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Community emergency preparedness: a manual for managers and policy-makers



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1999

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Preface

This manual is designed to assist those concerned with preparing for emergencies at the local level. It explains what emergency preparedness is and how to achieve it in an effective, appropriate way. It is intended principally for:

- local organizations and managers responsible for emergency planning (e.g. health sector administrators, directors of public works organizations, hospital administrators, and heads of volunteer organizations); and
- national and international officials involved in emergency management.

National civil protection bodies, emergency management organizations, and sectoral departments, such as public health authorities, are responsible for ensuring the safety and security of a nation's people, resources, and environment in the face of hazards. It is at the community level, however, that the full effects of emergencies are felt, and it is there that definitive achievements in emergency preparedness can be made. It is difficult for national and international emergency organizations to form an effective working relationship with a community that is unaware of its hazards and unprepared for emergencies.

The key to emergency preparedness is the involvement and commitment of all relevant individuals and organizations at every level — community, provincial, national, and international. This multisectoral approach means that many organizations accept clearly-defined responsibilities and the need to coordinate their efforts. Without their involvement and commitment, emergency preparedness becomes fragmented, inefficient, and poorly coordinated.

Self-evidently, one of the principal effects of any emergency will be on the health of the population. Preparedness within the health sector was felt to be beyond the scope of this manual, a separate WHO publication devoted entirely to health sector preparedness is planned.

The term "emergency" in this manual is used in the broadest possible sense. One person's emergency may be another's mere incident, and disasters cause problems above and beyond smaller emergencies. Nevertheless, the processes of emergency preparedness can be used to develop systems and programmes for coping with every scale of adverse events. Similarly, the same preparedness processes can be used for enhancing the safety of a building, a community, or an entire country.

This manual explains the processes of policy development, vulnerability assessment, emergency planning, training and education, and monitoring and evaluation for use in a wide range of emergency management applications.

Acknowledgements

This manual is the result of a lengthy process of research, consultation, and writing. WHO collaborated with a number of organizations during this process, including the International Civil Defense Organisation and the International Federation of Red Cross and Red Crescent Societies. Several experts contributed to elaborating the concepts included in the text and many others reviewed it and helped finalize its content. Dr S. Ben Yahmed, formerly Chief of Emergency Preparedness at WHO, developed the idea for the manual and coordinated the effort, which greatly benefited from the contributions and advice of Dr R. Doran (formerly, Division of Emergency and Humanitarian Action, WHO) and Professor E. Quarantelli (University of Delaware).

Contributions were also made by WHO's regional offices and by the WHO divisions responsible for such areas as operational support in environmental health, nutrition, communicable diseases, and mental health.

Special acknowledgement is due to: Mr M. Tarrant (Australian Emergency Management Institute) and Mr B. Dutton (Disaster Management Consultants International) for managing the development of the hazard analysis process that formed the basis of Chapter 3, Vulnerability assessment; the Disaster Management Consultants International team for technical editing; Mr J. Lunn, Mr B. Dutton, Mr W.A. Dodds, and Mr G. Marsh for developing the planning process that formed the basis of Chapter 4, Emergency planning; and Mr P. Koob (Disaster Management Consultants International) for writing the manual.

Chapter 1

Introduction

Decision-making for emergency preparedness

The increase in global vulnerability

Major emergencies and disasters have occurred throughout history and, as the world's population grows and resources become more limited, communities are increasingly vulnerable to the hazards that cause disasters. Statistics gathered since 1969 show a rise in the number of people affected by disasters (see Fig. 1). However, since there is little evidence that the actual events causing disasters are increasing in either intensity or frequency, it can only be concluded that vulnerability to disasters is growing.

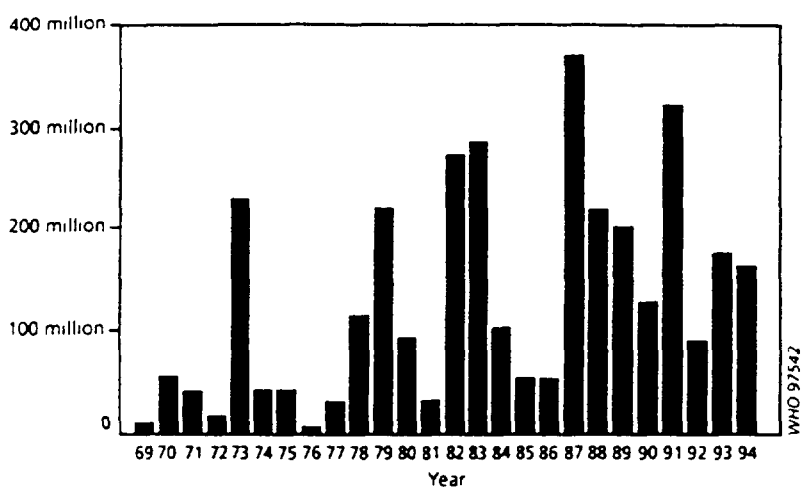
Emergencies and disasters do not affect only health and well-being; frequently, large numbers of people are displaced, killed or injured, or subjected to greater risk of epidemics. Considerable economic harm is also common, and Fig. 2 shows how economic and insured losses have risen since 1960. This has led to a restructuring of the insurance industry, with insured parties bearing more costs, and governments assisting the insurance and reinsurance markets (2). Uninsured and economic losses are creating immense burdens on communities, economies, and governments. As Fig. 3 shows, these disasters are not confined to a particular part of the world; they can occur anywhere and at any time.

