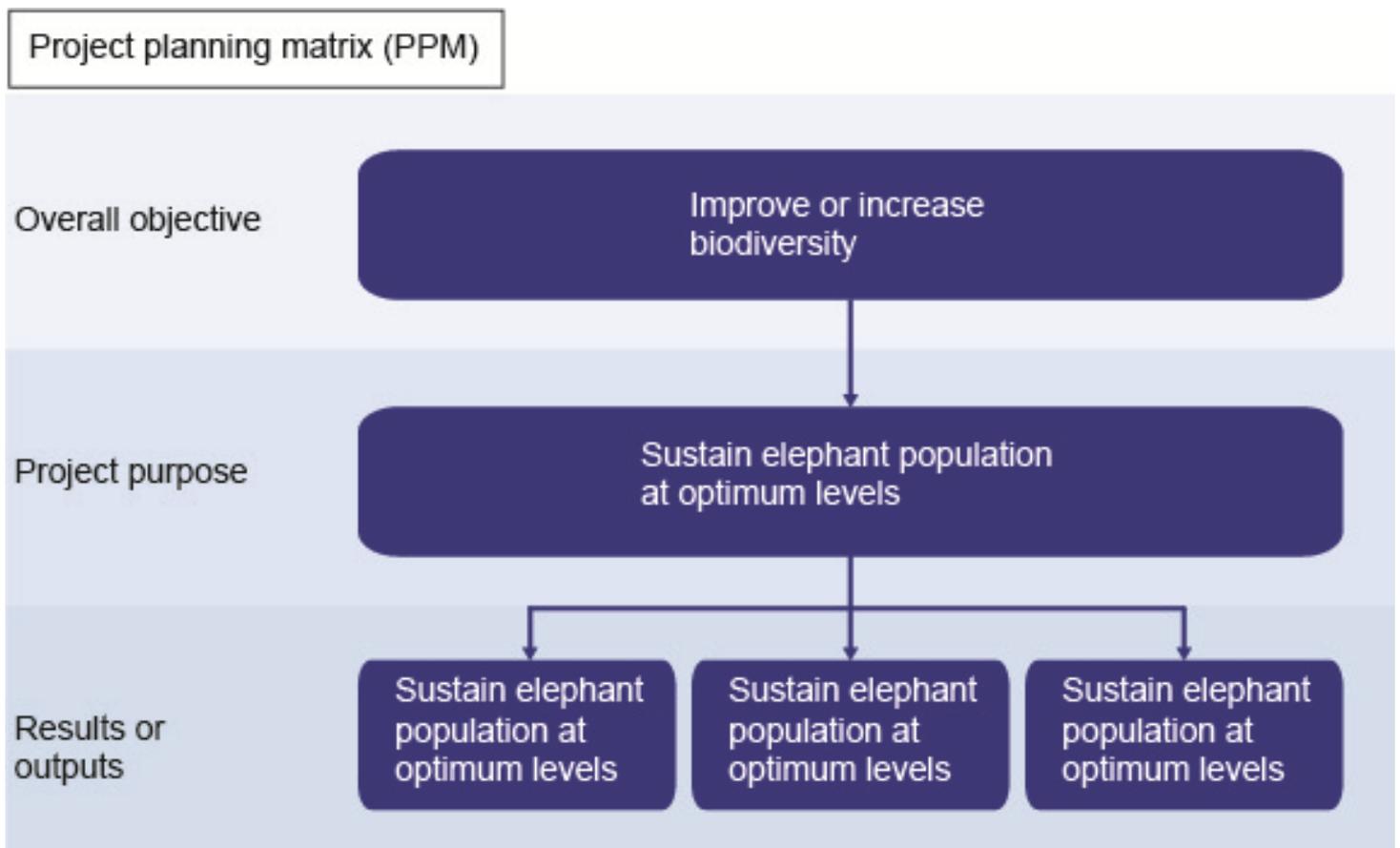
- measures, actions, materials, inputs

All alternative strategies considered must contribute to solving a problem, or in other words: they must be suitable steps towards the attainment of identified guiding objectives (=relevance).

Based on the situation analysis and the ordering sequence of the problem and objective trees, the strategy analysis involves clustering objectives and examines the feasibility of different interventions. The main objective becomes the project purpose and the lower order objectives become the outputs or results and activities.

The strategy analysis phase involves the selection of a strategy to achieve the desired results. The strategy comprises the clusters of objectives to be included in the project. In addition to examining the logic, strategy analysis also looks at feasibility of different interventions. This may mean that the focus of the project shifts, therefore once the strategy has been selected, the project purpose and overall objectives are finalised.

An example of a strategy analysis is shown below (*IUCN, 1997*). In this example it is unlikely to choose "efficient human population programme" (identified in the objectives analysis) but rather one or all of the other means. The process of making choices should be carried out in a very methodical way, giving due consideration to the ends/means relationship in the objectives tree.



12.7 What is a PPM?

The Project Planning Matrix is developed from the strategy analysis by filling in the columns of the matrix as shown below. The goals, purpose, outputs/results and inputs/activities are transposed from the strategy tree to the columns and rows in the matrix.

The PPM provides a one-page summary of:

- **Why** a project is carried out (= who/what will benefit?)
- **What** the project is expected to achieve (= utilisation of services)
- **How** the project is going to achieve its outputs/results (=measures executed)
- **Which** external factors are crucial for the success of the Project (= risks and frame conditions)
- **How** we can assess the success (= indicators)
- **Where** we will find the data required to assess the success (= means of verification).

What does the Matrix look like?

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Goals and objectives	Measures of goal achievement	Various sources of information; methods used	Goal-purpose links
Project purpose	End-of-project status	Various sources of information; methods used	Output purpose links
Outputs and results	Magnitudes of outputs; planned dates of completion	Various sources of information; methods used	Input/output links
Goals and objectives	Types/levels of resources; starting date	Project data, other sources of information	Initial assumptions regarding the causality of the programme

When used properly the logframe helps to make logical relationships between activities, results, purpose and objectives more transparent.

12.8 What are the Main Elements of the PPM?

(1) Narrative Summary

GOAL

The development goal describes the developmental benefits which the respective target groups can expect to gain from the program or the project. It contains hints on: the kind of benefits which are expected to accrue to the target groups and by what type of capabilities they should be enabled to keep up or improve their conditions in changing economic, social and institutional environments.

PROJECT PURPOSE

The purpose of a program or a project describes the changes in behaviour, structures or capacity of the target groups, which directly result from the utilisation of the deliverable outputs or results the program or project will be expected to yield. It contains aspects like: a changed type / method of resources utilisation, an improved system of production / organisation which allows the target groups to participate in the project / program, and which is adjusted to their economic, social, ecological and institutional frame conditions.

OUTPUTS / RESULTS

The outputs or results describe the goods and services, the direct deliverables, which are contributed from the side of a project or program. Outputs or results must express the nature, scope and intensity of support or of the solution being sought. This includes:

- (1) Provision of information on support / solution compatibility of support / solution with prevailing frame conditions
- (2) access to support / solution by specific target-groups, including gender aspects
- (3) availability of support / solution

INPUTS/ACTIVITIES

Measures / tasks carried out by the project / program in order to achieve and obtain the outputs/results (actions)

(2) Objectively Verifiable Indicators:

For each cell of the narrative summary, indicators need to be developed. Objectively verifiable indicators or OVI should meet the following criteria:

- **Measurable:** An indicator must be able to be measured in either quantitative or qualitative terms

- Feasible: An indicator should be feasible in terms of finances, equipment, skills and time.
- Relevant and Accurate: An indicator should reflect what we are trying to measure in an accurate way.
- Sensitive: An indicator should be capable of picking up changes over the time period that we are interested in.
- Timely: An indicator should be able to provide information in a timely manner.

Indicators should show who is benefiting from the project and allow for evaluation of the intended and unintended impacts of the project on various social groups and stakeholders. This requires the collection of information separately for men and women, for different ethnic groupings, for different age groupings (children, adults, elderly) and for different economic (rich, poor) and social groupings (agriculturists, pastoralists, businesses).

(3) Means of Verification

Once indicators have been developed, the source of the information and means of collection (means of verification (MOV)) should be established for each indicator. An MOV should test whether or not an indicator can be realistically measured at the expense of a reasonable amount of time, money and effort. The MOV should specify:

- The format in which the information should be made available (e.g. reports, records, research findings, publications).
- Who should provide the information?
- How regularly it should be provided?

(4) Assumptions:

The aim of specifying assumptions is:

- 1 to assess the potential risks to the project concept right from the initial stages of project planning
- 2 to support the monitoring of risks during the implementation of the project (assumptions can be specified by indicators and are an object of monitoring the frame conditions of a project / program and the changes in the frame conditions)
- 3 to provide a firm basis for necessary adjustments within the project whenever it should

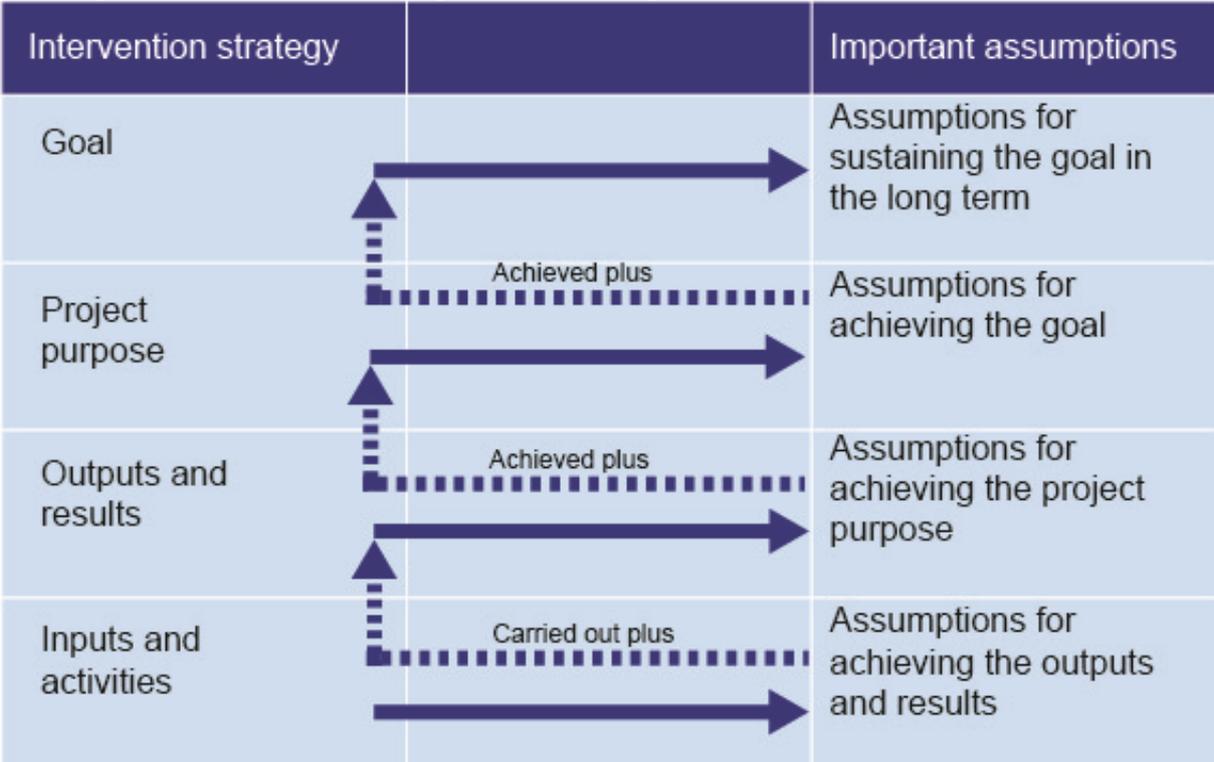
12.9 Vertical and Horizontal Logic within the PPM

The matrix functions on two dimensions, vertical and horizontal.

Vertical: The vertical logic can proceed from very specific inputs moving up to a general goal. It can also be considered in reverse from a general goal to the necessary specific inputs.

If the project or programme has good causality, then the vertical logic should be correct and demonstrable. Testing the vertical logic is important because it makes explicit the relationship between the particular inputs and outcomes. LFA also causes project participants to examine not only the causality of their project but also the resource requirements.

Linking of Matrix Cells through Vertical Logic



Horizontal: The horizontal logic of the matrix considers how to determine the status of inputs, outputs, achieving the project purpose and contributing to the overall goal by listing the indicators and verification and the assumptions overarching the project implementation.

12.10 An Example of a Matrix

Below is a simplified example of a filled out matrix with the overall goal to improve human nutrition.

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Goals and objectives Improving human nutrition in X	Improved human nutrition	Quantitive measures available from public sources or records of the project	Having more food produced will increase availability and improve nutrition
Project purpose Increase food production	Increased food production	Quantitive measures available from public sources or records of the project	Better yields will lead to increased production
Outputs and results Increased yields of vegetables	Increased quantities of vegetables	Quantitive measures available from public sources or records of the project	Using irrigation water will increase yields
Inputs and activities Irrigation water	Irrigation water	Quantitive measures available from public sources or records of the project	Irrigation water is available and can be distributed The increased yields will be available to the people

12.11 Implementation

The operational phase of a project commences when implementing activities begin in order to achieve the expected outputs/results. In many cases, this may be one or two years after the project concept had been established at the end of the design phase (as laid down in the PPM of the project appraisal). In the meantime, framework conditions may have changed, so that a verification of the PPM must take place during the operational planning. The project purpose and development goal, however, should be altered only in exceptional cases when major changes have occurred.

Implementation should have a plan of operations i.e. the detailed plan for the implementation of project. It is established by the project team and will be documented as:

- work plans / work schedules

- project budget / resources plans
- personnel plans
- material and equipment plan / procurement plan / staff training plans.

The work plan and the project budget constitute the core of the Plan of Operations.

12.12 Constructing a Combined Work plan and Project Budget

Step 1: Develop a table (work plan skeleton) and transfer the activities from the Project Planning Matrix to the first column of Define any necessary sub-activities.

Step 2: For each activity / sub-activity:

- specify the anticipated milestone(s)
- assign responsibilities for the implementation
- determine the beginning and the end of the implementation of each activity / sub-activity (timing)
- specify staff requirements per activity/sub-activity
- specify the quantity of material and equipment needed per activity/sub-activity
- specify cost and cost category for every activity/sub-activity
- specify important assumptions and their indicators

Step 3: Final check with focus on:

- consistency of cost with overall allocation / availability of financial resources.
- workload of assigned / responsible personnel
- consistency of the timing.

It may be advisable to transfer the reviewed work plan into a bar chart with time axes.

Possible format for a workplan

Activity	Mile stone	Assigned to: Responsibility:	2000 1st Div.	2000 2nd Div.	2000 3rd Div.	2000 4th Div.	Staff/ Training require- ments	\$	Misc.	\$		\$	Remarks
Activity 1.0			-----										
Activity 1.1			-----										
Activity 1.2			-----										
Activity 2.0				-----									

The work plan and project budget sheet constituting the core of the Plan of Operations, will serve as the basis for further detailed operational planning: e.g. sectional work-plans / budgets, half yearly/ quarterly plans, specific functional plans e.g. for training, procurements, etc.

1. Summary

Name of project, location, project executing agencies; overall goal, project purpose, background and major time schedule; indicators regarding ongoing project phase, outputs/results, major activities and resources required in the planned project period.

2. Overall Concept

Problem analysis and objectives; target groups, long-term project strategy, outputs/results, assumptions and risks for the overall project period; guarantee of the sustainability (integration planning), organisation of project executing agencies, development of institutional structures; total costs.

3. Description

Description of the situation at the beginning of the planning period; comparison of targets and actual situation, with respect to the results of previous planning period and the utilisation of resources, indications concerning assumptions and major(non-scheduled) impacts, conclusions concerning subsequent planning period overall concept (modifications, new activities, evaluations, etc.)

4. Description of upcoming project phase

Description of project goal, the outputs/results and assumptions, providing indicators for this period; description of the major activities; the procedure followed in the individual work areas and time frame (work plan), inter-linking of activities, impacts on target groups, their contributions and how they are integrated; monitoring and project controlling; description of the major organisation, competencies and responsibilities of the project executing agency in the project; functions of personnel; contributions by third parties; how funds are managed; organisation of cooperation in project (co-ordination, work-flows, communications, etc.)

5. Contributions by the partner organisation, the funding agencies and by third parties to the ongoing project period

- Project budget
- Personnel plan
- Staff training plan
- Material & equipment plan / procurement plan

6. Monitoring and Reporting

Deadlines for reports, addressees, deadlines for re-planning, evaluations.

7. Appendices

- Problem tree for entire project period
- Objectives tree for entire project period
- Project planning matrix for entire project period
- Project planning matrix for upcoming project period
- Monitoring and evaluation documents
- Organisation chart for project executing agency and for the project
- Job descriptions of project staff (expatriate and local personnel)
- List of available planning documents

12.13 Weaknesses with Logical Frameworks

LFA provide a valuable set of tools for project designing, but they also have a number of weaknesses. Such weaknesses include, but are not limited to the following:

One of the main criticisms that project designers have of the LFA approach is that it begins by identifying problems. Three problems emerge from beginning with problems:

- Beginning with the problem analysis often produces poor results because the initial negative focus pervades the rest of the LFA process. This often results in limited vision of potential solutions.
- Beginning with the problem analysis can be particularly serious problem in cultures that consider it inappropriate to openly discuss problems or criticise.
- Beginning with the problem analysis is not suited to situations where there is a great deal of uncertainty or where agreement cannot be reached on the main problem.

The LFA approach assumes the nature of the problems can be readily determined at the beginning of the planning process. This does not allow for an exploratory style project that seeks to learn from experience.

The LFA is often developed and used rigidly. This can stifle innovative thinking and adaptive management. LFAs are often developed after the project has been designed rather than used as the basis for design. The use of the LFA late in the design process can often be attributed to:

- a lack of understanding of the LFA approach
- the LFA is seen as a requirement of funding agencies and not as a design or management tool.
- LFAs do not readily enable monitoring unintended consequences.
- LFAs are rarely considered by project managers to be a key planning tool.

12.14 Conclusions

The logical framework approach provides a powerful set of tools for designing projects and project evaluations. However, like all tools, LFAs are not the complete answer to effective project designing. LFAs are best used towards the end of the project design cycle after information has been collected and analysed, needs assessed, views of stakeholders sought and the external environment of the project understood.

13. UNDERSTANDING THE CONTEXT FOR WASH NEEDS IN MASS DISPLACEMENT EMERGENCIES

Of all of the primary human needs, water has the greatest importance for survival. A safe water supply and some form of sanitation are basic human needs that are necessary to protect the community from diseases caused by human excreta. Unfortunately, water is also a carrier of pathogenic organisms, causing many outbreaks of water-borne diseases, particularly diarrhoea. Diarrhoea can have devastating effects both on the individual and on the group. It lowers resistance to other diseases, reduces the ability of the body to readily absorb valuable nutrition, and causes low morale and apathy. At its worst, it is fatal.

Emergency shelters and camps are potentially dangerous to human health and life largely because of poor water quality and poor sanitation conditions. Relatively few camps have been planned and prepared in advance of the arrival of a mass population movement. With inadequate provisions for sanitation, water, drainage, space and shelter and despite the delivery of supposedly adequate food quantities, many camps have outrageously high death rates. Proper water and sanitation programs play a major role in disrupting the deadly cycle of disease transmission and thus prevent sickness and death.

Cultural factors affect personal hygiene practices and how decisions regarding water and sanitation are made. Politics and local influential personalities largely determine most decisions on what interventions are allowed. For example, host country officials may be reluctant to permit latrines to be constructed in a camp when their own country lacks resources to provide them to their own people.

One can exist longer without food than without water. Safe water is essential for life and health. The provision of water demands immediate attention from the start of a refugee emergency. In emergencies, water is often not available in adequate quantity or quality, thus creating a major health hazard.

13.1 Understanding Water Sources

An adequate amount of water is essential for good personal hygiene to be practiced. In general, the supply of adequate quantities of water to people in crowded conditions has a greater overall impact than supplies of small quantities of microbial pure water.

Nevertheless, whenever possible, sources of clean water should be sought or disinfection systems established. Hand, utensil, and clothes washing depends upon sufficient water that is safe and accessible. There are three different types of *water sources* which may serve to meet the overall requirement. There are some issues associated with each of these sources that should be considered:

- 1) Rain Water- may be a useful supplement for individual needs. As a main source of water, it is generally not suitable because of its unpredictable availability. For this to be a successful option there must be sufficient rainfall throughout the year and there must be suitable shelter and household storage facilities.

- 2) **Surface Water**- If the only available source is surface water, great care must be taken to protect it. Do not allow people or animals to enter the water- especially upstream of the intake point, if it is a river.

