

SOCIAL CONSIDERATIONS IN PRE-DISASTER PLANNING

The problem

In spite of the fact that pre-disaster planning has been initiated in many disaster-prone countries, there continues to be significant loss of life, destruction of physical property, and disruption of social environments from natural disasters. While many steps have been taken to reduce the effects of disasters and to meet human needs in disaster situations more effectively, experience has shown that the establishment of a pre-disaster planning process is not without difficulties, and has not always produced the results hoped for. From the social point of view, it is necessary to evaluate how current disaster preparedness arrangements might be made more effective.

Analysis suggests that similar problems are faced in many countries. Some of the more common problems are summarized as follows : Pre-disaster planning often deals only with disaster impact and relief, without adequate consideration of recovery in the longer term. Disaster preparedness is often narrowly perceived as the drafting of a relief plan. Prevention is rarely perceived as an important complement of preparedness, dealing with long-range scientific, social and economic problems.

This results in a lack of integration between pre-disaster planning and on-going development. Disaster plans are often limited in their effectiveness because they are based on erroneous assumptions, and do not address certain essential disaster-related issues. Pre-disaster planning often tends to be focused on improving a particular agency's response to community needs rather than, for example, on strengthening the preparedness capabilities of a self-reliant community. Pre-disaster planning tends to be limited in scope and fragmented. These problems have been exacerbated by a lack of experienced disaster preparedness personnel.

Pre-disaster planning

As defined earlier in this publication, a natural disaster is an interaction between a disaster agent and a vulnerable population. The vulnerability of a population is partly determined by human behaviour. Even when disasters cannot be prevented by the elimination of the physical phenomena, or by the permanent removal of a population at risk, in almost all cases the effects of disasters can be reduced through planning and mitigation measures. Usually, a lack of appropriate disaster preparedness planning means that the disaster is not handled particularly well at any stage. The recovery and long-term rehabilitation stages are frequently the most difficult to manage.

For those disasters which cannot be prevented, the pre-disaster planning objectives should be to minimize loss of life, physical destruction and social disruption; to alleviate the suffering of people who experience such disasters; and to assist disaster-affected communities to return to normal as soon as possible. In general terms one may refer to such action as mitigation.

Prevention and mitigation, preparedness and recovery are often treated as independent concerns requiring separate actions, almost as though they were unrelated. This, however, must change in favour of a more integrated approach. Without adequate *preventive* measures the burden of relief will inevitably continue to increase.

Pre-disaster planning and mitigation have often been separated in both conceptualization and implementation. They have often been viewed only as guidelines for future action. Increasingly, the separation of planning and implementation is being challenged. Pre-disaster planning is being redefined as a long-term process in which the anticipation of potential problems, the establishment of guidelines and programmes of implementation are seen as integral parts of the same process.

Social principles of pre-disaster planning

Social responsibilities : The responsibility for disaster preparedness is often delegated to one agency or department. Such delegation may be essential for programme development, for providing special expertise, and for co-ordination to ensure that individual efforts are complementary. Nevertheless, it is important to recognize that effective disaster preparedness must be a part of the work of all departments and organizations at every administrative level. Pre-disaster planning, for example, must be carried out at the national level, the regional level, the state or provincial level, the local level and by many individuals and groups within each community. It must be an activity of all ministries, public services, private businesses and most community groups. Disaster preparedness and prevention activities should not be carried out only by specialized agencies or departments, but should be a collective effort.

While preparedness must be carried out at each administrative level, perhaps the most important is the household and community level. The success of disaster preparedness is always measured at the community level. National or regional plans are of little good if community and household measures are not implemented effectively.

Just as every individual, family, organization, business and public service within a community will be affected by

a disaster, each has a role to play in preparedness. Stated even more strongly, on a practical basis the multitude of actions that must be taken to implement an effective disaster preparedness programme requires the participation of the entire community. This of course is obvious, for if life is to be protected, people, individually, must take protective action. If homes are to be protected, the home-owners and the building industry must be involved in making the houses safer. If businesses and industry are to minimize losses, each particular establishment must take responsibility for the necessary preparedness and mitigation. If hospitals, schools, food warehouses and other public services are to be protected in an emergency, those responsible must implement the necessary preparedness and prevention efforts.