A disaster can be defined as any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area (3).

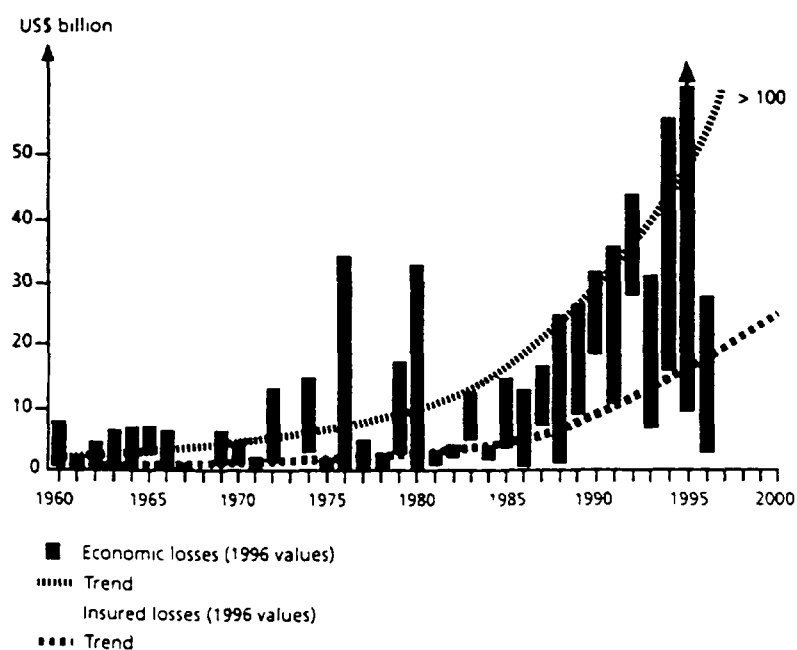
A recent Latin American study indicated that for each disaster listed in officially recognized disaster databases, there are some 20 other smaller emergencies with destructive impact on local communities that are unacknowledged. Hence, the actual harm caused by emergencies and disasters probably far outweighs the accepted disaster statistics.¹

Disasters are causing greater harm to people, communities, and countries every decade, affecting current populations and existing infrastructure and threatening the future of sustainable development.

Clearly, neither communities nor governments can afford to wait for emergencies and disasters to occur before responding to them. The suffering caused by injuries

Fig. 1. Number of people reported annually as affected by disasters^a

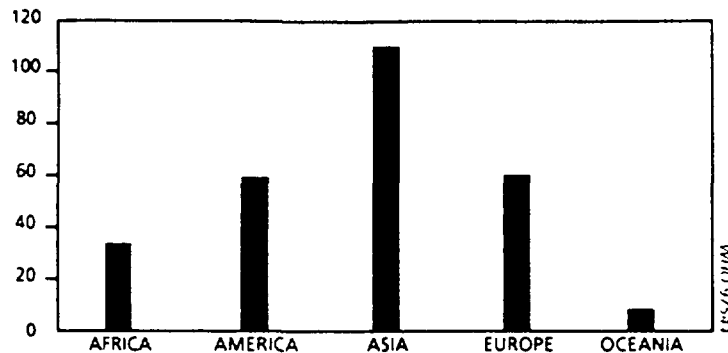
^aReproduced from reference 1 by permission of the publisher.

Fig. 2. Economic and insured losses from natural disasters, 1960–1996^a

WHO 97543

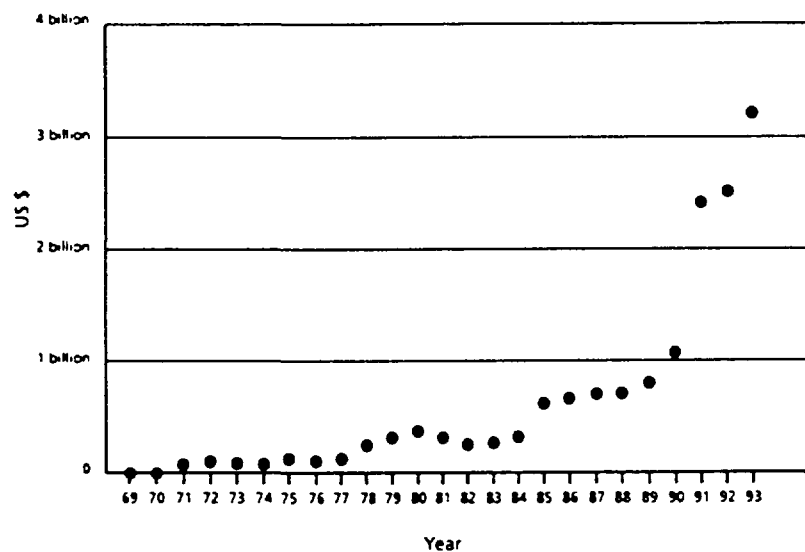
^aReproduced from reference 2 by permission of the publisher.