Contamination of surface water by rain runoff from latrines or open defecation areas is a severe problem. Surface water sources include seasonal catchments, rivers and ponds. All of these have great potential for contamination and disruption.

Although in the initial phase of an emergency the refugees will usually use surface water, like rivers and lakes if available, it is preferable *not* to draw water from such sources since they are likely to be contaminated. In emergencies, however, the only immediate solution may be to use these sources. In this case, an accurate water quality monitoring system and appropriate treatment measures (i.e., sand filtration or chlorination) must be quickly developed and put into place.

- 3) **Ground Water** – includes infiltration galleries, boreholes, wells and springs. **Springs** with sufficient flows are the ideal source for groundwater, water supply schemes. The quality of water is usually good, but should be tested.

13.2 Water Treatment

The three main principles of *water treatment* in emergency situations are :

1. **Coagulation and Sedimentation** – If the raw water contains high silt loads, sedimentation is necessary. The water will flow through a large tank where velocities are kept very low. This allows the solid matter to settle out, leaving relatively clean water to exit the tank. If the particles are of a small size, the sedimentation can be assisted by adding a *coagulant*. The particles will *flocculate* (attach to each other) and settle faster. The microbiological quality, however, does not improve significantly through these processes so a further treatment of the water is still required.
2. **Filtration** – An effective method of treatment for emergency situations is the slow sand filter. The water moves down through a filter bed of 600 to 900 mm of deep sand, physically filtering out solids and, more importantly, a thin and very active layer of algae, plankton, bacteria and other forms of life develops on the surface of the sand bed. It is here that micro-organisms break down organic matter and kill pathogens. Provided the rate of filtration is slow enough, the quality of the treated water is very good.

The construction of sedimentation and filter tanks requires considerable time which is often not available in emergency situations. However, OXFAM provides a sand filtration unit that is set up easily and can be flown into nearly any location.

3. **Disinfection** – Pathogenic organisms can be destroyed by disinfecting. This can be done by adding disinfectant, by ozone, by UV light or boiling. Chlorine

or chlorine compounds (bleaching powder) are most commonly used. Chlorine is an oxidizing agent and, if added to the water, will oxidize the impurities. This makes it a very effective bactericide.

It is essential that the dose of chlorine is exactly determined, if an insufficient dose is used, it will not kill all pathogens. If the “residual” chlorine level is too high, people may reject the water because of the unpleasant odour and taste. An adequate dose satisfies the chlorine demands and leaves a minimum residue which provides protection against contamination during the distribution.

The residual chlorine doses should be checked regularly after a contact time of 30 minutes to ensure that the doses applied are sufficient. **The optimum residual chlorine measurement is 0.5 ppm.** If the level is higher than 1 ppm, people will probably reject the water due to unpleasant taste. The level of chlorine can be easily checked in the field with a DPD chlorine comparator kit.

13.3 Understanding the Hygiene Loop

Water, sanitation and personal hygiene (the sanitary practices undertaken to maintain a clean body and clean environment in and around shelters) are all interrelated and of major concern in the refugee camp. Improper disposal of faecal material can lead to contamination of water. Contamination of water supplies leads to higher disease and malnutrition rates. Improper hygiene, poor food storage or preparation techniques, or lack of personal cleanliness can cause minor skin diseases, also severe diarrhoea, and other diseases.

In the management of refugee camps, the interrelationship of water, sanitation and hygiene is known as the *hygiene loop*. This implies that the basic elements cannot be treated independently. Rather, they must be treated as a system in order to control disease.

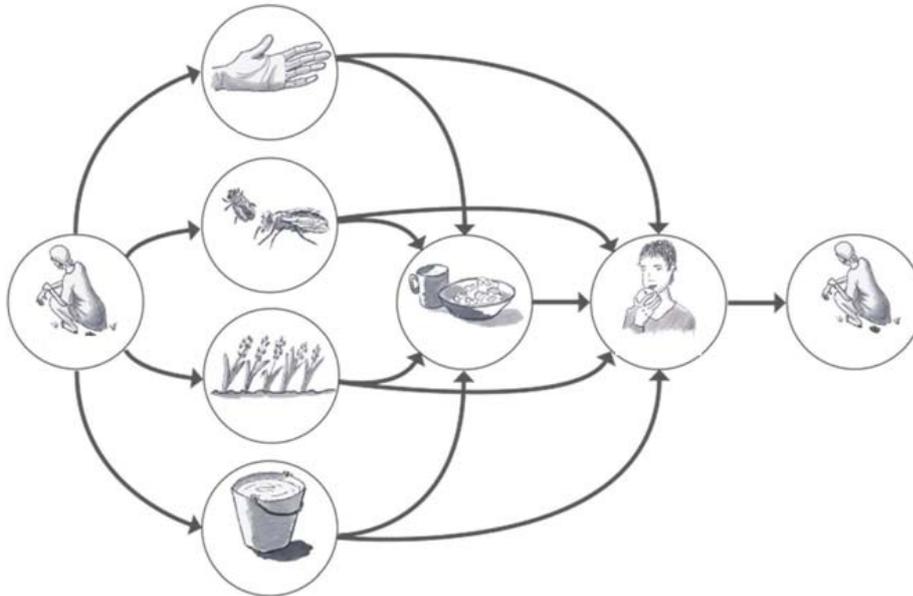
Since failure of any of these systems or activities falls under the direct responsibility of the refugee camp manager, it is important that the administrator be aware of how to determine if problems exist in the loop and how to correct them. Safe and adequate water supplies cannot be taken for granted. The camp environmental system and sanitary practices must be evaluated constantly to detect and prevent the possibilities of a deadly communicable disease outbreak from occurring. This can affect not only the refugees but the surrounding host community as well.

An infectious disease is one that can be transmitted from one person to another or, sometimes to and from animals. Living organisms, such as bacteria, viruses, or parasitic worms, cause all infectious diseases. By passing the organisms from one person’s body to the other (faecal/oral route) the diseases are transmitted. In the transmission of diseases from the sick, or from carriers of the diseases, to the healthy, a chain of conditions is necessary:

- An agent that can cause disease must be present
- The agent can cause an infection in its host
- The agent can escape from the host
- The agent can be transmitted from the host to a potential new host

- There is a possibility of entry into the new host
- The new host must be susceptible to the agent

If any of the above conditions is absent, the spread of the disease is impossible.



Hygiene Loop illustrates the many ways bacteria and other disease causing organisms can be transmitted to cause communicable disease. The lines are complex and confusing as these organisms can be transmitted in many different ways. Therefore, it becomes more evident that the concept of the hygiene loop is the only practical approach that integrates all the water and sanitation activities needed in order to obtain the desired effect. Understanding the relationships illustrated in the hygiene loop is critical to establishing an effective water and sanitation program. A program that just stops transmission in one route will probably not have the desired outcome.

Bacteriological analysis of water should be carried out through faecal and total coliform bacteria counts. As a preventative measure, new water supplies should be tested **before** use, and supplies that are already in use should give scheduled periodic testing. As a curative measure, testing of the water supplies being used should be performed whenever there is an indication of water-borne illness/disease.

Normal practice dictates detection of “indicator bacteria”. Humans and other warm-blooded animals – regardless of whether they are ill or healthy, always excrete these bacteria in large numbers. Their presence in a water sample indicates a faecal contamination of the water. The most commonly used indicator is Escherichia Coli (E Coli).

The usual testing done by local water laboratories and experience of local sanitarians will probably be directly related to the typical water problems faced by the host country community.

The most widely used tests implicate and enumerate faecal coliforms and are performed in water testing labs. Virtually every country is equipped with at least one such lab. Usually, several labs are able to carry out tests for the presence of coliforms rapidly and routinely. If there is no available lab, a portable Delaqua water

testing kit might be considered. They are readily available from various resources and good results can be obtained in the field.

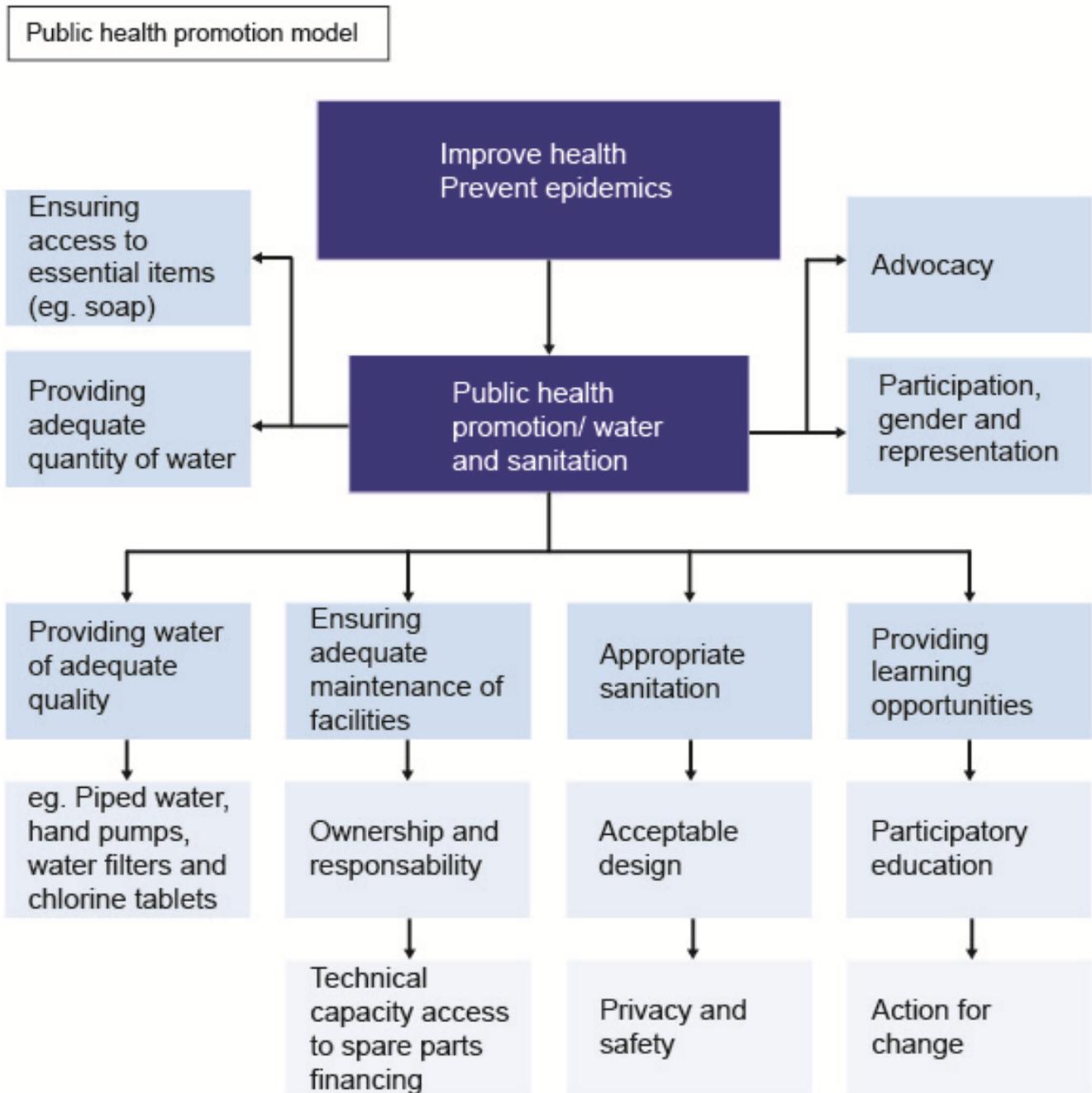
The presence of coliform bacteria in a water distribution system indicates that the treatment or disinfection has failed. ***A rough guide to faecal coliform concentrations and their associated water quality level follows:***

0-10 faecal coliforms/ 100 ml water	⇒ reasonable quality
10-100 faecal coliforms/ 100 ml water	⇒ polluted
100-1,000 faecal coliforms/ 100 ml water	⇒ very polluted
> 1,000 faecal coliforms/ 100 ml water	⇒ grossly polluted

Detailed standards for water quality are presented in WHO's guidelines for *Drinking Water Quality*, the UNHCR *Handbook of Emergencies* (Chapter 16) and the Sphere Project standards (Chapter 2).

Avoiding Faecal Contamination

From experience, it is evident that the faecal disposal problem is one of the greatest sanitary hazards in a camp environment. This can be most effectively dealt with during initial camp design. Water and sanitation facilities in a refugee camp usually require a substantial investment of money, both for the construction of the facilities, and their on-going maintenance. In many cases, on-going maintenance costs can be much more than the initial cost to construct the systems. A major way to reduce maintenance costs is to focus on the water and sanitation systems during camp planning. In fact, good planning will not only reduce maintenance costs but will improve the use of these facilities. For example, if latrines are constructed that are too far away from the users homes or shelters, there will be increased use of the surface areas in the camp for defecation. Or, if water supplies are too distant, efforts to encourage refugees to improve personal hygiene by washing will be difficult.



Water is heavy. Use is dependent upon closeness of the supply and availability of proper receptacles for transporting it that can be used by the group whose task it is to carry it. Or, if water supply taps are provided in large numbers throughout the camp, but there is no provision of drainage from these tap outlets, massive unsanitary conditions will result at these taps. Construction of latrines that require pumping by a vehicle but not providing road access to the latrines will result in wasted resources and health hazards.

If latrines are not carefully sited, pollution from them can enter the water supply. This seems obvious but may not become apparent until a flash flood or heavy rains. A site for latrines should be selected with many criteria in mind.

Initially, excreta should be contained within specific areas until a more appropriate sanitation system can be implemented. Personal or family latrines that are **well maintained** are the best solution.

Sphere Sanitation standard 1: access to, and numbers of toilets (latrines). *Poorly maintained and unclean latrines are a health hazard.* If communal trench latrines are to be used, responsibilities regarding cleaning and maintenance should be assigned carefully.

13.4 Dealing with Solid Waste (Garbage)

Garbage that is mismanaged can promote a variety of environmental hazards. Planning and organizing refuse collection services is a complex business. Major types of refuse treatment and disposal are:

1. Sanitary landfill
2. Incineration
3. Composting

Poor refuse disposal will encourage fly breeding and may thus promote the transmission of faecal-oral infections. It can also promote diseases associated with rats.

Burying (sanitary land filling) is better than burning (incineration). Incinerators, however, might be advisable for clinics/health centres where medical/hazardous wastes are to be disposed of in the safest possible manner. Communal systems are better than individual pits.

Proper management of garbage, excreta (see above as for fly control) and domestic wastewater disposal through environmental measures such as filling and drainage are a more effective means of vector control than chemicals (i.e. use of pesticides). It is more cost-effective and may avoid undesirable effects such as resistance of target organisms and/or poisoning of non-target organisms.

Before spraying activities are launched, workers should be adequately trained and provided with protective clothing. These safety considerations are as important (if not more) than the procurement of chemicals and sprayers.

Awareness of the vector species existing in a specific area and the most effective means for controlling those vectors is essential. This will avoid unnecessary effort and ensure that environmental modifications do not favour some other potential vector(s). The two main methods used for mosquito control are:

1. Killing adult mosquitoes by using insecticides
2. Treatment or elimination of the breeding sites by using larvicides, oil, or construction with proper drainage.

Control measures should be concentrated within 1-2 km from settlement(s).

14. PARTICIPATORY MONITORING AND EVALUATION: LEARNING FROM CHANGE

Summary:

Development organisations need to know how effective their efforts have been. But who should make these judgements, and on what basis? Usually it is outside experts who take charge. Participatory monitoring and evaluation (PM&E) is a different approach which involves local people, development agencies, and policy makers deciding together how progress should be measured, and results acted upon. It can reveal valuable lessons and improve accountability. However, it is a challenging process for all concerned since it encourages people to examine their assumptions about what constitutes progress, and to face up to the contradictions and conflicts that can emerge.

14.1 Why the interest in PM&E?

Monitoring and evaluation (M&E) is vital if governments and aid organisations are to judge whether development efforts have succeeded or failed. Conventionally, it has involved outside experts coming in to measure performance against pre-set indicators, using standardised procedures and tools.

Participatory monitoring and evaluation (PM&E) has emerged because of recognition of the limitations of this conventional approach. It is attracting interest from many quarters since it offers new ways of assessing and learning from change that are more inclusive, and more in tune with the views and aspirations of those most directly affected. This shift in thinking has been prompted by:

- *the surge of interest of participatory appraisal and planning, a set of new approaches which stress the importance of taking local people's perspectives into account;*
- *pressure for greater accountability, especially at a time of scarce resources;*
- *the shift within organisations, particularly in the private sector, towards reflecting more on their own experiences, and learning from them.*

PM&E provides an opportunity for development organisations to focus better on their ultimate goal of improving poor people's lives. By broadening involvement in identifying and analysing change, a clearer picture can be gained of what is really happening on the ground. It allows people to celebrate successes, and learn from failures. For those involved, it can also be a very empowering process, since it puts them in charge, helps develop skills, and shows that their views count.

14.2 Beyond the Conventional Approach

PM&E differs from conventional monitoring and evaluation approaches in several important ways:		
	Conventional M&E	Participatory M&E
Who plans and manages the process:	Senior managers, or outside experts	Local people, project staff, managers, and other stakeholders, often helped by a facilitator
Role of 'primary stakeholders' (the intended beneficiaries):	Provide information only	Design and adapt the methodology, collect and analyse data, share findings and link them to action
How success is measured:	Externally-defined, mainly quantitative indicators	Internally-defined indicators, including more qualitative judgements
Approach:	Predetermined	Adaptive

14.3 What is PM&E?

PM&E is not just a matter of using participatory techniques within a conventional monitoring and evaluation setting. It is about radically rethinking who initiates and undertakes the process, and who learns or benefits from the findings.

Early examples of PM&E date back to the 1970s. There are many different forms depending on who is participating, at what stages they are involved, and the precise objectives. Community-based versions, where local people are the primary focus, sit alongside other forms geared to engaging lower level staff in assessing the effectiveness of their organisation, and working out how it can be improved. At the heart of PM&E, however, are four broad principles:

- **'Participation'** - which means opening up the design of the process to include those most directly affected, and agreeing to analyse data together;
- The inclusiveness of PM&E requires **'negotiation'** to reach agreement about what will be monitored or evaluated, how and when data will be collected and analysed, what the data actually means, and how findings will be shared, and action taken;
- This leads to **'learning'** which becomes the basis for subsequent improvement and corrective action;
- Since the number, role, and skills of stakeholders, the external environment, and other factors change over time, **'flexibility'** is essential.

A wide range of methods and tools have been developed to carry out PM&E. They all seek to compare the situation before and after a particular project, or set of events. They include home-made questionnaires and scientific measurement techniques adapted for use by local people, as well as more innovative methods such as oral histories, and the use of photos, video and theatre.

14.4 Practical Applications

PM&E is being used for many purposes. Some governments and aid organisations are using it a way of becoming more accountable, by giving intended beneficiaries the chance to speak out about local impacts. At a community level, PM&E is being used to help motivate people to sustain local initiatives and manage conflicts. Banks and other large commercial enterprises are employing similar approaches to assess their ethical and environmental performance, for instance through social audits. The following examples illustrate the range of application.

Getting the right end of the stick in Zambia

CARE Zambia, a non-governmental development agency, wanted to implement projects in a more responsive manner, and ensure they learned better from their own project experience. First, a baseline was established in dozens of villages using wellbeing ranking and other participatory methods. Now changes are being tracked in the best and worst-off households to assess project impact and help plan new initiatives. Joint analysis has helped communities and staff define - rather than just speculate about - changes, and has encouraged communities to take action on their own.

Most PM&E processes involve a sequence of steps:

Steps and Methods

Methods commonly used include:

Maps: to show the location and types of changes in the area being monitored.

Venn diagrams: to show changes in relationships between groups, institutions, and individuals.

Flow diagrams: to show direct and indirect impacts of changes, and to relate them to causes.

Diaries: to describe changes in the lives of individuals or groups.

Photographs: to depict changes through a sequence of images.

Matrix scoring: to compare people's preferences for a set of options or outcomes.

Network diagrams: to show changes in the type and degree of contact between people and services.

Defining Sustainability: The international conservation organisation, IUCN, is testing alternatives to the usual top-down approaches to assessing sustainability. One alternative invites local people to score the health of their community and ecosystem on a 'sustainability barometer'. It can be a revealing process. In a pilot study in India, villagers generated their own evidence showing dwindling natural resource stocks. This led them to rethink long-held assumptions about the abundance of natural resources, and prompted them to take steps to address key problems, particularly water scarcity.