Planning and development

Disaster preparedness is most effective if planned as a development process, rather than as a relief process. Development stimulates self-reliance and is participatory. Relief is something done for or given to people. Pre-disaster planning is frequently divorced from the development process within a country or community. The separation of the pre-disaster planning process from the non-emergency planning processes or the separation of disaster prevention programmes from the implementation of on-going programmes is unlikely to produce long-lasting results. The consequences of such separation is often that preparedness and prevention measures are simply never implemented. Such separation may also result in the establishment of procedures and goals which are at variance with broader community objectives, or may result in the establishment of parallel and competing programmes. Integrating disaster preparedness measures into organizational and community development programmes is likely to give the best results.

The separation of technical and social considerations in disaster planning also continues to be a major problem. Pre-disaster planning is often treated primarily as a technical exercise, with inadequate consideration of the human and organizational issues. In many communities little is known about how the general public perceives and understands disaster warnings; what is likely to motivate people to evacuate if necessary; what people believe to be the necessary precautions to be taken. These are a few of the many examples that could be cited as evidence of this separation.

One of the many causes of fragmentation, which may limit the effectiveness of pre-disaster planning for particular types of disasters, is the building up of response mechanisms independently of pre-disaster planning and response for *other* types of emergencies, for example, planning for emergency medical services without consideration of the everyday emergency services that exist in every community. Fragmentation is also seen in the actions taken for particular natural disasters (such as earthquakes) to the exclusion of others (such as fire), and in separating the planning for natural disasters from plans for man-made and technological disasters.

Planning with scenarios

Effective pre-disaster planning cannot be based on the assumption that people who live in disaster-prone areas are aware of the risks, know what precautions to take for the protection of life or property, or will accurately anticipate post-emergency conditions. On the basis of disaster experience alone, most community officials and the general public do not have a solid basis for making sound judgements about the possible effects of a future disaster, nor are they likely to be aware of the most effective precautions to take.

Research has shown that disaster experience itself may not be a reliable teacher. In fact, studies in the United States have shown that persons with some disaster experience are less likely to take necessary precautions than those without disaster experience. People who live through a natural disaster that causes only minimal destruction often erroneously assume that the next natural disaster will be similar. For example, people living along the coast of the Indian state of Andhra Pradesh in 1977 did not evacuate the area in response to the cyclone warning, although advised to do so. On the basis of their past experience, they were not prepared for the tidal wave which accompanied that particular cyclone, resulting in the death of over 10,000 people.

It is sometimes suggested that, through past experience with cyclones, earthquakes and floods, people in disaster-prone areas develop common-sense methods of protecting themselves and their properties, just as fishermen seem to develop a sense of the ocean. It is not uncommon to hear officials claim that local residents know what actions to take in the event of a disaster, nor is it uncommon to hear warnings which consist only of an undefined directive to "take necessary precautions". While some appropriate precautions are taken in most disaster-prone communities, much more is required than is commonly done. Damage assessments after nearly every disaster demonstrate that even simple precautions were not taken. For example, in the case of high winds, people frequently do not anticipate the consequences of roof damage, nor do they take precautionary steps to protect items within a building. This is often dramatically illustrated by damage to records, office equipment, food stocks, clothing, personal effects, machinery, tools, hospital supplies, etc., all of which could have been protected with minimal effort. Such damage does not result from disinterest but primarily from a lack of awareness of actual hazards and their effects.

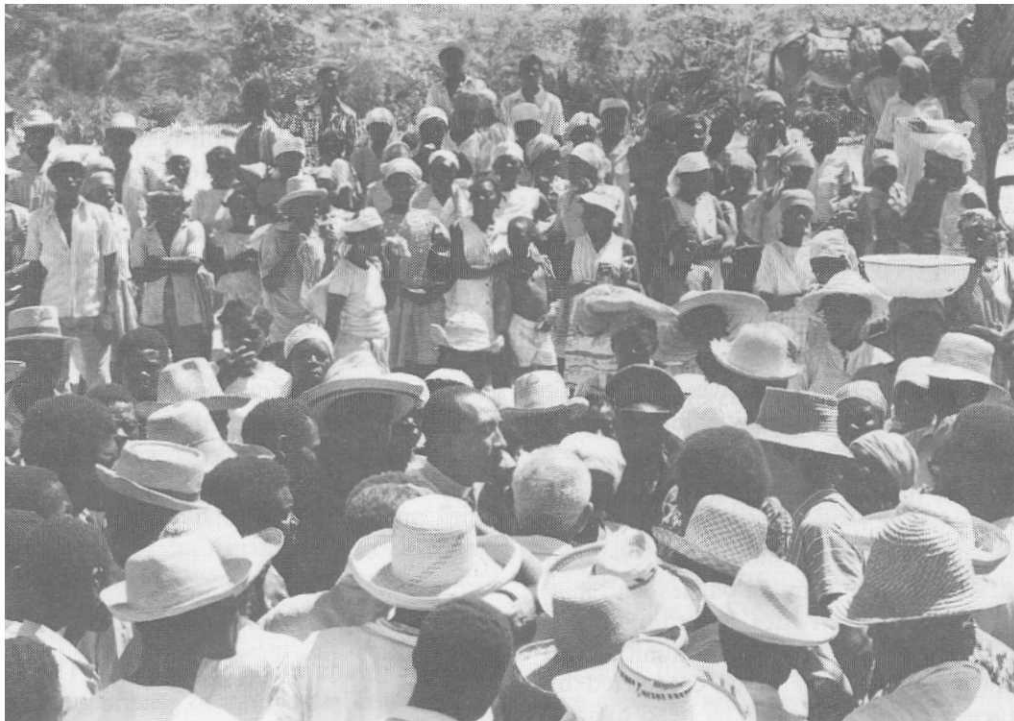
Effective measures are dependent upon an accurate projection of what physical impact the disaster is likely to have on a community, and what the response of individuals and organizations within that community is likely to be. Realistic planning and effective precautions require an informed assessment of future disaster risks and consequences, including time frames.