Fig. 3. Number of disasters with natural and non-natural triggers by global region in 1994^a



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Fig. 4. Value of humanitarian assistance (in US\$) by year^a



WHO 97545

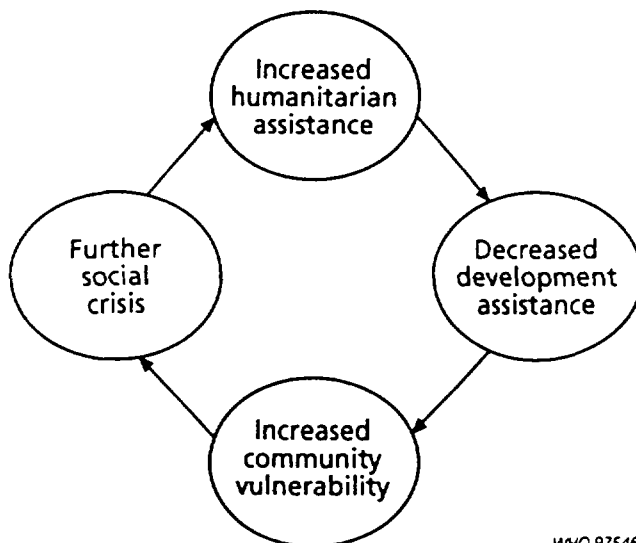
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and deaths, social and economic disruption, and the destruction of the environment can be reduced through various measures designed to reduce vulnerability.

The effects of inappropriate humanitarian assistance

Often, the international community's reaction to disasters is to provide large amounts of humanitarian assistance and increased aid to the affected countries or communities. This might appear a fairly simple solution — to reduce short-term suffering and allow the community to rebuild. Figure 4 shows how humanitarian assistance has increased over the last three decades, from US\$ 3 million in 1969 to US\$ 3.2 billion in 1993. In 1995, it exceeded US\$ 4 billion. Estimates show that, in 1980, global humanitarian assistance formed less than 1% of total overseas development assistance and that this figure had increased to 7% in 1993 (4).

Fig. 5. How humanitarian assistance can increase vulnerability



Frequently, humanitarian assistance takes the following course. It is not requested by the affected country and not integrated with the country's normal services or with community development. Assistance funds are diverted from those otherwise provided for development, thus reducing development opportunities in areas most vulnerable to emergencies and disasters. Delivery channels that parallel existing national channels are established for allocating and managing these assistance funds, leading to inefficiency and undermining existing development programmes. Hence, humanitarian assistance that is not properly coordinated at the national and community level can increase vulnerability and lead to greater dependence on further assistance, further social crises — and a need for *more* humanitarian assistance (see Fig. 5).

Badly coordinated humanitarian assistance clearly is not the answer and is a poor investment of time, resources, and money. Effective emergency preparedness, however, built in at an early stage, can establish the necessary structures and processes for an affected country to integrate humanitarian aid — provided *only* when requested — within its infrastructure in a cost-effective manner.

Vulnerability reduction and the focus on communities at risk

Coordinated efforts are also needed to halt emergencies and disasters by tackling the source — the deteriorating environment, the hazards that bring harm to communities, the vulnerability of communities to those hazards. Such efforts may be collectively termed “vulnerability reduction”.

Vulnerability concerns the interaction between a community, its environment, and hazards. A community is the smallest social grouping in a country with an effective social structure and potential administrative capacity. The environment is the surrounding support system and processes. Hazards are the potential sources of emergencies of natural, technological, or social origin. A community

interacts with its environment and its hazards. This interaction can be positive, resulting in vulnerability reduction and in development, or negative, resulting in a series of crises and emergencies, as well as setbacks in development initiatives.

Vulnerability to emergencies and disasters is a function of the degree of exposure to hazards and of people's capacity to cope with hazards and their consequences.¹ Community vulnerability has two aspects: susceptibility, the degree to which a community is exposed to hazards, and resilience, the community's capacity to cope with hazards. It is possible for a community to have either high or low susceptibility and resilience.

For example, many communities are susceptible to frequent severe earthquakes because of their geographical position and geological environment, while others do not experience them. Of the susceptible communities, some, like San Francisco, and many communities in Japan, are highly resilient and some, like Armenia, less resilient. This difference in resilience can be due to:

- different abilities of buildings, and various elements of the infrastructure, to withstand seismic loads;
- differences in emergency preparedness (i.e. the degree to which a community is organized to cope with emergencies);
- the extent of the resources that can be applied to an emergency;
- the degree to which the province or nation can sustain economic and social damage.

The vulnerability of units smaller and larger than a community, such as individual buildings, organizations, national economies, and political structures, can also be described in terms of susceptibility and resilience.

Vulnerability reduction requires a number of coordinated activities, including:

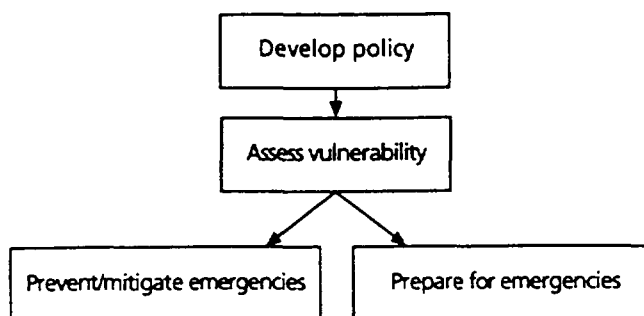
- policy development;
- vulnerability assessment (to describe the problems and opportunities);
- emergency prevention and mitigation (to reduce susceptibility);
- emergency preparedness (to increase resilience).

Without vulnerability assessment, communities will not know in what way they are vulnerable and how hazards may affect them. Without emergency prevention or mitigation, communities are exposed to unnecessary risk. Without emergency preparedness and response mechanisms, an emergency can escalate into a disaster, causing great harm and setting development back years. These aspects of vulnerability should all be addressed by any national policy (see Fig. 6).