Assessing a US Federal programme

In the USA, 'citizen learning teams' have been involved in monitoring and evaluating a large government programme for community revitalisation of distressed areas. Working with researchers, local volunteers selected which goals to track, decided how to measure progress, and provided ongoing feedback to local leaders and government funding agencies. In one area, people hit on the idea of using telephone directories and newspapers to measure the level of community capacity. By looking at changes over time in entries relating to 15 community sectors, they found many more signs of a dynamic community than they had previously assumed, and were able to use this knowledge to target program funding.

Supporting indigenous governance in Colombia

In Colombia, ACIN, an association of indigenous people covering 13 communities, is involved in monitoring and evaluating its own multi-sectoral regional development plan. They are looking at links between productivity and environmental and cultural factors, tracking changes over time and comparing plans with results in a systematic way. This has helped communities recognise their strengths and improve their management capabilities, which, in turn, is leading to changes in power relationships. Links are being made between communities, providing the concerted voice needed in negotiations with national and provincial government, and the private sector.

Tracking Agenda 21 changes in the UK

The 'Local Agenda 21' initiative in the UK aims to make communities more sustainable. Developing appropriate indicators is seen as an essential part of this. Research by the New Economics Foundation shows that indicators work the best when they are developed in participatory ways. In communities of all kinds, 'everyday experts' are getting involved in the monitoring and evaluation process, and results are starting to change policy. For example, Lancashire County Council is using locally defined indicators to pin-point hot spots of social exclusion and reallocates resources. Home-made indicators have also provided surprise evidence of massive increases in childhood asthma, and unearthed other problems.

14.5 Sustaining the Process

Such examples show how PM&E has created new ways of measuring change, while helping build the monitoring and evaluation capacity of the people involved. Nevertheless, problems have been encountered. Common mistakes are:

- *assuming that all stakeholders will be interested in taking part;*
- *imposing inappropriate indicators and methods in an effort to standardise and save time;*
- *being unclear about how information will be used, and by whom; collecting unnecessary information;*
- *starting too big, too soon.*

Opening up the assessment process to a wider range of stakeholders may also expose conflicts over what is most important, how it should be tracked, and whether

goals are being met. Failure to predict and deal with conflict can lead to frustration. When carried out well, however, PM&E can provide a framework for clarifying and negotiating differences between stakeholders and developing a consensus on what the priorities are.

PM&E is not just a research process, therefore; it is a social, political and cultural one, too. To be sustainable it requires openness, a willingness to listen to different points of view, recognition of the knowledge and role of different participants, and an ability to give credit where credit is due.

14.6 Selecting the Best Indicators

Indicators are central to most monitoring and evaluation processes. They can be qualitative or quantitative, and provide a way of spotting and measuring underlying trends. In Uganda, for example, the number of households eating 'beer bananas' is an indicator of hunger, since this type of bananas is only eaten during times of food shortage.

Selecting the best indicators is not always easy:

- *it is a balancing act between choosing locally-relevant factors, and those that can be applied more widely;*
- *the more stakeholders that are involved, the longer the process of selecting indicators can take;*
- *indicators should capture intangible as well as tangible changes, particularly in projects that value factors such as personal and social development. For example, the Inter American Foundation uses an approach that encourages the inclusion of indicators such as 'cultural identity', 'self-esteem', and 'degree of civil responsibility'.*

14.7 Implications for Development Agencies

Most development organisations are well aware of the shortcomings of conventional M&E approaches. The promise of better performance evaluation, and the positive impact it can have on those who take part, are encouraging many of them to try PM&E. But it is no easy option. It can also provoke more far-reaching changes than realised.

For organisations supporting participatory development, monitoring and evaluating throws up a particular challenge. Although there have been attempts to develop standardised indicators, these are bound to be problematic, since the quality of participation can only really be assessed through a process which is itself participatory.

PM&E can only thrive in organisations willing to review their procedures and attitudes, and change them where necessary. Flexibility and patience are essential,

since more time is needed to design and adapt the process than when standard procedures are used. Organisations need to create this space if PM&E is to work.

With many governments and development agencies favouring devolution and decentralisation, PM&E has an increasing role to play. If responsibility is to become more localised, and based on the diverse needs and priorities of local communities, progress can no longer be measured using standardised top-down indicators. New, more versatile, and more devolved processes are required to track and assess change.

Two main challenges stand out if PM&E is to flourish. First, bringing together people's different ways of looking at the world challenges established notions of what constitutes rigorous data collection and analysis. Conventional concepts of validity and reliability of data are being questioned as methods are combined in new ways and 'experts' interact more with local people. Adopting PM&E requires the acceptance of new, less rigid, standards of credibility of information, and an appreciation of when information is 'good enough' for the task at hand - rather than being perfect.

The second challenge is in scaling up the process, especially in cases when PM&E is being introduced into projects and programmes that themselves are not participatory. In such situations, there is a much more of a learning process to go through. Experience suggests that it is best to start small and create opportunities for PM&E to be tested before it is introduced more widely. A trial phase helps staff and other stakeholders come to grips with the new approach and its implications. During this phase it may make sense to use PM&E in parallel with conventional M&E processes, rather than as a substitute. Having a high level 'champion' can also be a big advantage, someone in authority who can create room to manoeuvre while experiments take place, and who understands that making mistakes is an important part of the learning process. Training is another key ingredient. It is required at all levels, from villager's right through to senior management. As well as concepts and methods, training needs to address questions of behavior and attitude, since these are crucial to any participatory process.

PM&E offers an opportunity to redefine development and its impacts, and create a communication channel between those in power and those living with the consequences of development decisions. But to be meaningful, policy makers and development agencies must recognise that their plans and programmes might be fundamentally challenged, and be prepared to respond accordingly.

Further reading

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- NEF, 1998, 'Communities Count! A step by step guide to community sustainability indicators', London: NEF

Useful websites:

More information on participation and PM&E is available on the IDS web site, at: www.ids.ac.uk/ids/particip

This Policy Briefing was written by Irene Guijt and John Gaventa and edited by Geoff Barnard, with input from: Jo Abbot, JuttaBlauert, Marisol Estrella, John Thompson, Colin Kirk, and Robert Chambers. Many ideas discussed here emerged from participants at an international workshop in the Philippines in November 1997 organised by IIRR, IDS, IIED, IDRC, Philippines PRA Network, and UPWARD, with additional funding from DFID and SDC. The opinions expressed are the authors' and do not necessarily reflect those of IDS or its funders.

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Institute of Development Studies, at the University of Sussex, Brighton BN1 9RE, UK
Tel: (+44) 1273 606261 Fax: (+44) 1273 691647 or 621202

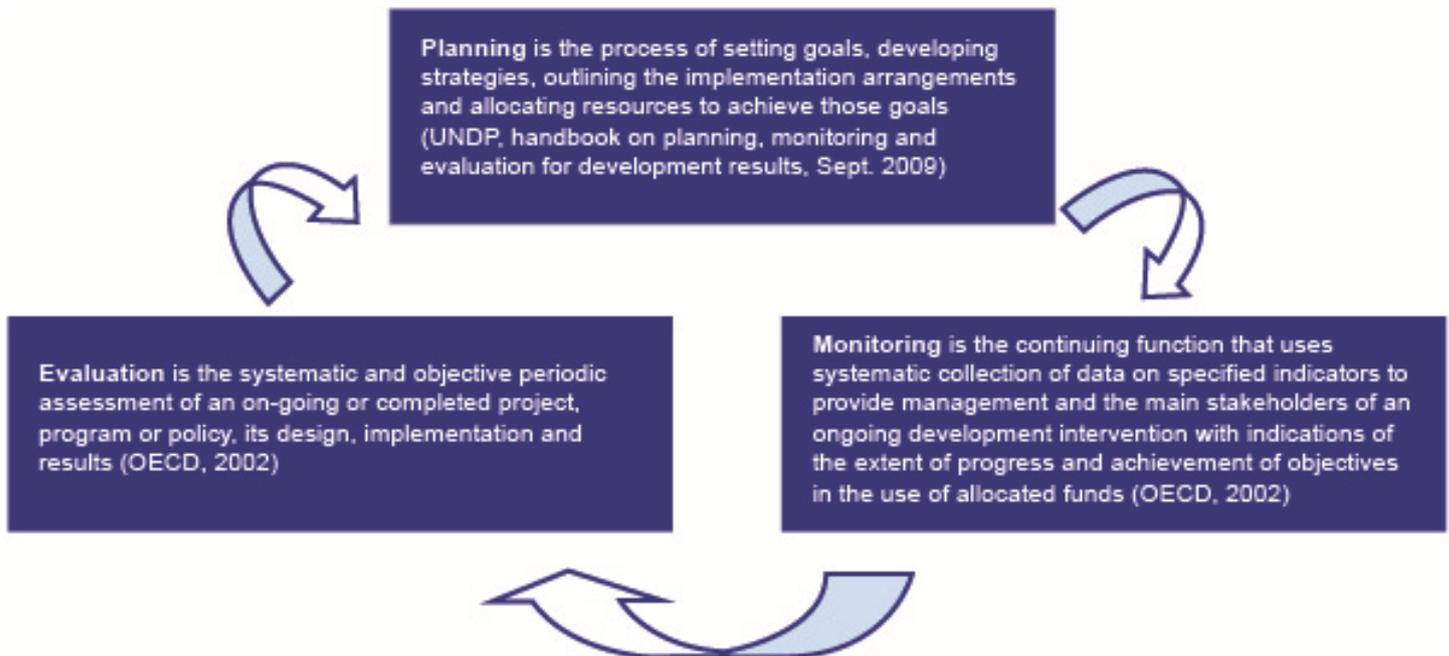
E-mail: ids@ids.ac.uk

Source: http://www.undmtp.org/english/contingency/conting_planning.pdf

15. PROGRAM AND PROJECT PLANNING, MONITORING AND EVALUATION⁸

15.1 Basic Concepts in Planning, Monitoring and Evaluation

There is an expression that “failing to plan is planning to fail”. Not having a plan - whether for an office, programme or project - is in some ways similar to attempting to build a house without a design or blueprint – that is, it is very difficult to know what the house will look like, how much it will cost, how long it will take, what resources will be required and whether the finished product will satisfy the owner’s needs.



Planning, in sort, help us to define what an organization, programme or project aims to achieve and how it will go about it. Furthermore, monitoring is concerned not only on asking the question “are we taking the actions we said we would take?” but also “are we making progress on achieving the result that we said we wanted to achieve?”. Furthermore, evaluations offer a learning opportunity to find out about what is working, what is not, and what needs to be improved.

Planning, monitoring and evaluation are interrelated and interdependent functions. Without proper planning and clear articulation of intended results, it is not clear what should be monitored and how; hence monitoring cannot be done well. Without effective planning (clear results framework), the basis for evaluation is weak; hence evaluation cannot be done well. Without careful monitoring, the necessary data is not collected; hence evaluation cannot be done well. Monitoring is necessary, but not sufficient for evaluation. Monitoring facilitates evaluation, but evaluation uses additional new data collection and different frameworks for analysis. Monitoring and

⁸ Habitat for Humanity: Program and Project Planning, Monitoring and Evaluation

evaluation of a programme will often lead to changes in programme plans. This may mean further changing or modifying data collection for monitoring purposes

15.2 Importance of Planning, Monitoring and Evaluation

Monitoring and Evaluation is predominantly associated with providing **information** that **managers** require for timely **decision making and action planning**. M&E will enable Managers:

- To assess progress against schedules and targets;
- To allocate the necessary resources and funds for effective implementation;
- To compare use of inputs and expenditures against resource schedule and budget; and
- To assess quality of implementation.

Monitoring and evaluation plays a particularly important role in Habitat for Humanity Programs and Projects. Only through M&E we can:

- Understand what changes are needed to improve programme implementation and performance.
- Identify lessons and recommendation for future implementation.
- Establish the success of the activity.
- Enhance effectiveness of project implementation by establishing clear links between past, present and future interventions and results.
- Extract relevant information that can subsequently be used as basis for programmatic fine-tuning, reorientation and planning; and
- Help improve performance and achieve results.

15.3 Characteristics of a Good Planning, Monitoring and Evaluation

Planning, Monitoring and evaluation in Habitat for humanity is guided by the **PRAISE** characteristics:

15.4 Steps in developing Project Planning, Monitoring and Evaluation Plan

P	Participatory	Encourages stakeholders involved in planning, collection, analysis and feedbacking
R	Result oriented	Focuses on measuring tangible results
A	Accountable	Clearly defines stakeholders' responsibilities and ownership
I	Innovative	Alternative approaches and participatory techniques are encouraged and ensure that appropriate and relevant M&E information are collected and utilised.
S	Sustainable	Ensures continuous and ongoing process of tracking progress and measuring
E	Effective and efficient	Focuses on measuring the intended results in the most efficient way

Step 1: Clearly define project results. The first step in measuring performance and results of HFH programs and projects is to clearly define the intended results of the project. Result statements must have the QQT (Quality, Quantity and Time) elements. An example is: *“Temporary shelter kits are distributed to 100 disaster affected families in village XX by August 2010.”*

Step 2: Identify performance indicators. Indicators are conditions, which will signal achievement of a desired end. Identification of objectively verifiable indicators (OVI) will facilitate comprehensive judgment about a particular situation, will encourage project implementers to clarify the objectives of the project and will provide an objective basis for evaluation. Indicators must be SMART (Simple, Measurable, Attainable, Realistic and time bound). Example of an indicator for Step 1 result statement is: *“Number of disaster affected families in village XX used temporary shelter kits”*.

Step 3: Identify suitable data collection tools (M&E tools). Alternative methods and tools can be used in collecting information to measure performance, achievements and results of project results. Below are some of the commonly used



tools:

Step 4: Identify risks and mitigating measures. Risk is a chance of loss or chance of bad consequences or exposure to mischance such as the risk of catching a cold and the risk which ones life is exposed to as a result of travelling alone in a dangerous forest or war zone. One important feature of risk is its close association with uncertainty. Unfortunately, uncertainty cannot be eliminated and since it is clear that where ever there is uncertainty there is risk, it follows that risk cannot also be eliminated. The following are the steps that need to be done to identify and analyze risks:

- i. **Identify risks:** based on the project design (Logframe), identify what potential external situation or event that may happen and will eventually adversely affect the realization of the project goal, purpose and objectives. Basically, risk identification begins by making a list of all areas that might cause project delays or failure.
- ii. **Identify potential adverse impact of risks:** once risks are identified, the next step is to identify what are the possible effects or impact if the risk will occur.
- iii. **Determine the likelihood and level of impact of the risks:** assess the possible occurrence of the risk (likelihood) and the level of effect (Impact) of the risks.
- iv. **Define strategy to mitigate the occurrence of risks and the responsibilities:** based on the current information available with you, what do

you things are the strategies that may be done to mitigate or minimize the occurrence of the risks.

Risk Management Matrix

Risks	Potential Adverse Impact	Risk Likelihood (H, M, L)	Risk Impact (H, M, L)	Mitigating Measures	Responsibility

Step 5: Identify and define information needs, flow and roles of key stakeholders.

The principle of participation is critical to ensuring sustainable human development, as it empowers people to influence decisions that affect their lives. It is the varying level of involvement and support of key stakeholders to realize the intended results and goal. Involving stakeholders in M&E to assess progress, outcomes and impacts of development projects, such as selecting appropriate indicators, methods and measurement, supplying information, analyzing findings and using lessons learnt is crucial to build ownership and accountability. Stakeholders participation in M&E is therefore “..an **action-oriented process** that leads to critical learning and corrective action by involving key actors, and building their capacity and commitment to reflect, analyze, and take responsibility for corrective actions...”.

Who are involved in M&E?	What are their M&E Role/s?	What M&E information do they need?	How often do they need the information?
<i>Example:</i> Project Manager	<ul style="list-style-type: none"> - Monitor progress of project implementation - Facilitate reflection of project performance - Communicate project achievements and results to National Office - Prepare monthly progress and financial report - Prepare end of project report 	<ul style="list-style-type: none"> - Activities conducted vs. plans - Outputs vs. targets - Challenges and issues encountered - Community assessment, gaps, issues and opportunities 	<ul style="list-style-type: none"> - Weekly progress - Monthly achievements

Below is a sample template in defining the roles of stakeholders, needs and flow of information.

Step 6: Collect baseline information. Baselines are information that describes the situation prior the development intervention, against which progress can be assessed or comparisons made. It is the first measurement of an indicator. It is the process of establishing where we are at present relative to the outcome we are trying to achieve.

Sample M&E Plan

Output	Indicators	Baseline and Target	Data Collection Tools (Frequency)	Responsibilities
<i>T-shelter kits are distributed to 100 disaster affected families in village XX by August 2010.</i>	<i>Number of disaster affected families in village XX used temporary shelter kits</i>	Baseline: Houses of 150 families in village XXX were completely damaged by typhoon XX in June 2010. Target: 100 temporary shelter kits distributed by end of August 2010	Monthly Report Monitoring Visit (Monthly)	Project Manager

Step 7: Develop PME Calendar. Below is a sample PME calendar for a three month temporary shelter project:

PM&E Activity	Month 1	Month 2	Month 3	Responsibilities	Remarks
Project Implementation Plan	X			Project Manager	Finalized by 1 st week of Month 1
Monthly Plan	X	X	X	Project Manager	1 st week of the month
Monthly Report	X	X	X	Project Manager	Once a month
Monitoring Visit	X	X	X	Field Officer	Random visit to project site
Monthly meeting	X	X	X	Project Manager	Last working day of the month

15.5 Eight Steps in Developing Baseline Data Collection and Monitoring Plan⁹

Step 1: Clearly define project results. Identify what need to be measured. Good indicators start with good result statements that people can understand and agree on.

Step 2: Identify performance indicators. Indicators are unit of information, measured over time, that document change. This step can be done through a brainstorming exercise with your team to identify as many indicators possible, then assessing each possible indicators the using ten basic criteria for judging an indicator's appropriateness and utility, namely: *Measurable, Practical, Reliable, Relevant, Useful to management, Direct, Sensitive, Responsive, Objective, Capable of being disaggregated.* The international best practice is indicator setting is: *minimum of one indicator to a maximum of five indicators for every result.*

Step 3: Develop baseline data gathering plan and monitoring plan. The next step is to develop the plan how to collect data by answering the following questions (see Template 1).

- What data needs to be collected?
- Where can we collect data?
- What method or tool can be used to collect data?
- How often will you collect data?
- Who will collect data?

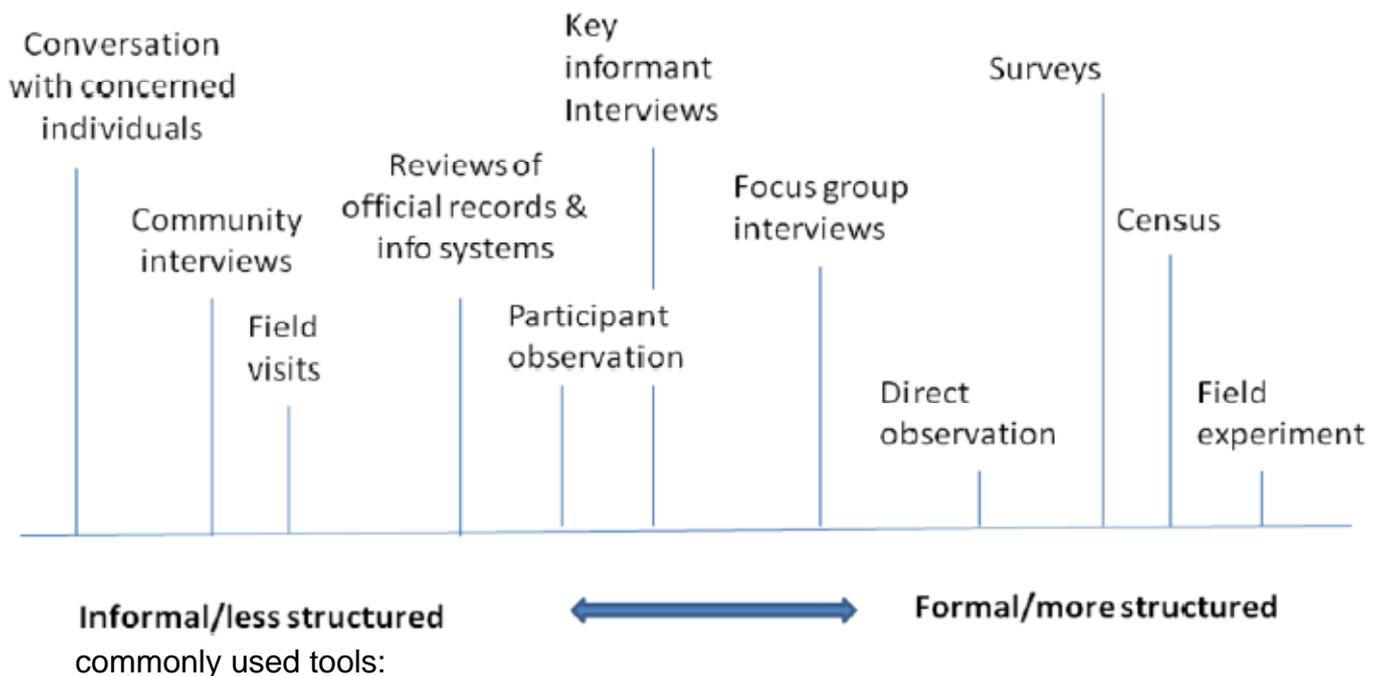
⁹ Habitat for Humanity: Eight Steps in Developing Baseline Data Collection and Monitoring Plan

- What resources are needed to collect data?