Training, awareness and public education

Training and disaster awareness programmes are essential if people living in disaster-prone communities are to

FIGURE 7

Public participation in pre-disaster planning, relief and recovery



(Credit C.A.R.D.)

have a more realistic understanding of the disaster risks of their community, and take more practical measures to save life and property.

Disaster training and disaster awareness programmes are gradually being established in a number of countries. A review of the materials produced in these programmes suggests that in some countries extensive and diverse efforts are being made to involve the general public, while in other countries little has been done. Disaster training and public education is a comparatively new endeavour. Much has yet to be learned about the best way to implement such programmes, and in many countries little is known about their success.

An effective disaster awareness programme for the public will :

- Be participatory in design;
- Be community-specific;
- Be based on an assessment of the information needed;
- Be integrated with existing disaster warning and response systems;
- Include information on prevention, mitigation, and long-term recovery;
- Be established as an on-going process; and
- Include as a priority the most vulnerable people.

There are several common problems encountered in disaster awareness programmes. Public education programmes are often limited to emergency assistance, first aid and relief issues. While these concerns are critically

important, the lack of attention to prevention issues continues to be a major shortcoming. The implementation of more effective ways to protect people and goods would eliminate the need for some of the relief, and would substantially reduce losses and hardship. Another important weakness arises from the fact that public information campaigns are carried out on a regional or national, rather than on a community basis. This results in disaster information that is very general and of little practical value in assisting people to know what specific actions must be carried out.

The need for hazard awareness programmes is assessed by the determination of three basic questions :

- (i) Do people know they live in a hazard-prone area ?
- (ii) Do people know the risks ?
- (iii) Do people know effective ways to reduce such risks ?

Priorities

In every community there are certain groups of people who are more vulnerable than others, services which are considered more essential than others, and certain amenities which are critically important. Priorities must be established for those factors which are considered the most important. A list of these priorities might include the following :

1. Those people who are most vulnerable should be provided with special assistance in preparedness and in post-disaster response. The aged, families requiring

assistance and the handicapped can be singled out immediately.

2. Every effort should be made to upgrade essential public services (particularly hospitals, utilities, and communications facilities) in order to keep disaster damage to the minimum, in readiness for post-disaster demands.

Disaster preparedness plans

Written plans are an important aspect of disaster preparedness. The development of specific plans is necessary to ensure that the required action will be carried out efficiently.¹ It is worth repeating that disaster preparedness plans are more effective if developed and maintained as an integral part of development programmes rather than as end products in themselves. The benefit of specific plans is that it forces explicit thinking about problems, and reduces probable unknowns.

While national-level plan is essential for over-all co-ordination and programme implementation, it is equally important that preparedness plans should be developed at every administrative level and by all parties who may participate in disaster-related activities. Most important, however, is the planning process at the community level. It is not an exclusive effort only to be completed by established emergency organizations or by head offices. It is a working tool for every agency, department, service, business and institution. In practice key governmental agencies and disaster-related organizations (both private and public) are likely to play a leading role.