Vulnerability assessment, also known as "hazard analysis" and "risk assessment", is based on a series of techniques for determining the hazards that may affect a particular community, and the impact they may have. It also determines what factors make the community vulnerable to emergencies and disasters, by

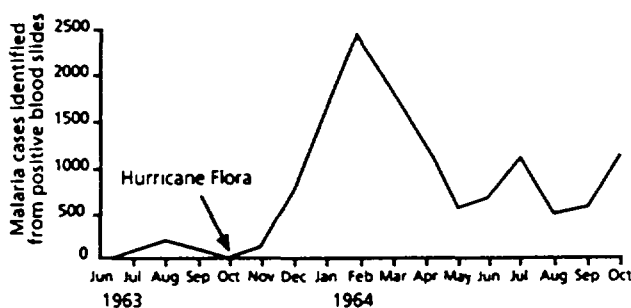
Vulnerability is different from "vulnerable groups", such as the aged, women, children, the sick, and the poor. An assessment of vulnerability may identify and describe vulnerable groups, but this is only part of the overall picture. Vulnerable groups have differing degrees of susceptibility and resilience, and exist within the context of communities that themselves have differing degrees of susceptibility and resilience.

Fig. 6. Vulnerability reduction



WHO 97547

Fig. 7. Number of cases of malaria following Hurricane Flora, Haiti, 1963*



WHO 97548

*Adapted from reference 5.

analysing the community's social, infrastructural, economic, and demographic composition.

Emergency prevention and mitigation involve measures designed either to prevent hazards from causing emergencies or to lessen the likely effects of emergencies. These measures include flood mitigation works, appropriate land-use planning, improved building codes, and relocation or protection of vulnerable populations and structures.

Emergency preparedness requires that emergency plans be developed, personnel at all levels and in all sectors be trained, and communities at risk be educated, and that these measures be monitored and evaluated regularly.

For example, Fig. 7 shows the prevalence of malaria before and after a hurricane. Malaria is just one of the health aspects of this emergency, and health is just one of the sectors affected. Emergency preparedness is required in the health sector to deal with the rapid changes in environment and disease brought about by emergencies.

A lack of preparedness will strain medical services and may ultimately impair development through increased morbidity and mortality in the population.

Because communities may be vulnerable to a broad range of hazards, the all-hazards approach should also be adopted. This approach entails developing strategies for all of the needs created by different types of potential emergencies. Each possible hazard can cause similar problems in a community, and actions such as warning, evacuation, mobilization of medical services, and assistance with community recovery may be required during and following emergencies. Thus, emergency preparedness can be based on common strategies and systems for the many different types of emergencies and disasters that might harm a community.

Certain hazards are of neither natural nor technological origin. Many forms of social exclusion can lead to social unrest, economic disruption, and violence. Such social exclusion may be caused by marginalization of the poor, tension between different ethnic and cultural groups, and other social inequities. One of the primary aims of development programmes with an integrated emergency preparedness component is to defuse potentially explosive social situations, and ensure the safety and security of the community.

Thus, vulnerability reduction addresses susceptibility by dealing with the causes of emergencies and disasters, and resilience, by strengthening communities that are still at risk.

Vulnerability reduction and development

Just as inappropriate humanitarian assistance can increase vulnerability, so vulnerability reduction can protect and enhance development. But how are vulnerability, hazards, and emergencies related to development?

It has been said that the purpose of development is to broaden people's range of choices. At the heart of this concept are three essential components:

- equality of opportunity for everyone in society;
- sustainability of opportunity from one generation to the next;
- empowerment of people so that they participate in and benefit from development processes (6).

Vulnerability to hazards is not spread equally throughout communities, and vulnerability reduction thus helps ensure equality of opportunity by reducing the susceptibility to harm of vulnerable groups. Emergencies are a direct threat to development, diverting development money to humanitarian assistance and damaging the structures that assist development. Vulnerability reduction is, like development, a process of empowering communities to take control of their own destinies.

Investing in vulnerability reduction protects human development achievements. Emergency preparedness also helps stricken communities limit the consequences of major emergencies and overcome them at an early stage, allowing development to resume.

Figure 8 illustrates how prepared communities can maintain and improve their level of development, despite emergencies. A prepared community will react to a potential disaster effectively, perhaps limiting it to the level of an emergency.

Fig. 8. The effects of disasters on the development of prepared and unprepared communities

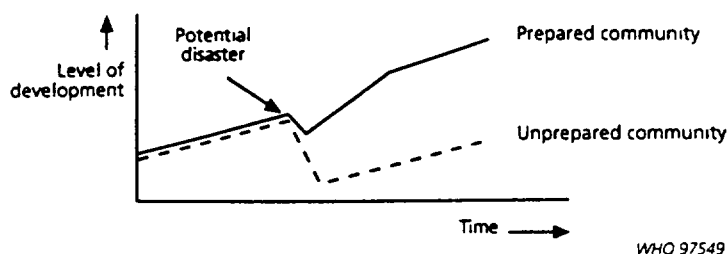
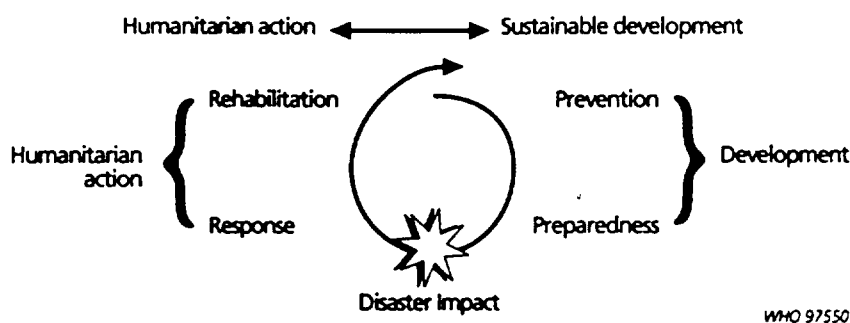


Fig. 9. Emergency management cycle^a



Note. Emergency management and development are linked. Prevention and preparedness measures should be integrated into development planning, in order to minimize the disaster impact. Response and rehabilitation are humanitarian activities which should contribute to sustainable development. Emergency management is a continuing process which is relevant not only at the time of the disaster impact, but also as an integral part of sustainable development.