Template 1: Baseline Data Collection and Monitoring Plan

Project Results	Indicators	What data to be collected?	Where to collect data?	What suitable data collection tool can be used?	Who will collect data?	How often will data be collected?	What resources are needed to collect data?

Step 4: Identify suitable baseline data collection tools. Below are some of the



Step 5: Design and pretest baseline data collection tools. The baseline tool must capture all relevant data needed for all indicators identified.

Step 6: Collect baseline information. Baseline is the first attempt to collect data for every indicator. It describes the situation prior the development intervention, against which progress can be assessed or comparisons made. It aims to establish where we are at present relative to the outcome we are trying to achieve.

Step 7: Data collection, analysis and storing. All data must be encoded and stored in a baseline database for ongoing tracking and trend assessment within the project lifespan and as basis for impact evaluation.

Step 8: Regular tracking of information to changes based on the set of indicators. A process of ongoing tracking must take place to check level of change vs. indicator.

16. GENDER AND PARTICIPATION

(Excerpts from “The Importance of Gender & Participation to the Work of Disasters & Emergencies” by Françoise Praline Coupal)

16.1 Understanding Key Concepts

There are a number of key concepts that are critical to considering gender and participation in disaster work.

Gender refers to the socially constructed roles and responsibilities of women and men that can be seen through:

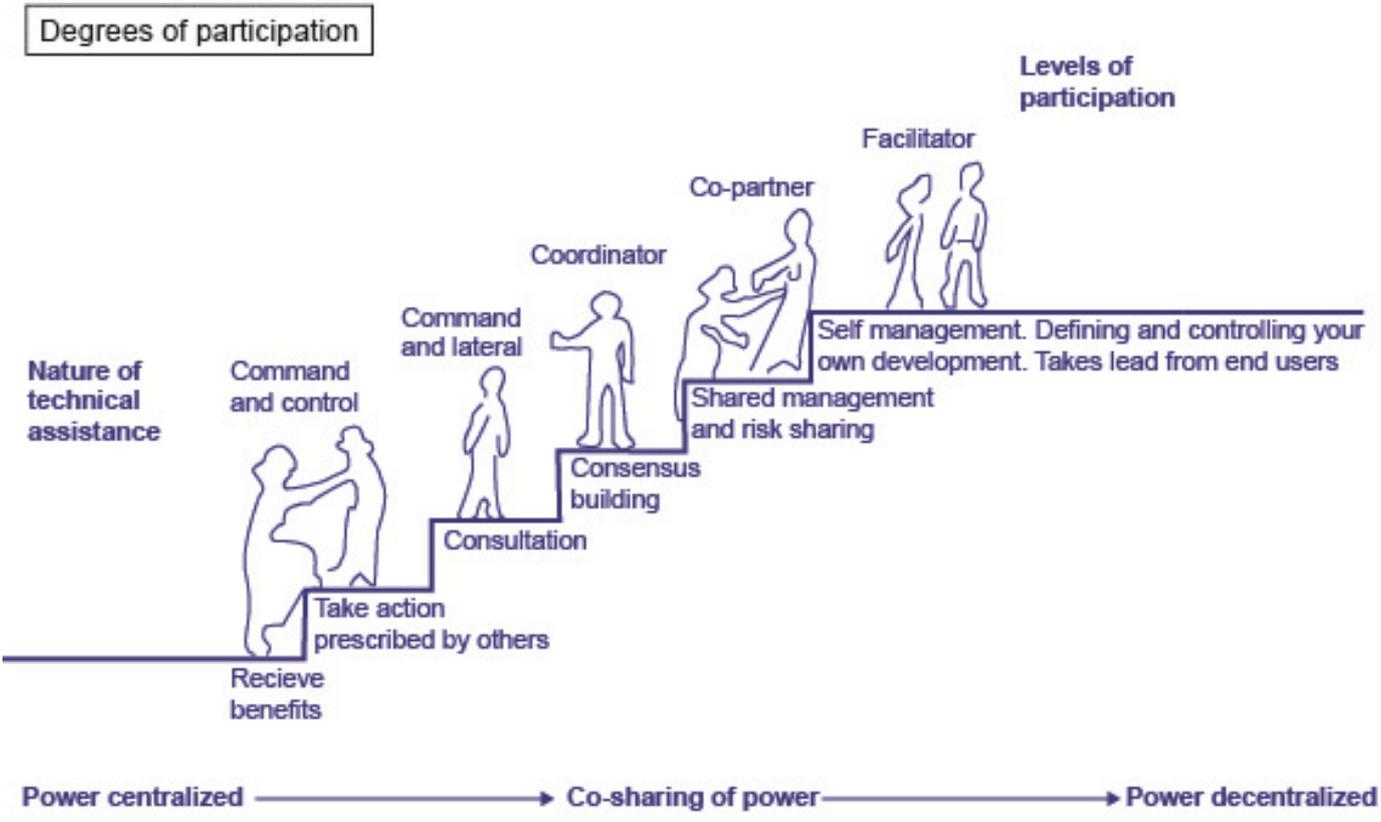
- The differential needs of women and men which may need to be met in different ways.
- The differential roles and responsibilities and capabilities of men and women which can be reinforced or undermined before, during or after disasters and emergencies.
- Social institutions and cultural practices that ensure that we learn and comply with socially accepted roles.
- The differential impact of disasters based on women and men's social economic position in society.

Gender Equity are the special measures that are often required to ensure that women and men can fully participate as equal partners in the sustainable development of their societies. Latin American countries have adopted their own laws on promoting equal opportunities and measures against domestic violence and discrimination. **Are your disaster interventions providing equal opportunities for both women and men regardless of their gender, race, sexuality or socio-economic position?**

Gender Equality is not simply a women's issue. Gender equality means that women and men have equal opportunities for reaching their full potential to contribute to the national, economic and social and cultural development of their country in ways that ensure sustainable development, social justice and greater equity.

Participation. Experience has shown that real participation can improve the quality, effect and sustainability of development actions by placing the needs, priorities and aspirations of people at the centre. However, experience has also shown that there are a myriad of definitions, interpretations, degrees and levels of participation. What seems participatory to one person may seem vertical and dictatorial to another. Undergoing some critical self-analysis on one's style of management or work is essential as well as identifying the attitudes, behaviours and skills that are necessary to be more participatory and inclusive in how projects are designed, implemented and evaluated or how disaster preparedness, mitigation and response can mobilize all the resources in ways that encourage democratic principles, team-work and inclusivity.

Learning to use participatory and rapid assessment methods might prove useful in community development work and in rapid assessments following a disaster. Exploratory walks, focus groups (men, women and children), discussions with key informants and opinion leaders (i.e. community leaders, elders, teachers, nurses, etc), community mapping, ranking of priorities are some of the many tools that can be used to triangulate your findings.



Gender and participation are emerging issues for the disaster community. While there is general recognition that women, children & the elderly are the most vulnerable there is a need to look at how disasters involve and impact on women & men

differently & how diverse voices can be included & heard in all levels of disaster management & decision-making in order to make development & disaster interventions more effective.

There are a number of reasons why a gender and participation aspect is important in the work of disasters and emergencies:

- **Women and men's existing capacities and vulnerabilities determine the way they respond to crises.** The aim of disaster interventions should be to increase capacity and reduce vulnerability. Understanding how men and women, youth and the elderly respectively define vulnerability according to their perception & experience of the environment is critical in overcoming future obstacles and vulnerabilities.
- **Disasters involve women and men differently and understanding this may ensure our interventions do not exacerbate gender disparities.** Women are key family health managers and community organizers. During times of emergencies and disasters, women's participation is often an extension of her domestic work, providing food and meeting shelter needs of the local population. Men are usually involved in high-risk search and rescue activities and at the forefront of decision-making although women are often in the background as the key community organizers. Understanding these roles, ensuring they are not exacerbated and supporting women and men who take on different roles is essential in good management. Indeed, the voices of both are required for informed decision-making.
- **Differential needs.** All too often needs assessment fail to disaggregate the population by age, gender and ethnicity which lead to international humanitarian assistance that is inappropriate and wasteful. Shelter, nutritional needs and appropriate medical interventions need to be disaggregated by age, gender and ethnicity to ensure sensitive and appropriate interventions.
- **Women and men experience disasters differently according to their gender roles.** Women by virtue of their lower social, economic and political status tend to be more vulnerable to disasters. They are more likely to suffer domestic violence and be excluded from post reconstruction activities that target men. Men have difficulty coping with their loss of status and productive work which is often reflected in high rates of alcoholism and abusive behaviour. Strategies to provide psycho-social support can lessen the adverse effects of disaster for women, men and their families.
- **Reconstruction provides opportunities for social change.** Gender roles can change rapidly as a result of disasters. These can be opportunities to redefine social relations that are more equitable and sustainable. But, to do so, reconstruction and preparedness initiatives must be anchored in sound and responsive development interventions.

Indeed, when involved in disaster preparedness there are a number of critical questions that one should be asking:

1. **Institutional Framework:** Is the Ministry responsible for gender or women's issues included in the disaster management co-ordination unit? Are people's human rights protected by the Ministry of Justice during and following emergencies? Are locally based NGOs represented at all levels of decision-making: national, regional and locally? At the community level, are women and men, youth and the elderly represented?
2. **Information, Collection and Analysis:** Is information gathering extractive or empowering? To what degree does it involve the local population? Who owns the information? Do interventions take into account local experiences in dealing with disasters in the past? How does the local population define vulnerability? Is this differentiated by age and gender? Is adequate information available on different people's coping strategies to adequately guide hazard mitigation strategies? Whose and what indicators will you use to measure progress?
3. **Prioritization of hazards and activities.** Are decision-making structures to guide resource allocation for disaster mitigation and preparedness sufficiently representative of different social groups? Do activities reflect the varied needs and priorities of women and men, youth and the elderly? Do you have a representative sample of various stakeholder groups to ensure your interventions are representative of the community at large?
4. **Early Warning Systems:** How have local populations in the past forewarned disasters and emergencies? Do women and men have different early warning systems based on their productive roles? To what degree are indigenous early warning systems built upon? Is the information that triggers early warning sufficiently disaggregated by social group? Is the medium widely available, democratic (i.e. radio vs. walky talky) and appropriate (easy to understand, targeting and timing) to ensure that the most vulnerable are being reached?
5. **Contingency Planning:** Do contingencies demonstrate a full understanding of the different needs of women and men, boys and girls and the elderly in the event of a disaster? Have these groups been consulted and are they part of the planning process? Do relief stockpiles such as food, shelter and medical supplies meet the disaggregated needs of the population? Does the relief process being planned appropriately build on, rather than undermine local capacities and skills and involve both affected women and men, boy and girl youth leaders and the elderly, rather than being treated as invisible or as victims?
6. **Public Education/Information:** Do public information and education campaigns about disasters respond to existing differences in the vulnerabilities and capacities of men and women?
7. **Exercises and Rehearsals:** Are exercises and rehearsals targeted to include all key stakeholders such as children, youth, men and women and the elderly. In hospitals are food staff, nurses, maintenance staff, doctors and nurses and administrative staff included? Are the most vulnerable populations (pregnant women, handicapped, premature babies, diabetics or patients on life support apparatuses) identified and taken care of?

16.2 Some Examples of Gender-Sensitive and Participatory Approaches

The Importance of Age and Gender Disaggregated Data

In 1997, a consortium of humanitarian organizations launched the Sphere project to develop a set of uniform standards that are gender-sensitive in core areas of humanitarian assistance that would improve the quality and accountability of disaster response and relief work.

Indeed, initial health assessments include among other things, the sex and age breakdown of the affected population, the average family or household size including estimates of female and child-headed households and pregnant and lactating women. Indeed, basic gender and age disaggregated data will have an important impact on requirements in the area of water, sanitation, shelter, nutrition and food security.

The uniform standards developed by the Sphere project also goes further by outlining appropriate approaches that involve the participation of local health authorities and qualified members of the affected population including community workers and home visitors.

Accurate and reliable data is indispensable so that humanitarian assistance and reconstruction projects respond more directly to the needs of the local population. Rapid and participatory needs assessments with NGOs and the local population can triangulate data coming from more official sources.

The Foundation for Municipal Development

(FUNDEMUN) in Honduras has over the past year made a conscientious effort to achieve greater gender equity in their disaster preparedness work at the municipal level. Invitations to workshops now explicitly invite women and men participants to the workshops. This simple strategy has increased women's participation in the workshop by 10% and increased women's involvement at the municipal level.

Psycho-Social Impact

Many countries following hurricane Mitch, the earthquake in El Salvador and civil strife in Colombia have begun to note the differential psycho-social impact on affected populations.

For example, in Colombia millions of persons have been displaced by guerrilla and para-military groups. As men were often the key contact for guerrilla groups or the para-military, men often felt guilt for displacing their families, experienced a deep

sense of loss of their social and economic role and identity that was closely tied to working the land. Displaced women assumed new roles as social agents and economic providers to ensure the survival of their family. Nevertheless, women also manifested psycho-social symptoms such as sadness, anxiety or irritability.

The changing roles of women and men have also resulted in increased violence and abuse of both women and children, the breakdown of families and the consequent increase in women headed households.

There is a tremendous need to systematize data, experiences and low-cost and appropriate intervention strategies that are gender-sensitive.

16.3 Challenges Facing the Disaster Community

There are multiple actors involved in disaster work: Government Ministries at the national and municipal level; civil defence; NGOs: both national and international; civil society; donors; the Church, and community-based organizations. Indeed, integrating a gender and participatory perspective in the work of disaster means facing a number of challenges such as:

Resistance. Organizations may not be ready to embrace the change that may be required to accommodate both women and men as participants and decision-makers in their communities or organizations.

Shifting control and command structures so that they are more horizontal, team-based and inclusive of various voices. As the saying goes, "people want change, but don't want to change". Without a basic change of attitudes and behaviours that value listening, participation, diversity of opinion, it will be very difficult to move to more democratic structures of decision-making that value teamwork and horizontal modes of communication that are less hierarchical and vertical.

Shedding old practices for new tools and methods. The current un-sustainability of development interventions and inappropriate international humanitarian assistance bring a host of lost opportunities, duplication of efforts and plain waste of human and financial resources. Governments, donors and technical assistance organizations, must define their inventions by listening to the people, hearing their needs and priorities, hearing their voices to shape interventions that come from below rather than being imposed by what outsiders think poor people need or require. This requires strong facilitation skills and knowledge of participatory rapid assessment techniques that can be used in preparedness, mitigation and response.

Coordinating Efforts without forgetting who are the key ACTORS of development. Greater donor and NGO coordination is essential and laudable. Supporting local NGO capacity is critical when international money has dried up and gone elsewhere. However, the local population and those most affected by disasters and emergencies must be part of this consultation process and an environment

created so that their voices are heard and listened to. They cannot be absent from discussions about them whether they be the Government, the poor, the vulnerable: youth, single heads of household or elderly or the displaced.

17. GENDER CONSIDERATION IN DISASTER ASSESSMENT¹⁰

17.1 Key Questions

- How are women and men, girls and boys differently affected by the disaster?
- What are the implications for the relief, rehabilitation and reconstruction effort (in terms of needs, access to assistance and contribution to community efforts)?
- Are there particular vulnerabilities/difficulties that result from the disaster for women, for children, for men?
- How do gender norms of the community affect aid seeking behaviour and/or access to aid?
- Are women predisposed to have less access to aid/ information due to cultural norms affecting mobility in public, illiteracy?
- Are local women and their associations being actively included in planning and implementation?
- Are there women and men involved in decision-making and employed as aid workers at all levels?

17.2 Specific Needs of Women in Tsunami Aftermath

- Sanitary supplies (tampons/ sanitary napkins/cloth) and privacy to ensure that these can be used correctly. The need for other supplies related to women's reproductive health (including contraceptives) must be assessed.
- There are reports that women have lost their clothing in the tsunami and are unable to go out in public because of this. This affects their access to assistance and information, increases their reliance on others and the potential for abuse. Additionally, this prevents these women from actively participating in clean-up, recovery and rebuilding efforts. Therefore, there is a need for culturally appropriate clothing for women and girls (including underwear and, where appropriate, head covering).

17.3 Women as Carers

¹⁰ WHO/GWH (11 January, 2005). "Gender Consideration in Disaster Assessment"

- Women are often primary carers for children, the elderly (and sick/injured family members). For women who now head households, do their child and other care responsibilities prevent them from accessing aid? Do their attempts to access aid place their children at increased risk (if they are left unattended or taken to a crowded distribution site)? Is the ability of women to care for their children affected by the effects of the earthquake/tsunami on their physical and mental health? How does burden of care affect women's physical and mental health?
- If women are the ones who take care of the sick in the household, they must be provided with information about health resources, recognizing infectious diseases and other medical conditions which require immediate attention, and how to respond to diarrhoea with ORT.

17.4 Access to Aid

- Does the location of water-points, latrines put women at risk? Does distance/procedure place an increased burden on them if they are primarily responsible for fetching water?
- Are services addressing the needs of and reaching women? What about pregnant and nursing women?
- Does targeting of aid distribution have the potential to exclude certain groups or increase opportunities for exploitation?

17.5 Vulnerability to Exploitation/Abuse

- During displacement, including in shelters and sites for the internally displaced, the issues of exploitation and abuse of women and girls including domestic violence must be recognized. Children may be at risk of trafficking and girls also of early/forced marriage.

17.6 Principles of good practice:

- Involve women in all stages of decision-making. Make sure that information about the needs of the family/community are obtained from men and women.
- Collect data disaggregated by sex and use this data for program planning and for documentation of short- and long-term effects.
- Identify and provide sex-specific needs.
- Consider and assess the impact of all response activities on women and men.
- Pay special attention to those who may experience some social exclusion (widows, female heads of household, disabled women).

DAY 5

18. UNDERSTANDING EARLY RECOVERY¹¹

18.1 Definitions and Objectives

What is early recovery?

The overall focus of the recovery approach, as defined by UNDP, is to restore the capacity of national institutions and communities to recover from a conflict or a natural disaster, enter transition or 'build back better', and avoid relapses. Early recovery is a multidimensional process guided by development principles that begins in a humanitarian setting, and seeks to build on humanitarian programmes and catalyse sustainable development opportunities. It aims to generate and/or reinforce nationally owned processes for post-crisis recovery that are resilient and sustainable. It encompasses the restoration of basic services, livelihoods, transitional shelter, governance, security and rule of law, environment and other socio-economic dimensions, including the reintegration of displaced populations. It strengthens human security and aims to begin addressing the underlying causes of the crisis.

Early recovery and transition

Following a crisis, a country undergoes a process of transformation within the overall time-frame of transition. The term 'transition' as used in this document refers to the period immediately after a disaster or conflict when pre-existing plans and programmes no longer reflect the most pressing priorities. It is applied to many different, often overlapping processes of transformation. Early recovery is the response to this transformation process, starting immediately after the onset of a crisis. The priorities are to produce immediate results for vulnerable populations and to promote opportunities for recovery, a response that evolves over time into longer-term recovery. The aim of the UN system and its partners in transition is to help national authorities to initiate immediate, high-priority crisis resolution and recovery activities, and to then move from a short- or medium-term post-crisis recovery strategy to a longer-term national development framework.