^aReproduced from reference 7.

Thus, although the event may affect community development, its impact will be tempered. An unprepared community, however, may take years to recover from a severe setback in development.

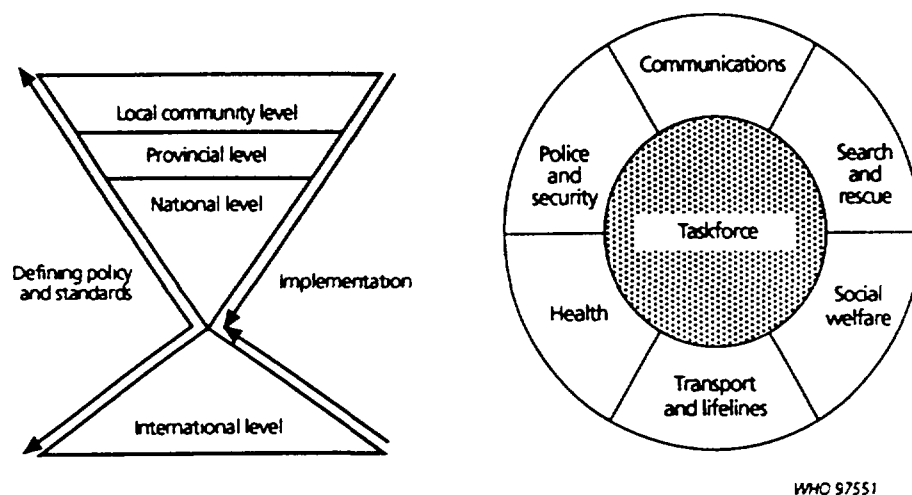
Preparedness is a feature of many successful organizations in the world today. When a new or existing programme in an organization is being assessed, the risks, costs, and benefits are analysed. This allows the organization to ensure that its investment is protected, leading to a more secure future. These risk-management practices can be applied to communities: vulnerability reduction and emergency preparedness components should be built in to each new development, and whenever existing developments are reviewed (see Fig. 9).

The comprehensive approach combines prevention (and mitigation), preparedness, response, and recovery (rehabilitation). It is important that all sectors and organizations are active in each of these areas.

The responsibility for vulnerability reduction

Vulnerability reduction is often perceived as the exclusive domain of one organization, sector, or level of society and government. But a disaster — by definition

Fig. 10. Vertical and horizontal integration of vulnerability reduction



— exceeds the coping capacity of an entire community, and no single sector can manage vulnerability. Therefore, vulnerability reduction must be integrated into every sector of a country at every level — government, the private sector, and nongovernmental organizations (NGOs) — that is, both vertically and horizontally. Policy and standards for vulnerability reduction should come from the national level but implementing the various measures should begin at the community level (see Fig. 10). Six sectors at each administrative level should be involved in implementation, with a representative task force to coordinate the work. These sectors are: communications, health, police and security, search and rescue, social welfare, and transport and “lifelines”.

Other sectors, such as education and environment should be included as appropriate, bearing in mind that vulnerability reduction must be integrated within the political and administrative context of each country.

The most successful management system for emergencies and disasters will be multisectoral and intersectoral. The multisectoral and intersectoral approach is one in which all organizations — government, private, and community — are involved in emergency management. Emergency management may entail different priorities for specific organizations (8), including:

- protecting their own interests and personnel;
- protecting the community from hazards arising from the activities of the organization;
- providing a public service to protect the community from likely hazards.

However, the emergency management work of each organization must be brought under a single, coordinated umbrella. If this approach is not applied, emergency management becomes fragmented and inefficient (7). The multisectoral and intersectoral approach will also help link emergency management to development, by institutionalizing emergency management and the use of its principles in development projects.

A key aspect of the multisectoral approach is that emergency management neither duplicates normal government administration nor acts independently of government. The control of government organizations should not be considered except in exceptional emergency circumstances.

In particular, it is imperative that organizations are not limited to the areas of emergency management in which they seem most active. So-called "response" and "relief" organizations should participate in all aspects of emergency management, including vulnerability assessment, prevention, mitigation, and preparedness.

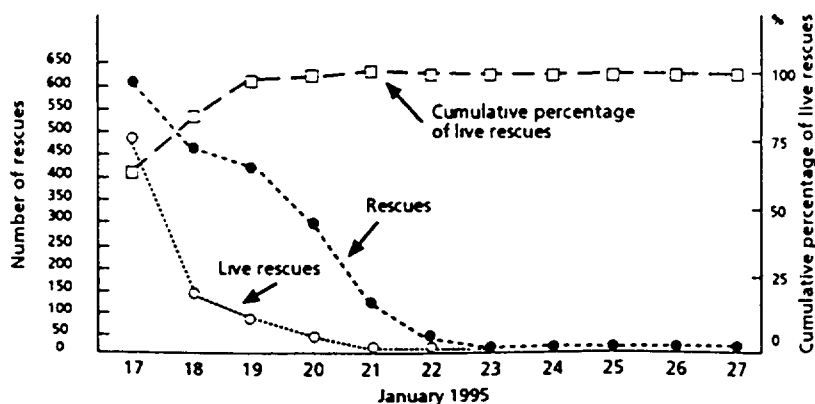
Despite governmental and organizational involvement in emergency management, the community link remains the most critical one. Policy and standards must be defined by the national government, but communities should be allowed to develop and implement their own vulnerability reduction and emergency preparedness programmes because they will be the first to respond to emergencies. Provincial and national levels will support communities in their work, and the national government will provide the connection with international organizations and other countries.

Community emergency preparedness

The need for community-level emergency preparedness is illustrated by the live rescue rates following the Great Hanshin-Awaji (Kobe) earthquake of 17 January 1995 (see Fig. 11). Sixty-five percent of live rescues were accomplished in the first 24 hours. Within the first 3 days, the Kobe Fire Department had made 86% of their live rescues (9). Similarly, in the 1988 Armenian earthquake, 65% of the live rescues were made within the first 18 hours (10).

Only those in the immediate vicinity of an emergency or disaster, i.e. community members, can respond quickly and effectively. A community prepared for emer-

Fig. 11. Live rescues made by the Kobe Fire Department following the Great Hanshin-Awaji (Kobe) earthquake*



WHO 97552

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gencies can rescue people rapidly and provide life-saving first aid: reliance on external assistance will lead to greater loss of life and harm to the community.

Because the community provides initial rescue and first aid, its capabilities should never be underestimated and with effective emergency preparedness these can be used to their utmost.

"It is the victims of disaster who take action first to protect their lives, whether digging a neighbour out of the rubble after an earthquake or sifting through the city garbage to find things to sell and food to eat when drought turns grinding poverty into famine. If disaster relief is to be successful, it must build upon this tenacity for survival, working in partnership with, not imposing upon, the disaster victims." (11)

It has been shown that mortality rates in some types of emergencies can be reduced by 10% by simply placing the injured in the "lateral safety" or "coma" position. External humanitarian assistance may arrive too late, and may not be appropriate. If preparedness measures are taken seriously, families and the whole community will learn this type of self-reliance.

Local communities are at the centre of immediate response and recovery activities. Empowering local authorities to reduce a community's vulnerability and increase preparedness makes the most effective use of its action. Every level of government and each organization should support communities in this work, through the multisectoral approach.

The individuals in a community are responsible for maintaining its well-being. External assistance may be expected but it should not be relied on. Community members, resources, organizations, and administrative structures should be the cornerstones of an emergency preparedness programme. Listed below are some reasons that communities should prepare for emergencies (7, 11):

- Members of a community have the most to lose from being vulnerable to disasters and the most to gain from an effective and appropriate emergency preparedness programme.
- The positive effects of preparedness programmes can be best measured at the community level.
- Resources are most easily pooled at the community level and every community possesses capabilities. Failure to exploit these capabilities is poor resource management.
- Those who first respond to an emergency come from within a community. When transport and communications are disrupted, an external emergency response may not arrive for days.
- Sustained development is best achieved by allowing emergency-affected communities to design, manage, and implement internal and external assistance programmes.
- Excessive or inappropriate external assistance can destroy self-reliance and normal social and economic patterns, as well as increase both vulnerability and dependence on provincial, national, and international organizations.

This does not mean that each community should introduce a disaster management programme. Most communities are adequately prepared to deal with the harm caused by minor emergencies because experience has taught them to establish the necessary systems and resources. Existing routine emergency experience, organization, and resources can be built on to create disaster management preparedness.

Emergencies arise every day worldwide. An emergency can be defined as:

"A sudden occurrence demanding immediate action that may be due to epidemics, to natural or technological catastrophes, to strife or to other man-made causes." (3)

Emergency management strategies can be used to prevent and respond to disasters. Methods for coping with severe road traffic accidents can be adapted to disaster rescue and medical services. The emergency management infrastructure can be employed to manage potential disasters since disasters are but the extreme end of the spectrum of harmful events.

"Disasters are an extreme example of normal processes. The normal seasonal hunger turns into famine, the normal annual flood reaches its 20-year high point and the normal rise and fall of economic fortune plunges into economic collapse." (11)

Emergency management systems and strategies can be used to prevent disasters, despite limited resources for such activities, by better organizing established community resources and building on existing capabilities.

What is emergency preparedness?

Emergency preparedness is:

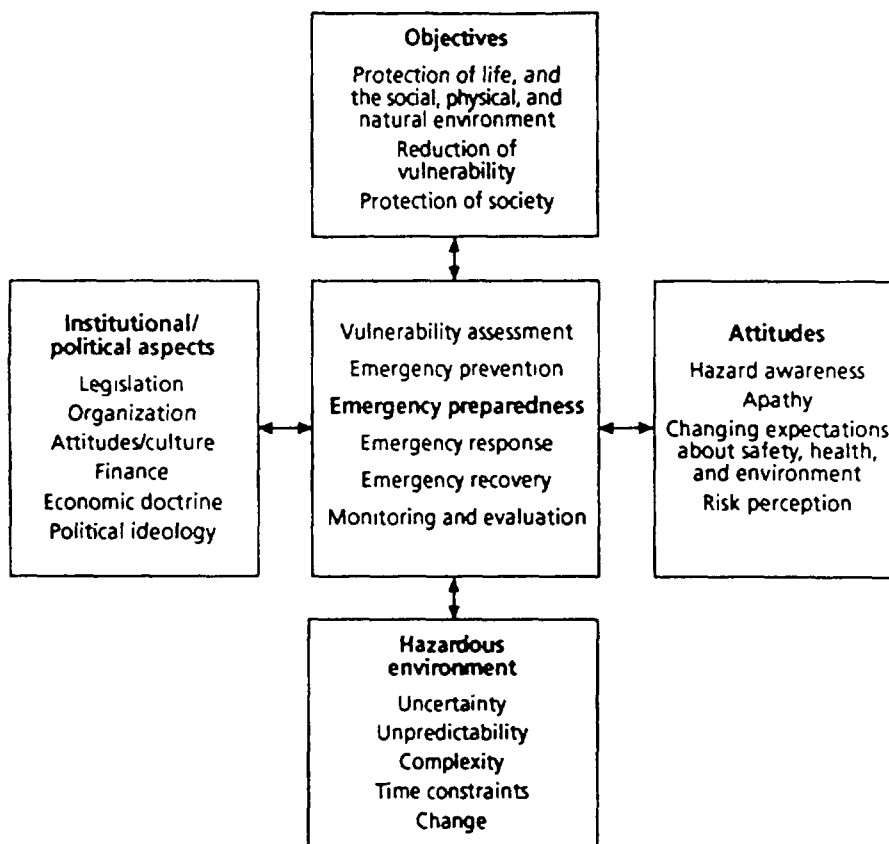
"a programme of long-term development activities whose goals are to strengthen the overall capacity and capability of a country to manage efficiently all types of emergency and bring about an orderly transition from relief through recovery, and back to sustained development " (3)

The development of emergency preparedness programmes requires that the community's vulnerability be considered in context. Emergency preparedness can be ensured by creating a supportive political, legal, managerial, financial, and social environment to coordinate and use efficiently available resources to

- minimize the impact of hazards on communities;
- coordinate an efficient transition from emergency response to recovery, according to existing goals and plans for development.

Thus, emergency preparedness and emergency management do not exist in a vacuum. To succeed, emergency preparedness programmes must be appropriate to their context. This context will vary from country to country and from community to community, but some relevant aspects are shown in Fig. 12.

There are a number of aspects to any management activity; in the context of emergency preparedness programmes they are:

Fig. 12. The context of emergency preparedness^a

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- content (the elements of an emergency preparedness programme);
- form (what the emergency preparedness programme looks like, and how it fits into real life);
- principles (the criteria used when making decisions about emergency preparedness),
- process (the methods used to develop preparedness).

Emergency preparedness includes the following elements.

- legal frameworks and enabling policy for vulnerability reduction,
- the collection, analysis, and dissemination of information on vulnerability;
- strategies, systems, and resources for emergency response and recovery,
- public awareness;
- organizational and human resource development.

These elements should be developed at community, provincial, and national levels. A capacity in each of these elements is a precondition for effective response and recovery when an emergency or disaster strikes. Without these elements,

there will be no link between emergency preparedness and efficient emergency response on the one hand and recovery and development on the other. Developing and implementing an emergency preparedness programme will also produce significant secondary gains in encouraging local political commitment, community awareness, and intersectoral cooperation.

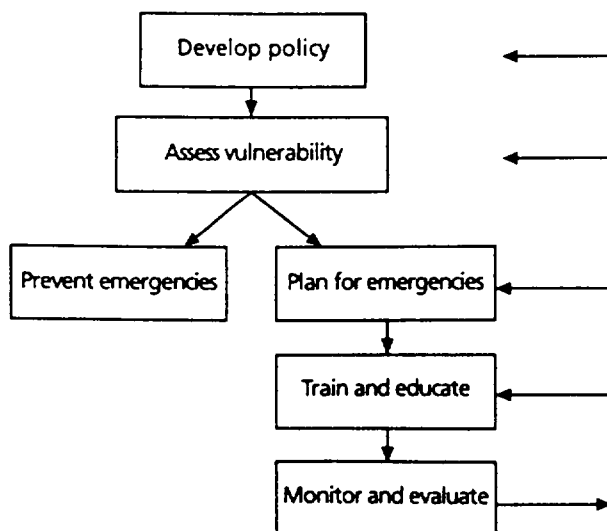
The basic principles of emergency preparedness are outlined below:

- It is the responsibility of all.
- It should be woven into the context of community, government, and NGO administration.
- It is an important aspect of all development policy and strategies.
- It should be based on vulnerability assessment.
- It is connected to other aspects of emergency management.
- It should concentrate on process and people rather than documentation
- It should not be developed in isolation.
- It should use standard management techniques.
- It should concentrate not only on disasters but on integrating prevention and response strategies into any scale of emergency.

The process of preparing for an emergency (see Fig. 13) is a series of related methods for preparing a community, an organization, or an activity for emergencies. Each part of the process is explained briefly below (and most are discussed in greater detail in subsequent chapters).

Policy development (Chapter 2) includes developing emergency management legislation, normally established by a national government. It will mainly relate to the responsibility for emergency preparedness and special emergency powers.

Fig. 13. An emergency preparedness process



There is also a need for provincial and community organizations to develop policy relating to their specific geographical area. Similarly, private organizations and NGOs with emergency management responsibilities should develop appropriate policy in full partnership and consultation with the local authorities.