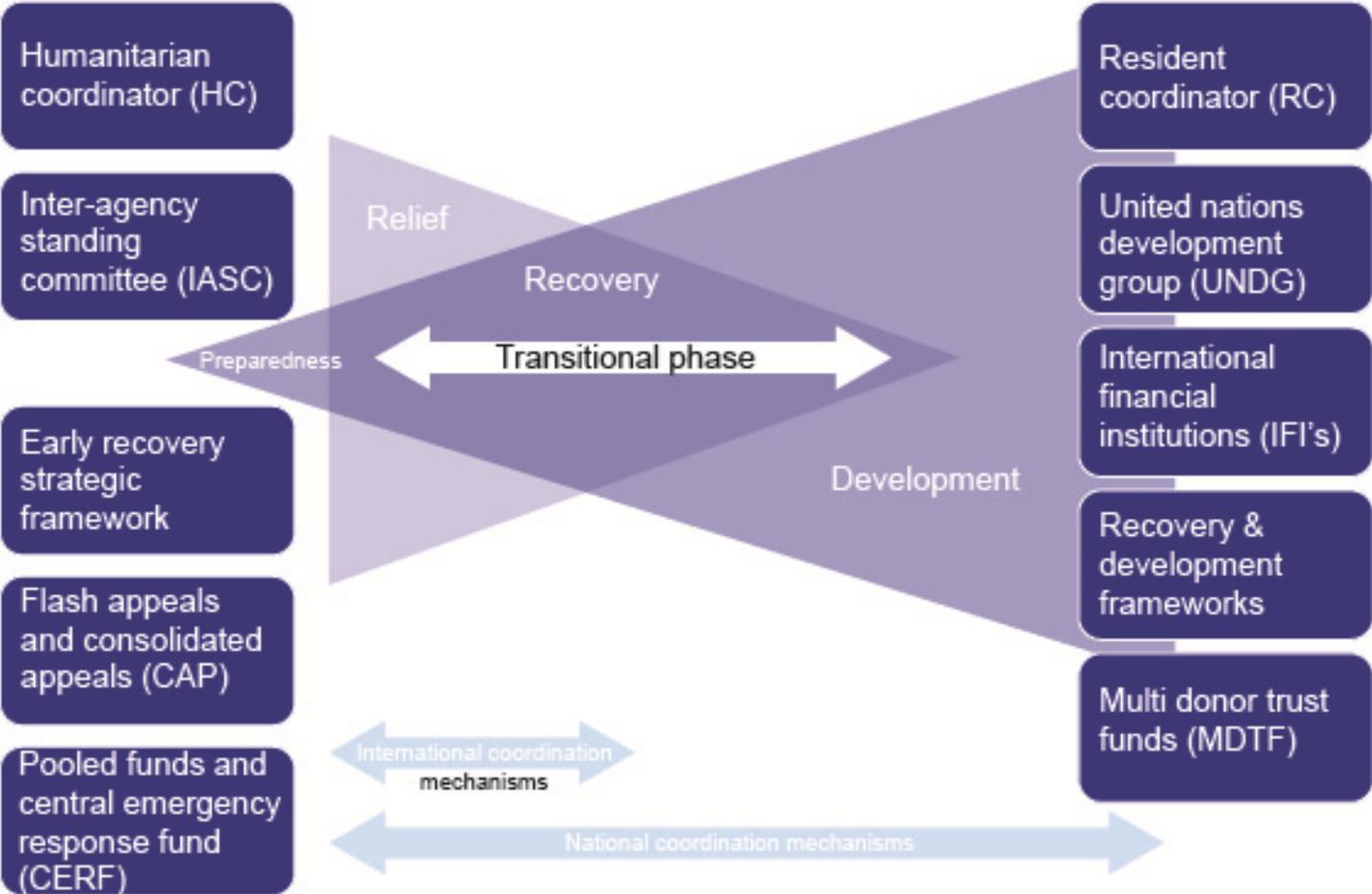
People affected by crises often require life-saving support because their communities, institutions and livelihoods may be weakened or destroyed. Recovery programming throughout the transition works to restore basic social services, infrastructure, livelihood opportunities and governance capacity. To achieve this, the foundation of recovery must be initiated in the humanitarian or emergency phase.

¹¹Cluster Working Group on Early Recovery, UNDG-ECHA Working Group on Transition (April, 2008): Guidance note on Early Recovery

Most initial attention will be given to life-saving interventions, but the sooner work on recovery begins, the sooner the affected areas are stabilized, and the shorter and more effective the recovery process is likely to be. As effective early recovery allows regional institutions to progress with providing basic services and assume governance functions such as security, local administration and justice.

While early recovery is guided by development principles, it begins within the time-frame of emergency intervention and must be integrated within humanitarian mechanisms. In practice, this means that early recovery coordination within the UN system falls under the overall responsibility of the Humanitarian Coordinator (or the Resident Coordinator, depending on the context), and early recovery activities should be integrated into humanitarian resource mobilization tools, such as flash appeals and consolidated appeals (CAPs). At the same time, in order to facilitate a smooth transition into longer-term development, early recovery also needs to be situated in the context of development actors and processes. Figure 1 suggests how early recovery can be integrated into relief and development contexts.

Figure 1 Early recovery in the context of transition



The aims of early recovery

Early recovery and humanitarian efforts occur in parallel, but their objectives, mechanisms and expertise are different. Early recovery efforts have three broad aims:

(1) Augment ongoing emergency assistance operations by building on humanitarian programmes, to ensure that their inputs become assets for long-term development and thereby foster the self-reliance of affected populations and help rebuild livelihoods, through e.g.:

- re-establishing and facilitating access to essential services such as health, education, water and sanitation, finances, and primary infrastructure (road repair, transport, communication), and restoring environmental assets;
- ensuring appropriate transitional shelter;
- distributing seeds, tools and other goods and services that help to revive socioeconomic activities among women and men;
- providing temporary wage employment for both women and men (e.g. cash-for-work programmes);
- urgently restoring environments needed to allow for rebuilding of livelihoods;
- restoring basic levels of collective and human security;
- strengthening the rule of law and the capacity of the State to respect, protect and fulfill the rights of the people; and
- introducing risk reduction and conflict prevention to build back better and prevent the reconstruction of risk.

(2) Support spontaneous recovery initiatives by affected communities and change the risk and conflict dynamics, through e.g.:

- supporting national/government capacity to lead early recovery planning and programming, providing support based on local knowledge and practices;
- strengthening the self-help efforts and capacities of the affected population, especially displaced people, to contribute actively to rehabilitation and reconstruction;
- promoting community approaches to restore basic levels of security;
- identifying negative coping mechanisms to ensure that community recovery and rehabilitation activities do not generate discriminatory practices or secondary risks; and
- Identifying critical ecosystems (goods and services) that require restoration to support the development of sustainable livelihoods.

(3) Establish the foundations of longer-term recovery, through e.g.:

- early needs assessment, planning and resource mobilization for recovery, taking into account the different needs, resources and vulnerabilities of women and men;
- planning that involves all relevant national and international stakeholders and enables women's organizations to participate fully in all phases of recovery;
- creating strategic alliances between communities and local authorities ensuring the participation and inclusion of vulnerable, marginalized and discriminated groups;
- raising human rights awareness and strengthening the capacities of local communities to claim their rights while building the capacities of the authorities to respond adequately to these claims;
- rebuilding/restoring/reinforcing national and local systems, including identifying personnel and training or retraining them to restore state capacities to direct and manage the development phase;
- reviewing and/or developing essential policy to guide recovery efforts that aims to improve and not replace pre-crisis conditions and vulnerabilities (e.g. through building back better, conflict prevention and risk reduction initiatives, promoting gender equity); and
- identifying and fostering an enabling institutional system with clear roles and responsibilities that facilitates the integration of recovery in the development process.

18.2 Guiding Principles for Early Recovery

Experience of recovery operations suggests that the process should be guided by principles that have been identified as conducive to sustainability and a successful transition. These guiding principles should be adopted throughout the needs assessment, planning, programming, and monitoring and evaluation stages of the early recovery implementation process:

- Ensure **national ownership** of the early recovery process through the fullest possible engagement of national and local authorities in the planning, execution, and monitoring of recovery actions.
- Promote local and national capacities by ensuring that external technical assistance complements rather than replaces existing capacities, and is seen by national actors as supportive rather than directive.
- Use and promote participatory practices to identify needs, build capacities for empowering communities and create the foundations of a sustained, free, active and meaningful participation throughout all phases of the early recovery process. This lays important groundwork, helps ensure that local initiatives, resources and capacities are fully understood and utilized, and builds capacity for comprehensive post crisis needs assessment led by national partners in the recovery period.

- Develop capacities for building constructive and inclusive working relationships between civil society organizations and government institutions.
- Influence how humanitarian and early recovery assistance is provided to ensure that interventions *Primum non nocere* – ‘first, do no harm’, as well as take account of longer-term development considerations. External assistance is not neutral, but becomes part of the context in which it is delivered, and can unintentionally reinforce actual or latent conflict dynamics. Thinking not only about what interventions plan to achieve, but also on how to achieve such objectives – including the choice of modalities for implementation, the selection of partners and staff, the time line for implementation – can help to ensure that early recovery efforts ‘do no harm’. Carrying out an environmental impact assessment (EIA) or health impact assessment (HIA), and understanding the root causes of the crisis, will assist decision makers to ensure that policies, projects and programmes in all areas lead to improved livelihoods and have no detrimental effects on the rights of the population.
- Maximize synergies among different actors through efficient coordination of stakeholders in the early recovery process. This can be achieved by sharing information and promoting integration to avoid duplication and gaps, optimizing the resources available for sustainable recovery.
- Include risk reduction and conflict prevention measures in the early recovery process by ensuring that key decisions are based on risk assessment. Assessments of hazard, vulnerability, and capacity will inform efforts to reduce risk.
- Build capacity to strengthen accountability systems so that the population can hold governments and local authorities to account in the implementation of early recovery plans and programmes as well as find redress if they have a grievance or a legitimate claim unfulfilled.
- Ground early recovery interventions on a thorough understanding of the context in which they take place, including in terms of conflict dynamics that may be unintentionally reinforced by such interventions (see box 6 on using conflict analysis on page 21 of this guidance note).
- Ensure integration of other cross-cutting issues such as gender, environment, security, human rights, and HIV/AIDS in assessment, planning, implementation, and monitoring and evaluation through the use of appropriate expertise and tools.
- Promote equality and develop local capacities to prevent discrimination of any kind such as race, colour, sex, ethnicity, age, language, religion, political or other opinion, national or social origin, disability, property, birth or other status. Early recovery programmes should identify and address the main patterns of discrimination, inequality and exclusion resulting from or being at the origin of the violent conflict. In identifying these patterns and potential negative impacts, programme decisions should be based to the extent possible on disaggregated data and information.

- **Promote gender equality** by assessing particular needs and vulnerabilities in gender analysis. Women's roles in transition and development are profoundly affected by how far early recovery efforts include them and their needs in assessment, planning and programming.
- Conduct effective assessments of need and capacity to determine objectives and priorities for early recovery.
- Monitor, evaluate and learn through appropriate participatory techniques and mechanisms that allow timely identification of corrective measures, and capture the experiences and voices of the target population.
- Build on and/or reorient ongoing development initiatives to ensure they contribute to building resilience and capacity in affected communities. As a minimum, review ongoing initiatives to ensure they do not contribute to the further accumulation of vulnerability.

19. SUSTAINABLE LIVELIHOODS AND EMERGENCIES

19.1 Sustainable Livelihoods Approaches: Purpose and key concepts

Sustainable Livelihoods approaches provide a framework for addressing poverty and vulnerability in both development and humanitarian contexts. They have emerged from the growing realization of the need to put the poor and all aspects of their lives and means of living at the centre of development and humanitarian work, while maintaining the sustainability of natural resources for present and future generations.

19.2 Definitions

*A **livelihood** comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.* Source: Chambers and Conway, 1992

***Livelihood strategies** are the range and combination of activities and choices that people make in order to achieve their livelihoods goals. On the basis of their personal goals, their resource base and their understanding of the options available, different categories of households – poor and less poor – develop and pursue different livelihood strategies. These strategies include short term considerations such as ways of earning a living, coping with shocks and managing risk, as well as longer-term aspirations for children’s future and old age. Livelihood strategies can be positive, helping households become more resilient and less vulnerable, or negative when they result in the further erosion and decrease of the asset base.*

19.3 Livelihood analysis and crisis

The impact of a crisis on any given population group results from the shock itself and the vulnerability of the affected people. In many situations, needs assessment is “supply driven” i.e. needs are defined in relation to particular agency mandates. Thus the same crisis can be variously described as a “food crisis” an “agricultural crisis” or a ‘health crisis’ depending on the perspective of the agency conducting or sponsoring the assessment, with needs and responses defined accordingly. Properly undertaken, a livelihoods analysis can circumvent such difficulties by helping to understand better the actual assets of affected people, which eventually shape people’s livelihood strategies (thus explaining their behaviour). People’s ability to withstand shocks, will ultimately depend on their asset base.

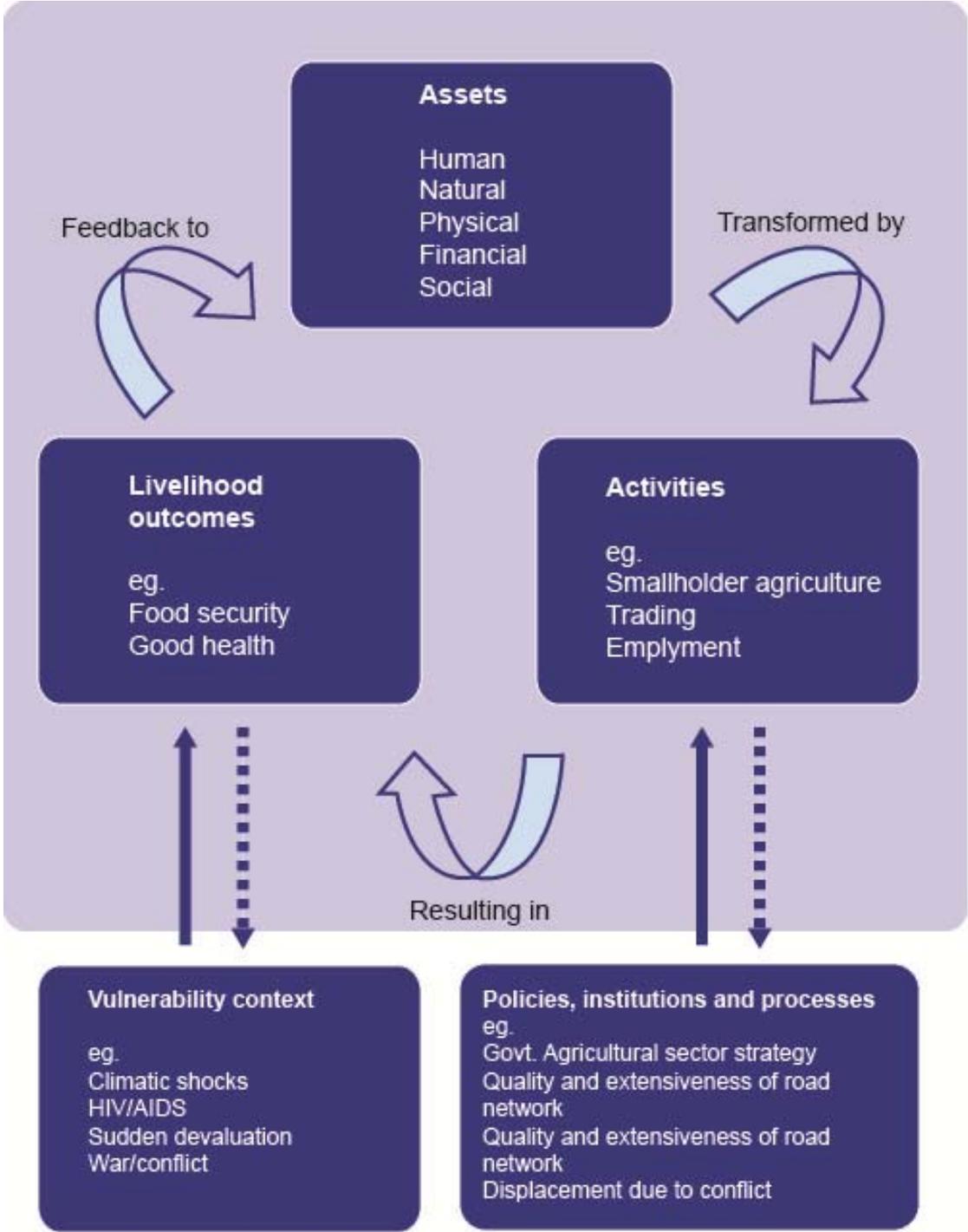
Assets are classified into:

- **human capital**, e.g. education, formal and informal skills, health;

- **natural capital** e.g. natural resources such as farming and grazing land, forests and non-timber products, wildlife, and water;
- **physical capital** e.g. shelter, infrastructure such as roads and transport, buildings, irrigation systems, and productive assets such as seed, tools, livestock, fishing gear and other farm and processing equipment;
- **financial capital** e.g. cash income and remittances, credit, savings in kind and cash;
- **social capital** e.g. formal and informal institutions (including markets), associations (e.g. water users and savings and credit associations), extended families, and local mutual support mechanisms.

The relationships between these assets, what people actually do, how this results in outcomes such as food security, and how all of this is subject to external influences such as outbreak of a civil war or drought is illustrated below.

19.4 A simplified livelihoods framework



The diagram shows that the livelihood of a person, household or community is comprised of assets, transformed by activities or strategies into outcomes. This “internal” relationship between assets, activities and outcomes is seen to be circular. All of this is taking place in the context of and influenced by the external environment (vulnerability context and policies, institutions and processes). The diagram also shows that the actions of people, households and communities themselves have an influence on these external forces.

19.5 HOW CAN SLAs BE USED IN EMERGENCIES?

Using SL in crisis situations

It is useful to distinguish here between SL analysis and SL intervention approaches based on this analysis. Sustainable Livelihoods *assessment and analysis* is especially useful in identifying the poor and vulnerable groups, understanding the constraints and opportunities they are facing, and mapping both the positive and negative impacts of the “coping strategies” that households engage in. They can inform stakeholder consultations for national and international response, and raise awareness and a better understanding of the impact of policy decisions on the livelihoods of these marginalized groups.

SL *approaches* are particularly suited to dealing with crisis situations where people have to adapt to rapidly changing situations. They can help build resilience of vulnerable households and capacity of local institutions in at-risk areas (preparedness) and protect and promote food security and nutrition in relief and recovery. By focussing on affected people throughout the crisis, they can bridge the gap between different phases. They also provide a common inter-sectoral framework which can facilitate inter-institutional collaboration at all levels.

SL should be considered as an overall approach to Emergency work and not as a specific sector to be covered along with others. SL Approaches can be useful in all the steps of the Emergency Response Cycle:

- **Preparedness / Early Warning:** Providing information on how people (and different groups of people) live and cope with crisis in at-risk areas through livelihoods assessments and profiles; identify relevant indicators and establish scenarios
- **Emergency:**
 - ★ Rapid livelihood assessment with a view to provide an inter sectoral framework for humanitarian response;

- ★ Incorporate SL into sectoral assessments and response with a view to improve targeting and design, and ensure the appropriate flexibility in project/programme implementation;
 - ★ Contribute to coordination mechanisms (OCHA, clusters, link with UNDAF) and joint programming (Government, other Agencies and NGOs);
 - ★ Use SL people-centred focus to improve communication on emergency interventions and strengthen appeals; promote livelihood rehabilitation programmes and umbrella projects in coordination with other Agencies to ensure better Donor support;
 - ★ Strengthen and make real the ‘build back better’ and “Do no harm” approaches through the adoption of a livelihoods approach;
 - ★ Use SL framework and indicators for **monitoring** progress, adjusting interventions and evaluating impact.
- **Recovery and rehabilitation and exit strategies:** By focussing on people rather than interventions, SL approaches will lead to a better articulation and integration of development and humanitarian projects and programmes, and will contribute to capacity building of local institutions. Exit strategies should focus on strengthening the resilience of local livelihoods to expected shocks.

Use of SL by FAO in emergency contexts

SL concepts and approaches have been used recently by FAO in Pakistan and in Somalia.

Pakistan. On 8 October 2005, an earthquake measuring 7.6 on the Richter scale, with its epicentre located 19 km northeast of Muzaffarabad struck the northern areas of Pakistan and India. Azad Jammu Kashmir and North West Frontier Province were severely affected, including 3 – 4 million people and an estimated death toll of 80,000. A rapid participatory assessment was conducted by an FAO Livelihoods Adviser in collaboration with ILO and the Department of Agricultural Extension, Government of AJK, during the period 27 to 31 October 2005. Its objective was to provide some qualitative information on how the earthquake has affected people’s lives and how they make a living. The survey looked at what resources people had lost, the coping strategies which they adopted to deal with the situation, and the outcomes that they sought to achieve when the immediate effects of the emergency were over. The rapid assessment also set out relevant responses based on the livelihood analysis, and gave a one year timeline for phasing in these responses. Use of a livelihood framework, as in this example, was instrumental in allowing the analysis to be organised in a way that clearly showed the impact of the crisis on people’s lives *and* relevant intervention priorities. This would not have been possible with a more sectoral analysis based on pre-conceived ideas of need.

Somalia. The Food Security Analysis Unit – Somalia (FSAU) has been developing a tool with which to classify the severity of impact of different situations on people’s lives and livelihoods. The Integrated Phase Classification (IPC) makes use of a number of different information sources to derive a “phase classification” of a particular geographic area. The phases range from phase 1 – generally food secure to phase 5 – famine / humanitarian catastrophe. In arriving at the classification, fairly detailed analysis is done of the state of and prospects for the five capital assets noted above. The following table presents indicates how the results of such analysis is translated into a “phase” indication

Table 15: Integrated Food Security and Humanitarian Phase Classification Reference Characteristics - Livelihood Assets

Reference Characteristic/ Outcome	PHASE	Generally Food Secure	Chronically Food Insecure	Acute Food and Livelihood Crisis	Humanitarian Emergency	Famine/ Humanitarian Catastrophe
		1	2	3	4	5
Livelihood Assets (5 capitals: humar, social, financial, natural, physical)		Generally sustained utilization	Stressed unsustainable utilization	Accelerated and critical depletion or loss of access	Near complete and irreversible depletion or loss of access	Effectively complete loss; collapse

Source: Integrated Food Security and Humanitarian Phase Classification: Technical Manual Version I, FSAU, May 11 2006.

Challenges for use of livelihoods approaches in emergencies

The main challenge of using livelihoods analysis to inform programming in emergency situations is that it is extremely challenging to quantify impact on different capital assets. This difficulty is acknowledged by the FSAU. This means that the approach is best used in conjunction with other tools to derive detailed programming responses. One of the strengths of the SLA in emergencies is that it provides a holistic and robust framework within which the use of various analytical tools and responses can be organised.

20. DISASTER RISK REDUCTION

20.1 Risk Assessment

Risk assessments include detailed quantitative and qualitative information and understanding of risk, its physical, social, economic, and environmental factors and consequences. It is a necessary first step for any other disaster reduction measure.

Risk assessment encompasses the systematic use of available information to determine the likelihood of certain events occurring and the magnitude of their possible consequences.

Given that Risk = Hazard x Vulnerability / Capacity, it is generally agreed upon that the risk assessment process includes the following activities:

Risk Analysis	Identification of Risk Factors		Risk Assessment
	Hazards Determines geographical location, intensity and probability	Vulnerabilities Determines susceptibilities & capacities	
Estimate levels of Risks			
Evaluate Risks			
Socio-economic cost/benefit analysis Establishment of priorities Establishment of acceptable levels of risk Elaboration of scenarios and measures			

This diagram shows the basic stages undertaken in a risk assessment process.

1. Risk Identification

This entails:

- Identifying the nature, location, intensity and probability of a threat.
- Determining the existence and degree of vulnerabilities and exposure to the threat.
- Identifying the capacities and resources available.

Using these parameters, the intensity, nature of risk may be identified.

2. Risk Prioritization

While we live in the context of increasing risks, we also inhabit a world of limited resources. Prioritization is important for optimal utilization of resources in order to meet the challenges and risks we face. This may also involve making decisions about acceptable levels of risk.

3. Stake-holder Analysis

This exercise enables the community members to identify the different stakeholders in the process of reducing risk, and the role they do/can play in the process through a SWOT analysis.

20.2 Risk Reduction Planning

Taking off from the results of the Risk Assessment Process, in which the community ranks the disaster risks according to priority for action, the PDRA team will now proceed to participatory disaster risk reduction planning through the following.

1. Visioning

PDRA team facilitators facilitate a community session on visioning. Team facilitators ask the community members to dream about the kind of "safe community" they want to attain in relation to disaster risks they identified during the risk assessment. Community members can present their dreams in the form of drawing, song, or role-playing. PDRA teams write down in the flip chart the ideas of a "safe community" described in the community's dream.

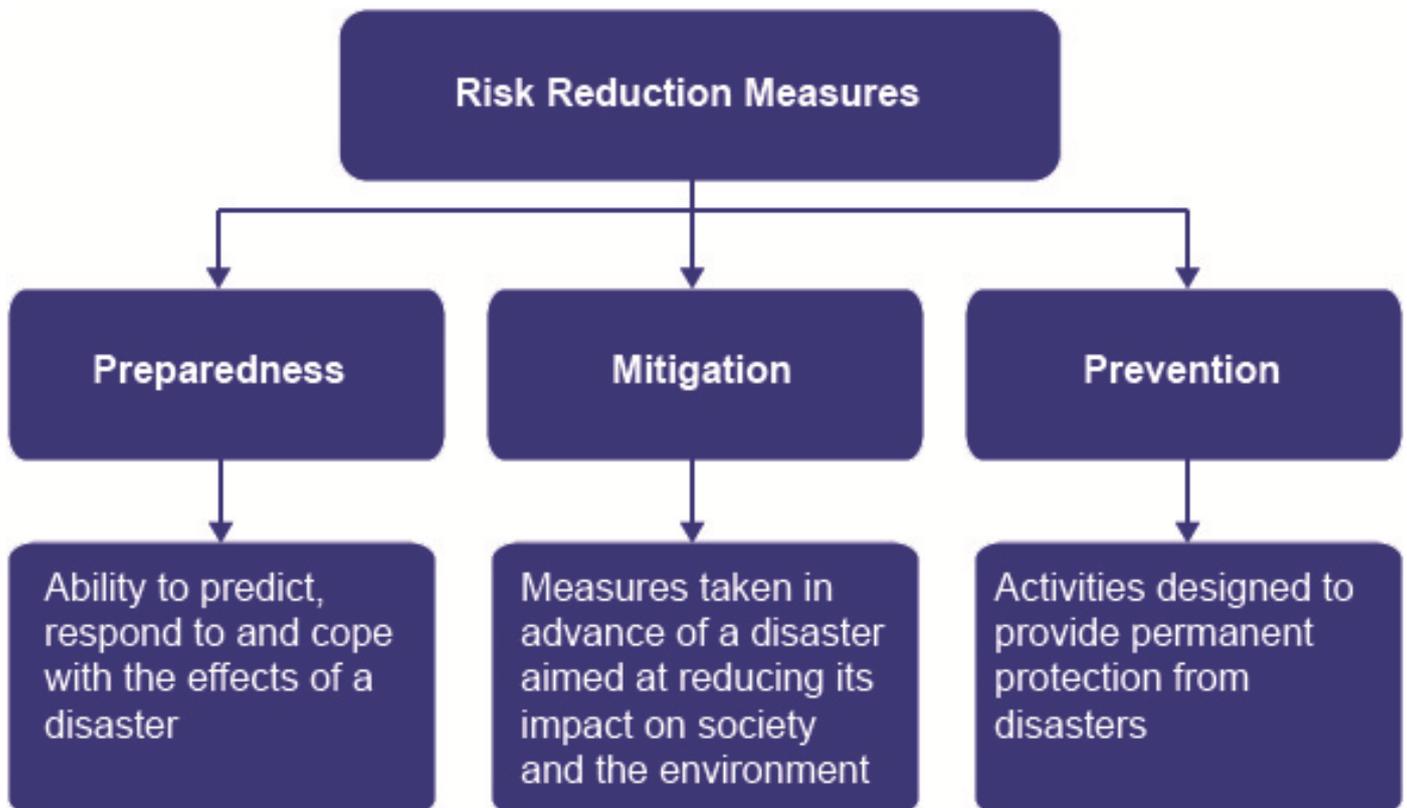
2. Discussion

PDRA teams facilitate discussion between authorities and other stakeholders about the dream for a "safe community" from the point of view of community members. This is the stage where community members, authorities and other stakeholders negotiate and agree about what all of them want to achieve in the risk reduction process.

Targets must be concrete and measurable. Setting indicators will help the community and other stakeholders measure whether targets have been achieved or not.

20.2.1 Identify risk reduction measures

After the visioning exercise, community members identify measures that will help attain their vision of a safe community



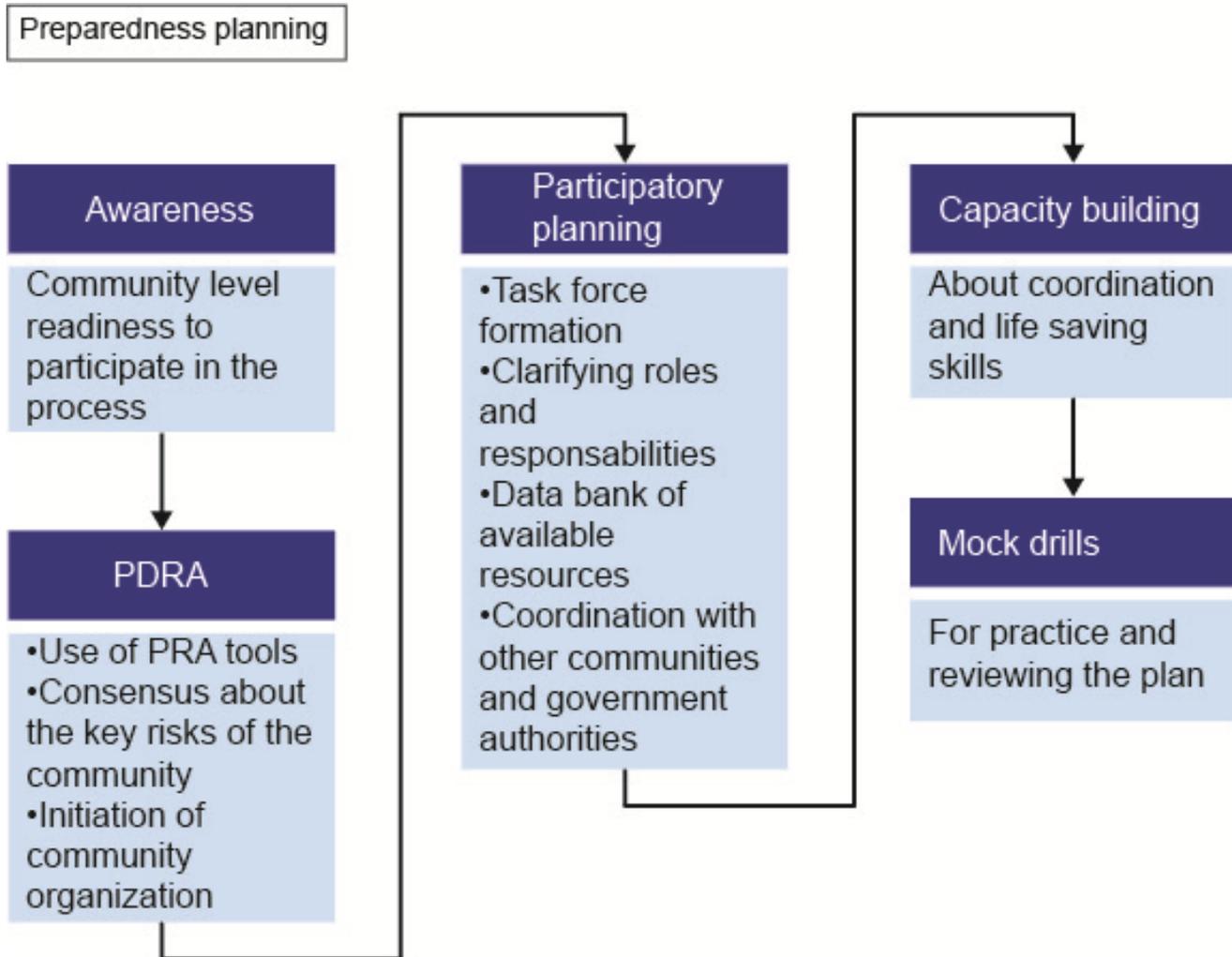
20.2.2 Plan strategies and Activities for Risk Reduction

PDRA teams will ask the community to review the list of capacities and opportunities enumerated during the earlier risk assessment process. Refer to collated data to identify capacities. Facilitators help community members and leaders to identify and list the capacities that will enable the community to move towards the vision. PDRA team facilitators proceed to assist community members and leaders to identify resources and technical assistance that are available within the community. Further, capacities that need improvements are identified, along with the requisite measures to achieve the same.

20.3 Preparedness Planning

- Pre-emergency phase, post- disaster risk reduction activities

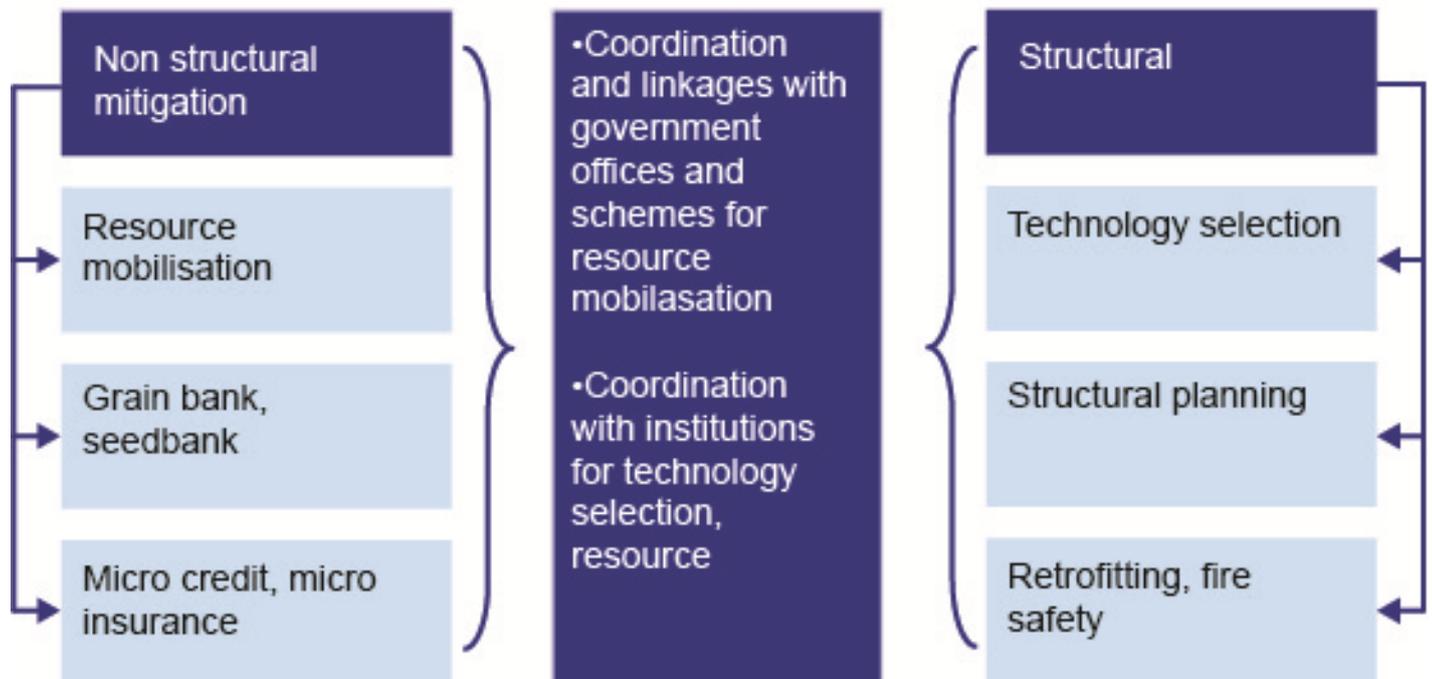
- Community early warning system; evacuation sites, routes and procedures for families and animals; evacuation center management, drills and simulation exercises



20.4 Mitigation Planning

Structural and non- mitigation measures such as strengthening of houses and river embankments, community health and sanitation, reforestation activities, diversification of livelihood and income sources, sustainable agriculture training and projects, etc.

Understand the frequency, intensity of hazard and assess the possible impact on the life and livelihood of the community



20.5 Prevention Planning

20.5.1 Assign Roles and Responsibilities

- Persons, committees and organizations to be in-charge of particular functions and activities; relationships of persons, committees,
- Relationships of persons, committees and organizations. An Organizational Structure to implement the plan may be drawn as needed.

20.5.2 Schedules and Timetables

- When activities will be initiated and completed

20.5.3 Annexes

- Maps, tables, and matrices from the community risk assessment and planning
- List of community residents, directory of organizations and important local government and media contacts, list of members of the community disaster response organization,
- Inventory of vital community resources for the preparedness activities

- Operational procedures and policies such as procedures in canvassing, stockpiling and inventory; reporting requirements and formats; use and replenishment of the community contingency fund
- Details of tasks of the various committees
- Evacuation procedures and route and procedures in management of the evacuation center and/or Emergency Operations Center

20.6 Community Contingency Plan

20.6.1 Definition

A contingency is measure or Preparation for an event that may occur but is not certain. Contingency Planning is undertaken for such potential events/ eventualities. A definition of contingency planning could be, ‘Contingency Planning (CP) is a forward planning process, in a state of uncertainty, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place in order to prevent/ mitigate, or better respond to an emergency or Critical situation”.

20.6.2 What is a Community Contingency Plan?

A community contingency plan (CCP) is a list of activities a village agrees to follow to prevent loss of life, livelihoods and property in case a cyclone/ flood. It also identifies in advance, action to be taken by individuals in the community so that **each one knows what to do when a cyclone / flood warning or other related hazard is received.**

Every village is different in terms of its inhabitants, its geography, its resources and its ways of making community decisions. *Thus contingency plan will differ from village to village.*

20.6.3 Who makes the Plan?

The Community: A community contingency plan, as the name suggests, *has to be made by the inhabitants of the village itself.* There should be representatives of women, youth, the elderly, the disabled, artisans, fisher folk, marginal farmers, wage labourers and other vulnerable groups. There should also be representatives of community-based groups like Self Help Groups (SHGs), farmers’ committees and other such groups functioning in a village. *For the plan to work, every segment of the community/ village has to be represented during meetings to express their needs, concerns and share their experiences.*

Social Organisations or NGOs and Government officials:

To carry forward the process of discussions and to guide the community towards drawing a workable plan, the **involvement** of NGO volunteers – community leaders – the local government departments – the Village Level Worker (VLW) – and elected

representative, CBOs, Co-operative society members etc. is necessary. They possess the necessary authority and skills to motivate the community, conduct these sessions and make sure that decisions are arrived at through participatory discussions.

The village sessions can be conducted during hours that are suitable for the community. The meetings can also be in small groups, which are manageable and give everyone a chance to express their opinions and ideas.

20.6.4 How the plan is made?

There are five Stages of while doing the Community Contingency Plan which is as follows –

Stage 1: Discuss what happened in the village during the last cyclone/flood (Review and Analysis)

Stage 2: Make a Description of the Village? (Situational Analysis)

Stage 3: Listing what causes damage in cyclone/flood and where (Hazard mapping)

Stage 4: Assessing who is at risk and what is at risk (Risk mapping: Identifying vulnerable people and areas)

Stage 5: How to reduce risk (Opportunity mapping)

REFERENCES

- *‘Living with Risk’*, 2003, UNISDR
- ADPC workbook Community Based Disaster Risk Management Course, Afghanistan

21. MAINSTREAMING DISASTER RISK REDUCTION WITH DEVELOPMENT

Natural hazards cannot be prevented from happening but the vicious cycle of disasters and underdevelopment can be reversed. This can be done through “mainstreaming” DRR in the development process. The UN-ISDR defines DRR as the “concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.”

DRR therefore has a twofold aims: one, “addressing vulnerability in order to be resilient to natural hazards” and two, “ensuring that development efforts do not

increase vulnerability to these hazards.” Reducing disaster risks is more affordable than repairing damage or totally replacing damaged structures.

“Mainstreaming” DRR into development means “to consider and address risks emanating from natural hazards in medium-term strategic frameworks and institutional structures, in country and sectoral strategies and policies and in the design of individual projects in hazard-prone regions.”¹²

The lack of disaster risk considerations in the development processes, including rehabilitation efforts following major catastrophes, leads to investments in “constructing and reconstructing risks” which perpetuate the conditions for unsustainable human development. As a result, the achievement of poverty alleviation, good governance, and other related goals becomes more difficult.¹³

21.1 The need for Mainstreaming DRR

Disasters have an enormous impact on development. With every disaster, there is a significant impact on various sectors of development like agriculture, housing, health, education and infrastructure. This results in a serious social and economic setback to the development and poverty reduction priorities of the developing countries, and poses a threat for achieving the Millennium Development goals. To meet with this crisis, the scarce resources that are programmed for development are often diverted for relief and rehabilitation efforts.

Thus development activity and disaster risk reduction representing two sides of the same coin have to be dealt with in unison, with mainstreaming disaster risk management into development policy, planning and implementation.

On the other hand, the process of development, and the kind of development choices made in many countries, it creates disaster risks. With disaster risk reduction considerations not featuring into the project design of the development activities, increases the risks, thus increasing the negative impact of the disasters on the socio economic set up of the country.

Disaster risk management being a cross sectoral issue, operating at all levels and across sector, hence the concerted effort of integrating it into development activities requires consensus and active participation of decision makers and planners at the national level and all related Ministries, but also support from the donor and development community. It is through the consolidated and concerted efforts of all stakeholders that safer and sustainable communities are to be attained. Importance of Mainstreaming is also recognized by the Hyogo Framework for Action (HFA)

¹²Provention, 2007

¹³ Mainstreaming Disaster Risk Reduction in Subnational Development and Land Use/Physical Planning in the Philippines, Published by the National Economic and Development Authority, United Nations Development Programme and European Commission Humanitarian Aid

adopted at the WCDR, where integration of disaster risk reduction in the development programs is a priority.