Vulnerability assessment (Chapter 3) can be used to identify those parts of a community that are vulnerable and in what ways; hazards that may affect a community and how they affect it; factors that render a community vulnerable and how vulnerability may be reduced; and the hazards that should be considered for emergency prevention and preparedness. Vulnerability assessment is also useful for response and recovery and for prevention and preparedness. It can be used to suggest areas that may have sustained damage and assist in assessing harm to the affected community, and provide a baseline for recovery and development strategies, by describing the "normal" state of a community.

Emergency prevention is based on vulnerability assessment and concerns the technical and organizational means of reducing the probability or consequences of emergencies, and the community's vulnerability. Emergency planning (Chapter 4) consists of determining:

- response and recovery strategies to be implemented during and after emergencies;
- responsibility for these strategies;
- the management structure required for an emergency;
- the resource management requirements.

Training and education (Chapter 5) concern training personnel in every aspect of emergency management and apprising the community of the kinds of hazards and the actions that may be required during emergencies, and the ways in which it can participate in emergency management.

Monitoring and evaluation (Chapter 6) determine how well the preparedness programme is being developed and implemented, and what needs to be done to improve it. Monitoring and evaluation are continuous processes, and any conclusions drawn should be included in policy development, vulnerability assessment, emergency management, and training and education.

Each section of this emergency preparedness process can be followed sequentially, but in practice, policy, vulnerability assessment, and emergency plans are often developed simultaneously. All of these activities should, however, be linked to ensure proper coordination.

Community participation

A community is composed of a group of people and the environment that supports them. For the purposes of this manual, a community will be defined as the people and environment contained at a local political and administrative level. This level needs to be small enough to allow community participation but there must be sufficient resources to permit realistic planning. Often planning will take place at several political or administrative levels simultaneously.

Because this manual is intended to be used in different countries, the following generic framework for government and administration has been assumed.

- community: the lowest administrative level within a country, corresponding to a village and its environs, county, town, or district);
- province (corresponding to a region or state);
- country (the national level).

Factors that may be relevant in assessing the vulnerability of a community and the ways in which it can recover from emergencies are demography, social structure, culture, economy, infrastructure, and environment. What is missing from these factors is the feeling of common interest, the social networks, and the shared experiences that exist within a community. Since communities are groups of individuals, most of whom need social interaction, there are many emotional and other mutual bonds between community members. These bonds form networks that may be difficult to analyse. They are, however, a very meaningful part of a community and play a significant role in its well-being.

There are also interactions between communities — the result of social, economic, or cultural ties. Thus, communities are not isolated but interconnected in a variety of ways. The effects of an emergency on a community will therefore be felt outside its strict administrative boundaries.

If one of the main principles of community emergency preparedness is community participation, how can this participation be ensured? Community participation should achieve the following:

- promote community awareness and education to reduce vulnerability and increase preparedness;
- allow the use of local knowledge and expertise, provide opportunities for participating in decisions that concern the community, and ensure policies and practices that allow for self-determination and maximum community involvement in response and recovery planning;
- ensure cooperation between professional personnel and volunteer members of the community;
- make use of the existing structures, resources, and local networks wherever possible, and of the community's own material and physical resources, particularly local suppliers;
- allow national and international organizations to channel resources directly to the community through predetermined and agreed procedures.

WHO describes community participation in the following ways:

"Marginal, substantive and structural participation. Participation can be characterized in terms of three stages: marginal, substantive, and structural. . . . In marginal participation, community input is "limited and transitory and has little direct influence on the outcome of the development activity". Substantive participation is characterized by the community being actively involved in determining priorities and carrying out activities, even though the mechanisms for these activities may be externally controlled. In structural participation, the community is involved as an integral part of the

project and its participation becomes the ideological basis for the project itself. In this latter case, the community plays an active and direct part in all aspects of the development process and has the power to ensure that its opinions are taken into account.

Spontaneous, induced or compulsory participation. Experience has also demonstrated that participation can be characterized as spontaneous, induced or compulsory. In general, "spontaneous" participation refers to local initiatives which have little or no external support and which, from the very beginning, have the power to be self-sustaining. "Induced" participation, which appears to be more common, results from initiatives which are external to the community and which seek community support or endorsement for already defined plans or projects. "Compulsory" participation usually implies that people are mobilized or organized to undertake activities in which they have had little or no say, and over which they have no control.

Cooperation and power-sharing. Participation can also be classified on the basis of whether government is actively seeking cooperation or wishes to promote power-sharing. Where cooperation is sought, people are usually granted the right to receive information, to protest, to make suggestions and to be consulted before decisions are implemented. In power-sharing, the community is understood to have the right to share in all decision-making and has the power to veto ideas that are not in line with its own objectives.¹¹

It should not, however, be assumed that a community represents a unified point of view. Often there are major conflicts of interest and the most vulnerable community members are excluded from decision-making. Real community participation requires methods for actively involving even the most marginalized community members, e.g. the disabled, homeless and displaced individuals, immigrants, and — in some societies — women.

The multisectoral, intersectoral, and all-hazards approach should be a partnership of relevant organizations and sections of the community, based on identifying vulnerabilities and planning action to reduce them. Within this framework, each partner accepts the responsibilities for which it is mandated, but within objectives defined by the community.

Project management

Whether for developing and implementing an entire emergency preparedness programme or for conducting a vulnerability assessment or emergency planning project, project management methods are often required. These methods are used to ensure that the project is:

- appropriate (it sets out to do something worthwhile);
- effective (it achieves the required results);
- efficient (it is completed on time and with the available resources).