Anyone who has tried to change policy and practice within an organization will appreciate how difficult this can be, but change is possible and there are some encouraging signs in the field of risk reduction.

21.2 Challenges

Introducing or modifying strategies can be a long and sometimes tortuous process, not least because few development or humanitarian organizations would now contemplate policy changes without extensive consultations with all the main stakeholders, especially their local partners. Considerable time, effort and money may be spent on this. Senior managers are unwilling to revise policies or strategies unless they are convinced it is necessary, and only after seeing the impact of those already in place.

Large agencies have more time, money and enthusiasm for strategic planning, whereas smaller ones lack the resources for this. International agencies operating in many countries can find it difficult to implement coherent regional strategies where individual countries' circumstances and priorities may vary widely. It may be unrealistic to attempt to standardize thinking and approaches, and more practical to encourage greater information sharing and collaboration (i.e. harmonization) over time.

Operational guidelines may be revised more frequently, but these vary greatly in quality. In larger agencies they are more likely to be comprehensive and detailed, but for this reason less likely to be read. Simpler versions may be more accessible, but many contain limited practical guidance on planning and implementation, or on assessing proposals from partners. Moreover, operational guidelines usually contain so many issues to consider that no development or emergency program can address them all adequately, and some are bound to be squeezed out by those that appear to be more important. The guidelines themselves tend to allow for this, often being meant to guide and not to prescribe. This gives project planners and managers considerable discretion. Where an organization's mechanisms for monitoring or assuring project quality are weak, the gap between theory and practice will widen. Even when issues are firmly established at strategic level and in planning guidelines, individual projects may still continue to show little or no understanding of the subject. Organizational size is an obvious influence on the rate of change. Small organizations, especially grass-roots ones and NGOs, often function as teams of individuals and can adapt their outlooks and systems relatively quickly. As organizations get larger, their structures become more formal and complex, and it becomes much more difficult to make substantive changes. This can be a very great challenge in large, high-profile organizations. A tradition of institutional and cultural barriers between relief and development professionals can also impede progress. Such tension has been observed in many agencies that work in both fields.

Institutional memories are weak in many organizations. Project documentation may be non-existent or difficult to find, and of poor quality. Much written material on disaster issues is found in books and academic journals, which few operational staff is likely to read. In development organizations especially, staff are uncomfortable with the technical language of disaster management, and this acts as a barrier to their engagement with risk and vulnerability questions.

Overwork is another major obstacle. Its significance cannot be overstated. Most people working in relief and development agencies are too busy, most of the time, to reflect about or absorb new ideas. In many agencies overwork, and pressures of work, have become systemic weaknesses.

21.3 Opportunities

In most agencies, especially NGOs, policy or strategy review seems to be a semi-permanent condition, which should give grounds for optimism about the uptake of relevant ideas at policy level in the medium term (the next two to five years). Recent strategy changes in international donor agencies and GOs reinforce this view. Disaster mitigation and preparedness and vulnerability to natural hazards are raising up the policy agenda. Attitudes are shifting, with the old view of disasters as one-off events being gradually replaced by awareness of the connections between disasters and development processes.

This shift has taken place mainly as a result of the severe 'natural' disasters in the past few years – hurricanes Mitch and Georges in 1998, the Bangladesh floods of the same year, the Orissa cyclone in 1999, the Mozambique floods in 2000 and the Gujarat earthquake in 2001 – which forced many agencies to rethink their approach. Change has also been influenced by the considerable research and academic debate on vulnerability and thinking on the linkages between relief and development since the 1980s, and the current enthusiasm for sustainable livelihoods may stimulate more development organizations to take vulnerability and risk on board.

There is evidence that determined individuals can push significant innovations through, even in large organizations, if there is sufficient space within institutional structures and systems. People in senior positions or who have been in an organization for a long time (with good knowledge of the system and extensive personal networks), are particularly well placed to do this. Specialist technical advisers can be very influential in encouraging, advising and supporting project managers. They can operate across an organization which may otherwise be compartmentalized in its structure and the focus of its work and thinking – a real problem for larger institutions. They have a mandate and, crucially, time to think. Their influence can come not just from their position and expertise, but also from their personality and approach, and the length of time they have worked in the organization. In larger organizations, the decentralization of authority – from

international headquarters to country offices, or from capital cities to districts – is gathering pace. This may make agencies more sensitive to hazards and vulnerability, at least at local level.

21.4 The Relationship between Disasters and Development

- **Is the number and frequency of disasters growing?**

Yes, the number and frequency of disasters is growing. According to Munich Re (one of the world's largest re-insurers), economic losses from disasters in the 1990s totalled over US\$608 billion, greater than losses over the four previous decades combined. This is supported by recent research by the Centre for Research on the Epidemiology of Disasters (CRED) based in Belgium, which found that there were 360 natural disasters in 2005 compared with 305 in 2004. Most agree that the number of disasters will increase as climate change and global warming generate more severe weather-related events. These events will affect economic development and slow down progress towards the Millennium Development Goals.

- **What are the links between disasters and poverty?**

The links between disasters and poverty are clear. The poorest are worst affected and suffer the most. Disasters damage infrastructure and affect productivity and growth. The capacity to cope and to reduce risk is much more limited in poor countries so people are more vulnerable. Impacts on communities can be severe: disasters increase poverty and malnutrition and reduce disease resistance. Families made poor, hungry or ill often have to send their children out to work rather than to school, and women and girls are often left with poorer health and an increased workload.

- **What are the economic benefits of disaster risk reduction?**

There is growing evidence of the economic benefits of disaster risk reduction. The IMF estimates that the average economic cost for each individual large-scale natural disaster event was over 5% of Gross Domestic Product (GDP) in low-income countries between 1997 and 2001. Recent World Bank estimates have placed this figure in the range of 2 – 15% of GDP for low-income countries. Moreover, the impact and incidence of disasters is rising, with Munich Re reporting that economic losses in the 1990s exceeded those of the previous four decades combined. However, where major disaster risk reduction efforts have been made, for example in many small island states, average annual damage relative to GDP has declined sharply. Studies assessing the relative costs and benefits of individual disaster risk reducing initiatives

have also indicated high potential returns for disaster risk reduction, and it is estimated that for every dollar invested in disaster risk reduction, between 2 and 4 dollars are returned in terms of avoided or reduced disaster impacts.

- **Why have development organisations under-invested in disaster risk reduction?**

One factor is that perverse incentives work against disaster risk reduction. Governments may know that they can rely on the international community to respond generously when a disaster hits, which could be a disincentive for investing in prevention. Disaster risk reduction is long-term and low profile. Disaster response on the other hand is highly visible and therefore has received greater political attention than disaster risk reduction. Whilst continuing to respond generously to disasters, we must alter the balance and invest more in prevention.

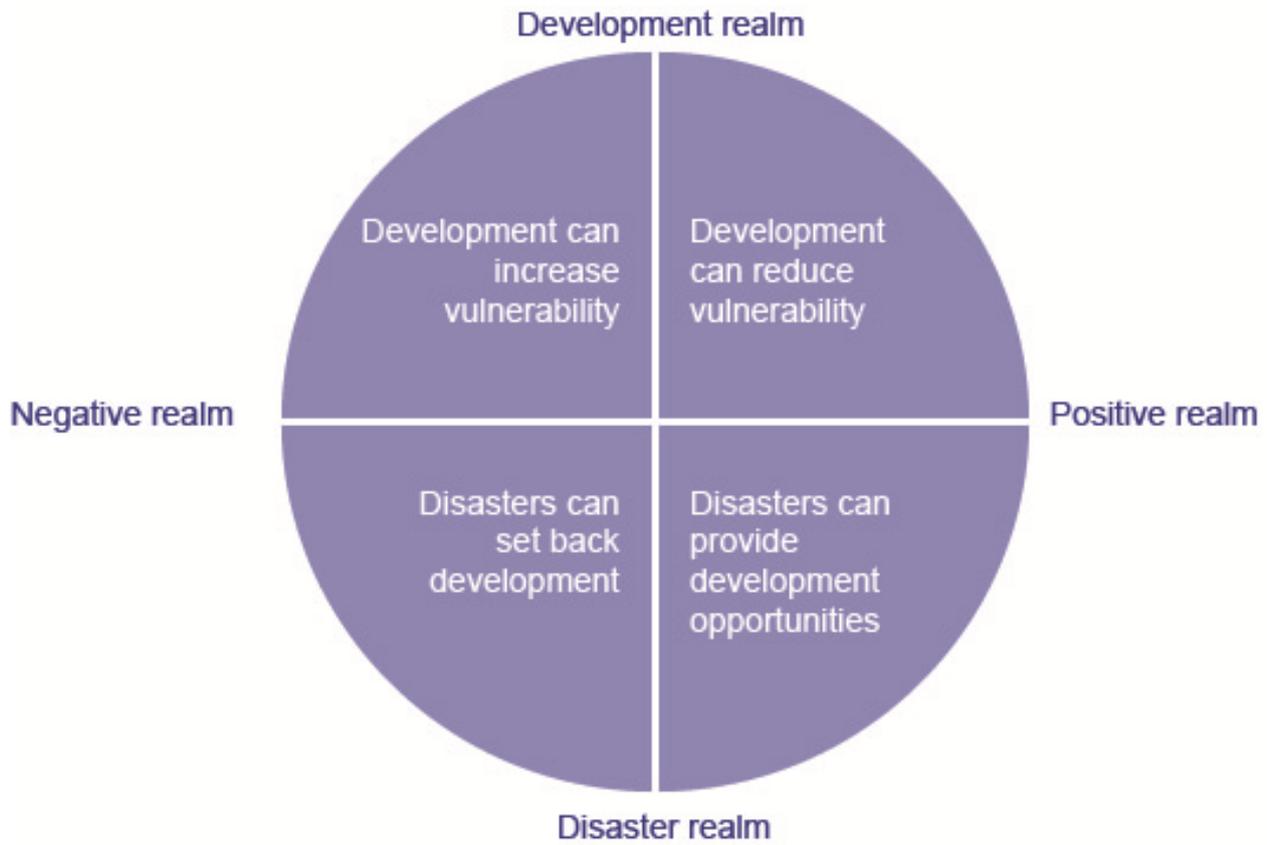
- **How can we encourage developing countries to invest more in disaster risk reduction?**

We need to help governments make the choices of where to invest. At the moment we lack information on the costs and benefits of reducing the impact of disasters. The long-term impact of disasters needs more research. We need a better evidence base for helping to decide which disaster risk reduction interventions to invest in. These choices are pretty tough for cash strapped governments. Do you invest in health or education that will bring a rapid benefit or disaster risk reduction when a disaster may not strike for 50 years?

- **Why do we need to better integrate disaster risk reduction into development?**

Disasters do not just happen – they result from failures of development, which increase vulnerability to hazards. Political systems recognise the need for strong intervention following a disaster. The challenge is to increase the focus on disaster risk reduction.

Why Should Disasters Be A Development Concern?



Development Can Increase Vulnerability

- Urban development and population influx lead to crowded housing on unsafe sites.
- Coastal zone development increases vulnerability to tsunamis / tropical storms / flooding.
- Transport construction leads to deforestation and landslides.
- Dams and irrigation schemes increase flooding risk and possible dam failure.
- Poorly controlled industrial development lead to air / water / smoke pollution / exposure to toxic materials.
- Livestock development leads to desertification from overgrazing.

Development Can Reduce Vulnerability

- Strengthening urban utility systems and industrial support increase response capacity.
- Incorporating hazard-resistant building techniques to withstand disaster shock.
- Building codes and zoning regulations reduce overcrowding.
- Improved administration and training programmes improve preparedness planning.
- Reforestation and soil conservation programmes reduce flood risk from Erosion.

Disasters Can Set Back Development

- Loss of resources.
- Interruption of programmes.
- Negative impact on investment climate.
- Political destabilisation.

Disasters Can Provide Development Opportunities

- Highlights areas of vulnerability.
- Creates a favourable political climate for social and economic change.
- Results in capital injections from donors
- Allows destroyed problem areas to be rebuilt more safely

21.5 Disasters Hold Back Development¹⁴

Disasters Undermine Efforts to Achieve Millennium Development Goals

MDG	Direct Impact	Indirect Impact
1. Eradicate extreme poverty and hunger	Damage to housing, service infrastructure, savings, productive assets and human losses reduce livelihood sustainability.	Negative macroeconomic impacts including severe short-term fiscal impacts and wider, longer-term impacts on growth, development and poverty reduction. Forced sale of productive assets by vulnerable households pushes many into long-term poverty and increases inequality.
2. Achieve universal primary education	Damage to education infrastructure. Population displacement interrupts schooling.	Increased need for child labour for household work, especially for girls. Reduced household assets make schooling less affordable, girls probably affected most.
3. Promote gender equality and empower women	As men migrate to seek alternative work, women/girls bear an increased burden of care. Women often bear the brunt of distress 'coping' strategies, e.g. by reducing food intake.	Emergency programmes may reinforce power structures, which marginalise women. Domestic and sexual violence may rise in the wake of a disaster.
4. Reduce child mortality	Children are often most at risk, e.g. of drowning in floods. Damage to health and water & sanitation infrastructure. Injury and illness from disaster weakens children's immune systems.	Increased numbers of orphaned, abandoned and homeless children. Household asset depletion makes clean water, food and medicine less affordable.
5. Improve maternal health	Pregnant women are often at high risk from	Increased responsibilities and workloads create

¹⁴DFID, Disaster Risk Reduction: A Development Concern. A scoping study on links between disaster risk reduction, poverty and development

	death/injury in disasters Damage to health infrastructure. Injury and illness from disaster can weaken women's health.	stress for surviving mothers. Household asset depletion makes clean water, food and medicine less affordable.
6. Combat HIV/AIDS, malaria and other diseases	Poor health & nutrition following disasters weakens immunity. Damage to health infrastructure. Increased respiratory diseases associated with damp, dust and air pollution linked to disaster.	Increased risk from communicative and vector borne diseases, e.g. malaria and diarrhoea diseases following floods. Impoverishment and displacement following disaster can increase exposure to disease, including HIV/AIDS, and disrupt health care.
7. Ensure environmental sustainability	Damage to key environmental resources and exacerbation of soil erosion or deforestation. Damage to water management and other urban infrastructure. Slum dwellers/people in temporary settlements often heavily affected.	Disaster-induced migration to urban areas and damage to urban infrastructure increase the number of slum dwellers without access to basic services and exacerbate poverty.
8. Develop a global partnership for development	Impacts on programmes for small island developing states from tropical storms, tsunamis etc.	Impacts on commitment to good governance, development and poverty reduction—nationally and internationally.
ALL MDGs		Reallocation of resources from development to relief and recovery.

21.6 Macroeconomic Impacts of Disasters

Assessing macro-economic impacts of disaster

In addition to **direct impacts** (physical damage to infrastructure, productive capital and stocks), disasters cause **indirect costs** and **secondary effects**. Indirect costs accrue when productive output is reduced because of damaged assets and infrastructure or a workforce weakened by disaster losses. Secondary effects include longer-term consequences for the economy, for example levels of household and national indebtedness, fiscal and monetary performance or the effects of relocating or restructuring elements of the economy or workforce or resettling populations.

Indirect and secondary losses can be seen in the 1991-92 drought in Zimbabwe where the manufacturing sector was hit by reduced hydroelectric output. Combined manufacturing and agricultural losses reduced 1992/93 GDP by 8 percent. Similarly, flooding in South Africa in 1999/2000 depressed agricultural productivity by 18 percent for the first quarter of 2000³³. Evidence from the Philippines demonstrates the interconnectedness of natural disaster shocks with other development pressures. Here 1990s annual GNP growth peaked at 7.2 percent in 1996, but in the following year the Asian financial crisis brought a reduced growth rate of 5.3 percent, and in 1998 the combination of the after-effects of this crisis and an El Niño event led to a dramatic decline in GDP growth to just 0.4 percent - the lowest for the decade. Citing evidence from 16 Latin American and Caribbean countries, the IMF estimates that one percentage point of GDP in direct damage from 'natural' disasters can reduce GDP growth by half a percentage point in the same year.

Ongoing research supported by the World Bank, ProVention Consortium and the UN Economic Commission for Latin America and the Caribbean (ECLAC) has begun to unpack some of the complex relationships between natural disaster shocks and macro-economic status. ECLAC has played a lead role in developing and applying assessment tools for these three categories of macro-economic impact. ³⁴ Applying this framework ECLAC finds that Latin America and the Caribbean have accumulated over US\$ 65 billion in damages from disasters, with smaller, less developed countries in the Caribbean, Central America and Andes disproportionately affected.

Macroeconomic impacts of the August 1999 Turkish earthquake

The earthquake, which struck Turkey on 17 August 1999, was centred in the country's most industrialised and economically dynamic area. The four districts most severely affected (Kocaeli, Sakarya, Bolu and Yalova) contribute over seven percent of the country's GDP and 14 percent of industrial value added. Per capita income is almost double the national average. Though containing only four percent of the nation's population, the region contributes over 16 percent of budget revenues. With the impacts of the earthquake compounding the effects of the global financial crisis, Turkey suffered a severe recession that year with a real GDP decline of 6.1 percent. The OECD put the direct output loss from the earthquakes at half to one percent of GDP. The aggregate economic loss has been put at US\$ 16 billion (about seven percent of GDP), much of this attributable to a decline in economic activity both in the earthquake zone and in the immediately surrounding districts (Bursa, Eskisehir, and Istanbul) economically linked to it. Impact on the public finances was significant, with direct fiscal costs totalling one percent of GNP in 1999 and two percent in 2000, and a decline in 1999-2000 revenue of around half a percent of GNP. These estimates suggest that the macroeconomic impact of the earthquake was substantial, and the destruction of both physical and human capital may have had a long-term negative effect on the country's economic growth prospects.

Disaster Impact on Communities and Livelihoods

Child mortality in floods in Vietnam

In recent years, annual flooding in the Mekong Delta of Vietnam has claimed hundreds of lives, the vast majority of which have been young children. The worst year was 2000, when 400 children died, closely followed by over 300 child deaths in 2001. In 2002, 99 children died – out of a total death toll in the Delta of 106. A study coordinated by Save the Children reported that most deaths were among children aged under-six from poor families. Though infants may be at special risk from fast-rising floods and strong currents, many such children died not during the onset of flooding but when floodwaters were well established. According to the study, many victims were from small households and had been left at home without adequate supervision for long periods while parents were earning a livelihood from fishing.

The Save the Children study called for a more accessible and affordable system of kindergartens for pre-school aged children. Indeed, from 2002 onward the Government of Vietnam has started to establish emergency ‘flood kindergartens’ in the Mekong Delta, where parents can leave young children in safety while they concentrate on securing houses, possessions and livelihoods. Independent assessment of the effectiveness and usage of these centres is not yet available. However, the Government claims that the 918 emergency kindergartens set up during the severe floods of 2002 drastically reduced the number of children who drowned that year.

21.7 Disasters are Rooted in Development Failure

Dominant Development Models and Risk

Armed conflict and disaster risk

In 2002 violence and armed conflict led to approximately 22 million international refugees and another 20 to 25 million internally displaced people. The social disruption and dislocation of governance systems caused by armed conflict and high levels of social violence (for example in urban neighbourhoods dominated by drug gangs) influences the capacity of households and communities to withstand natural hazard and to recover from disaster. The Horn of Africa is one region in which food insecurity and famine has been particularly associated with potent mixes of conflicts and drought over the last 30 years. In the last five years at least 140 ‘natural’ disasters have occurred in countries experiencing complex political emergencies.

People displaced by conflict often add to the swelling populations of urban informal settlements, or find themselves in refugee camps. Lack of adequate livelihood resources in these new settlements can magnify risk as the immediate environment is exploited for resources such as firewood leading to soil loss and potentially increasing flood or landslide hazard. Inside camps and informal settlements high density living increases exposure to disease.

The disruption or absence of government functions or diversion of public expenditure during periods of conflict can have an erosive effect on disaster risk capacity. The January 2002 volcanic eruption of Mount Nyiragongo in Goma, Democratic Republic of Congo, was predicted by a local geologist, but with no state capacity to act on this information no warning or preparedness measures were taken, and almost half of the city was destroyed.

Disaster can also play a role in generating social instability and political change. The collapse of the Somoza regime in Nicaragua, the undermining of community level organisations in Chile and political change in Ethiopia and Afghanistan have all been associated with social tensions catalysed during moments of disaster stress. On the ground it is often difficult to separate out the cause and effect relationships between natural disaster, social instability or inequality and conflict or political crisis.

21.8 Development Can Lead to Disasters by Increasing Exposure to Hazard

Adapting to climate change

It is widely agreed by the scientific community that climate change is already a reality, and likely to bring an increase in the frequency and severity of weather-related disasters. When seasonal change and climatic extremes overlap the results can be catastrophic, as demonstrated in 2003 when heat waves killed 2000 in India and as many as 20,000 across Europe.

Climate change will hit the poor hardest. The greatest impacts of climate change are likely to be on food security, the productivity of agricultural export crops, human health, water security and quality, and through the displacement of people as a result of flooding, drought or sea level rise. In Africa, sea level rise alone is estimated to increase those at risk from flooding from 1 million to 70 million by 2080. In India, where water tables are already falling rapidly in many areas due to overexploitation of groundwater, a temperature rise of 2°C could lower yields of wheat and rice by 10%, adding to the effect of increased rainfall variability.

The slow pace of the UN Framework Convention on Climate Change negotiations means that adaptation measures need to proceed alongside ongoing plans for climate change mitigation. Action is required to reduce the likely human impact of changes in climate as well as to reduce the process of change itself. Indeed, there are opportunities for combined adaptation/mitigation projects, such as the (re-) establishment of mangrove forests in high-risk, low-lying coastal areas. This is adaptive in reducing exposure to flooding and storm surge, as well as furthering mitigation through tree growth acting as a carbon sink.

Adapting to climate change will mean adjustments to risk bearing and sharing between individuals, civil society and the State, and will not depend solely on international action in this area. Such action needs to be part of a broader

development policy focus to support the adaptive capacity and resilience of vulnerable communities.

Climate change adds weight to the argument for integrating risk reduction into development. Where risks are known to be high, for example on floodplains or low-lying coasts, existing disaster risk reduction programmes should be expanded. Elsewhere, uncertainty increases the need for precautionary development that takes disaster risk into account. The Netherlands Red Cross Climate Change Centre has built on disaster risk reduction tools to offer guidance for national societies on local adaptation to reduce climate change risks. DFID has also recently produced a collection of key sheets, which demonstrate how climate change increases environmental risk for the poorest, putting the MDGs at risk.

Vicious cycles of urban risk

Rapid urbanisation in the 1990s and beyond has dramatically increased the numbers of people and scale of physical assets exposed to hazards (particularly earthquakes and flooding) because of inadequate urban land-use planning and construction standards. There are large numbers of urban residents living below poverty lines and close to the point of household collapse in cities of middle and low developed countries – often more than 50% of a city's population. The dependence of urban livelihoods on a money economy and reliance on infrastructure networks to deliver basic needs also heightens the susceptibility to disaster.

The high density of urban slums magnifies the number of people and assets at risk from any one event. In the densely populated Delhi slum of Yamuna Pushta, a single small fire quickly ran out of control and destroyed 2,000 squatter homes in November 2002. The inability of Cape Town municipality to support secure low-income living conditions contributed to over 10,000 informally constructed homes being destroyed by fire from 1995 to 1999.

Not only are the poor affected. In the January 2001 earthquake in Gujarat, India, poor planning and failure to enforce building codes in a rapidly urbanising area were directly responsible for unsafe buildings, which claimed 20,000 lives from all strata of society. Where wealth counted most was in ability to recover: those with assets and influence were able to secure housing in new locations and benefit most from rehabilitation assistance.

In worst-case scenarios such disasters are followed by inappropriate or partial recovery that only reproduces the socio-economic vulnerability for future disaster loss. Following urban disasters it is commonplace for residential areas to be re-developed either formally or informally on the same hazardous sites. In Rio de Janeiro, landslides caused 1000 deaths during storms in 1966, rising to 1700 in 1967 because of the redevelopment of hazard sites. For low income countries and regions, breaking out of such negative cycles may prove decisive in striving for sustainable poverty reduction.

21.9 Development Can Lead to Disasters by Increasing Susceptibility

Cultural change and vulnerability in small island states

Local knowledge needed to make coping and adaptive responses operational may be lost or become irrelevant following social change. This process has been observed in Fiji, with signs of dependence on food assistance from state and NGO sources replacing traditional coping measures such as the consumption of uprooted tubers. Similarly, there is evidence that rich and varied agro forestry systems of long standing in the Pacific islands are threatened by agricultural modernisation.

Coping strategies are further structured by the extent to which claims to customary rights from marginalised individuals are recognised. This 'moral economy' is susceptible to erosion by the extension of the market and the privatisation of communal resources, the penetration of the state into traditional social relations so that formal welfare replaces indigenous reciprocity and support systems, and population growth. In Western Samoa, for example, traditional coping mechanisms and agricultural practices have been undermined by the enhanced role of the market.

But not all change is bad! Customary interpretations of disasters as 'Acts of God' tend to dis-empower individuals and societies, limiting adaptations necessary to reduce vulnerability or hazard. Socioeconomic development that extends entitlements to information, livelihood resources and inclusive governance is likely to reduce disaster risk. The challenge on small island states, as elsewhere, is to promote development that improves human welfare without generating disaster risk.

21.10 Poorly Planned Attempts to Reduce Risk Can Make Matters Worse

A failed response to flooding risk: residential clusters in Vietnam

Disaster risk reduction efforts in Vietnam's Mekong Delta have many positive aspects, but government efforts since the mid-1990s to relocate low-income households in specially constructed safe (high ground) areas called 'residential clusters' have been conspicuously unsuccessful. According to one agency in Vietnam, residential clusters had been 'clumsily' implemented by some provinces from a narrowly sector driven perspective of disaster management. This resulted in low uptake of resettlement loans made available to households. By the end of 2002, 142 residential clusters had been completed, with planned space for 39,000 households; however only 3,000 households had actually moved in.

A report for CARE International suggests that many sites within the Delta for re-housing low-income households were initially created with inadequate sanitation, water and electricity provision, poor consideration of employment location and community composition, and no on-site public facilities. The report also suggests there was little effective community participation in their planning, construction and management. Some of these issues are now being addressed by the provincial governments.

Disaster Response Can Exacerbate Risk

International food aid has a vital role in humanitarian assistance programmes to save lives in the wake of disasters when there are problems of food availability. Under certain circumstances it can also be appropriate in the context of longer-term programmes to protect or help rebuild productive assets of those most vulnerable to disasters. Yet as a number of recent studies have shown, food aid has too often fallen short of these objectives or has been demonstrably counterproductive. In acute crises it has often arrived late or in insufficient quantities, and has subsequently impeded recovery through adverse effects on prices and incentives. Unless there is acute food availability shortfall or market failure, cash or other forms of non-food assistance are most often preferable to food assistance, and yet in both emergency humanitarian and recovery and safety net programmes it is non-food assistance that is most consistently under-resourced.

In Ethiopia's Somali Region a famine in 1999-2000, sparked by drought but with links to past and current regional conflicts, killed anywhere between 10,000 and 100,000 people. Humanitarian agencies were late on the scene and food aid became available only after the peak of human mortality had passed and tens of thousands of households in this pastoralist area had already lost their livestock and their livelihoods. When the relief operation did start, people flocked to temporary settlements on the outskirts of towns like Gode and other major distribution centres. Poor health and sanitation conditions there appear to have caused resurgence in child mortality. The humanitarian response was overwhelmingly food aid centred, and remained so. With little or no help for re-establishing their livelihoods many people stayed in Gode, trapped in a situation of food aid dependence – and were still there two or more years later. Some of the food aid was sold in local markets, where it undercut locally produced grain and undermined livelihoods of farmers and traders.

21.11 Disaster Risk Reduction Can Be Cost Effective

Cost-effectiveness of disaster risk reduction – some examples

- The World Bank and the US Geological Survey calculated that economic losses worldwide from disasters during the 1990s could have been reduced by US\$ 280 billion worldwide if US\$ 40 billion were invested in mitigation and preparedness.
- In China, investment of US\$ 3.15 billion in flood control measures over 40 years is believed to have averted potential losses of US\$ 12 billion.
- In Vietnam, 12,000 hectares of mangroves planted by the Red Cross protect 110 km of sea-dykes. Planting and protection cost US\$ 1.1 million but has reduced the cost of dyke maintenance by US\$ 7.3 million per year (and the mangroves have protected 7,750 families living behind the dyke).
- According to Oxfam, the value of cattle saved on a flood shelter of 4 acres in Bangladesh during the 1998 floods was as much as £150,000, against a construction cost of only £8,650.

- A study on Jamaica and Dominica calculated that the potential avoided losses compared with the costs of mitigation when building infrastructure like ports and schools would have been between two and four times. For example, a year after constructing a deepwater port in Dominica, Hurricane David necessitated reconstruction costs equivalent to 41% of the original investment; while building the port to a standard that could resist such a hurricane would have cost only about 12%.
- In Darbhanga district in North Bihar, India, a cost-benefit analysis of disaster mitigation and preparedness (DMP) interventions suggests that for every Indian rupee spent, 3.76 rupees of benefits were realised. The Net Present Value (NPV) of the project was calculated at £46,000.
- In the same district, a cost-benefit analysis of installing raised hand pumps less susceptible to flooding compared two scenarios – a ‘without’ scenario where government hand pumps were blocked each year by the silt and debris carried by the flood water and the pumped groundwater was contaminated, and a ‘with’ scenario where raised hand pumps did not become blocked. The benefit/cost ratio of raised hand pumps was calculated at 3.20 with a NPV of almost £3000.

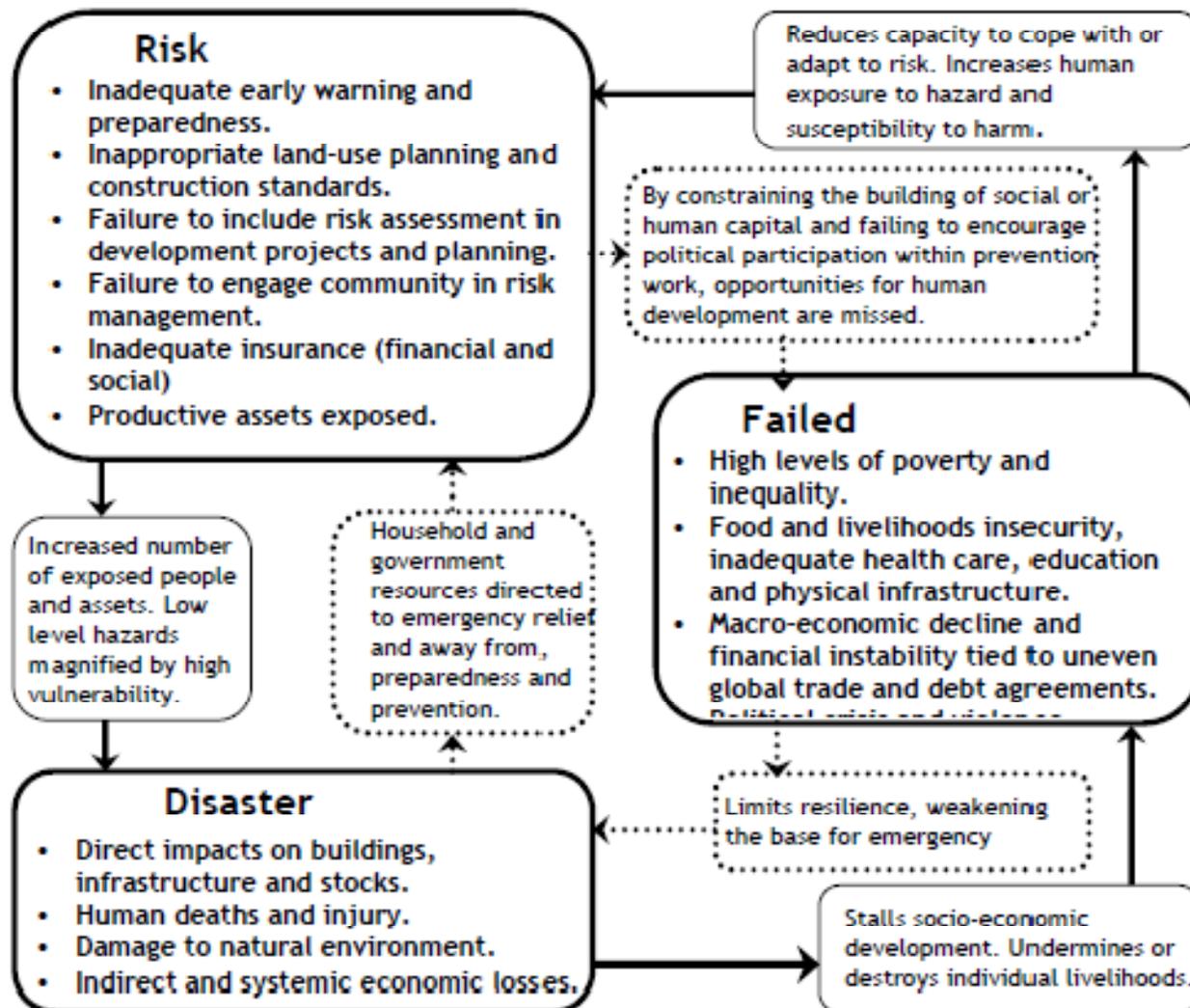
21.12 What Disaster Reduction Can Contribute Towards Meeting the MDGs

MDG	Examples of what risk reduction can contribute
<p>1. Eradicate extreme poverty and hunger</p>	<ul style="list-style-type: none"> • Disaster risk reduction and MDG1 are interdependent. Reducing livelihood vulnerability to natural hazards is key both to eradicating income poverty and improving equity, and to improving food security and reducing hunger. Reducing disaster impacts on the macro-economy will promote growth, fiscal stability and state service provision, with particular benefits for the poor. • Disaster risk reduction and MDG1 share common strategies and tools: this overlap means that giving development more security from natural hazard can be very cost-effective.
<p>2. Achieve universal primary education</p>	<ul style="list-style-type: none"> • In hazard-prone areas, the case for building schools and encouraging attendance becomes much stronger if buildings are safe and students and teachers are trained in emergency preparedness. Promoting safer structures may encourage better maintenance even in non-disaster times. • Reduced vulnerability will allow households to

	<p>invest in priorities other than mere survival. Education is often a high priority. Girls (as 60% of non-attendees) may benefit disproportionately.</p>
3. Promote gender equality and empower women	<ul style="list-style-type: none"> • Better risk reduction will help protect women from disproportionate disaster impacts. • Collective action to reduce risk by households and communities provides entry points for women (and other marginalised social groups) to organise for other purposes too, providing a catalyst for economic and social empowerment.
4. Reduce child mortality	<ul style="list-style-type: none"> • Disaster risk reduction will help protect children from direct deaths and injuries during hazard events (as exemplified in Box 5, p.24), and will lower mortality from diseases related to malnutrition and poor water and sanitation following disasters. • Health infrastructure and personnel in hazard-prone areas will be better protected. • This may also promote better maintenance of infrastructure.
5. Improve maternal health	<ul style="list-style-type: none"> • Disaster-related illness and injury will be reduced. • Improved household livelihood and food security will lower women's workloads and improve family nutrition. • Health infrastructure and personnel in hazard-prone areas will be better protected. • This may also promote better maintenance of infrastructure.
6. Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> • Public health risks, e.g. from flood waters, will be reduced, and nutrition and health status improved, boosting resistance to epidemic disease. • Fewer disasters will free up social sector budgets for human development. • Livelihood security will reduce the need to resort to work in the sex industry. • Community organisations and networks working in disaster risk reduction are a resource for family and community health promotion, and visa versa.
7. Ensure environmental sustainability	<ul style="list-style-type: none"> • Reduced disaster-related migration into urban slums and reduced damage to urban infrastructure will improve urban environments. • An emphasis on governance for risk reduction and more secure livelihoods will help curb rural and urban environmental degradation. • Risk reduction partnerships that include community level actors and concerns will offer more sustainable infrastructure planning, and enable

	<p>expansion of private sector contributions to reducing disasters.</p> <ul style="list-style-type: none"> • Housing is a key livelihood asset for the urban poor. Disaster risk reduction programmes that prioritise housing will also help preserve livelihoods.
8. Develop a global partnership for development	<ul style="list-style-type: none"> • Creating an international governance regime to reduce risk from climate change and other disasters will help overcome disparities in national negotiating weight. • Efforts to build equal global partnerships for risk reduction will have particular relevance for small island developing states and HIPCs. • Disaster risk reduction initiatives could promote better public-private partnerships.
ALL MDGs	<ul style="list-style-type: none"> • Reducing disaster impacts will free up resources, including ODA, to meet MDGs.

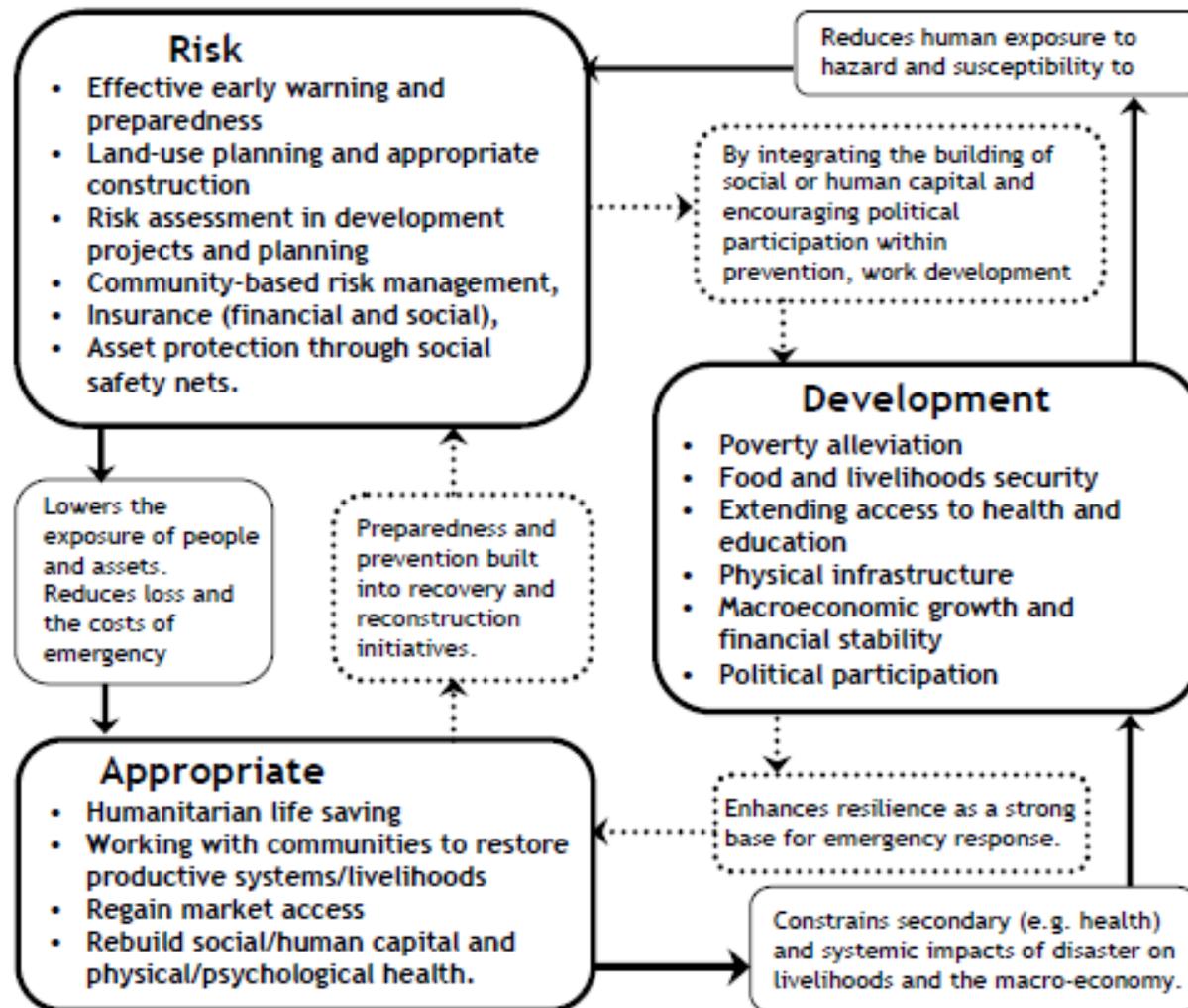
From Vicious Spirals of Disaster Prone Development



Anticlockwise:
Development failure undermining capacity to cope and increasing exposure to hazard

Clockwise:
Failed development undermining national capacity to respond strategically to disaster impacts

To Virtuous Spirals of Disaster Risk Reduction



Anticlockwise:

Development mainstreams DRR to minimise exposure and susceptibility

Clockwise:

Development provides a basis for strong emergency response and unique opportunity to reinforce DRR in reconstruction

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