Disaster preparedness plans are not always effective in improving disaster response. In many cases plans are drafted and approved by official bodies, then filed away and forgotten. All plans should have built in, mandatory provisions for updating. Some disaster plans impede rather than enhance programme implementation. Problems which limit the effectiveness of disaster plans include :

- Unrealistic assumptions about probable disaster situations;
- Disregard for potential contributions from other agencies;
- Disregard for the coping response of the general public;
- Not revising and updating plans;
- Inadequate planning for internal organizational problems;
- Insufficient planning for the prevention and recovery phases; and
- Omission of training and rehearsal procedures.

As disaster plans are developed at many different administrative levels and by many different departments and organizations, each component of the plan will be unique to the service to be provided. There is, however, a common basis for the development of disaster preparedness plans. There are at least six general categories of issues

which must be addressed, whether prepared for a hospital, the highway department, a non-governmental agency or others. They include :

1. ASSUMPTIONS

A disaster preparedness plan should state explicitly the assumptions upon which it is based. These assumptions should include the anticipated effects of a disaster, the projection of the needs likely to exist, and the actions likely to be taken by the general public, official departments and community groups. Historical facts about damage and the consequences of past programmes are extremely useful in explaining why certain assumptions are made. In Sri Lanka a disaster handbook was developed in which each set of recommendations was accompanied by a fact sheet entitled "Lessons Learned in the Cyclone of 1978", in which that disaster experience was summarized. However, the focus must be forward-looking as the next emergencies are not likely to be simple repeats of past experiences.

2. GOALS

Disaster plans must specify goals. The goals can range from detailed instructions to general guidelines, depending on the service being provided. While specific goals are usually more useful than broad generalizations, over-detailed plans may be counter-productive for lack of flexibility in unique situations. The longer and more complicated a plan, the less likely that it will be implemented.

3. ORGANIZATION

Many of the difficulties that commonly arise in disaster response come from internal organizational problems. Problems can be expected if a department or agency suddenly feels obliged to hire large numbers of new staff to carry out projects which have not been studied or planned for, and for which no administrative, managerial or technical support exists. The organizational considerations which must be addressed include project management, liaison, and administrative support.

Management

Defining a programme philosophy is an important basis of project management. A statement of programme philosophy should include a definition of the objectives of a planned service, a description of the planned programme approach, and an explanation of why this course of action is being taken. A programme philosophy influences both the choice of programmes and their implementation. For example, a programme philosophy which supports self-sufficiency is participatory in design, and attempts to provide support for actions which will have long-term benefits. It may have quite different consequences if it is oriented only to short-term, outside assistance in the impact, and undefined programme philosophy leads to problems.

¹ UNDRO, *Disaster Prevention and Mitigation : A Compendium of Current Knowledge*, vol. 11, "Preparedness Aspects" (Geneva, Office of the United Nations Disaster Relief Co-ordinator, 1984).

Examples of other project management issues to be addressed in a disaster preparedness plan include :

- Staff training for disaster preparedness;
- Techniques for the assessment of needs;
- Guidelines for the identification of new activities;
- Guidelines for the programme implementation;
- Mechanisms for soliciting additional technical support;
- Reporting procedures;
- Suggestions for the termination or transition of emergency programmes; and
- Plans for project evaluation and follow-up.

Liaison

Special consideration is required to ensure that an information flow is established between the authorities, other organizations and the general public. Liaison does not simply mean a one-way flow of information : successful programmes are also dependent upon feedback and comment.

Administration

Special planning is also required to deal with the administrative changes that occur within organizations operating in a disaster. Examples of emergency administrative issues that should be considered include :

- (i) The definition of critical roles and responsibilities (noting position not persons);
- (ii) The need for decentralization;
- (iii) Anticipation of the need for any additional administrative support that may be required;
- (iv) The establishment of special personnel policies for staff working in emergency situations;
- (v) The development of flexible decision-making procedures;
- (vi) Defining procedures for the sudden expansion of staff;
- (vii) Guidelines for the selection, training and support of new staff;
- (viii) The consequences of structural changes within the organization arising out of new staff and new functions;
- (ix) Administrative reporting requirements; and
- (x) Procedures for the transfer of money, and for financial control systems.

4. INTRA-ORGANIZATIONAL FOCUS

Disaster plans are often written as though the agency developing the plan was the only organization likely to respond to disasters. However, disaster plans will be most effective if they acknowledge the plans and contributions of other parties involved in the disaster process.

5. TECHNICAL CONSIDERATIONS

Special technical considerations, not normally encountered in non-emergency activities, are required in the provision of most disaster-related services. The technical issues addressed in a disaster plan should be those of specific importance to disaster preparedness and response. Technical reference material may be useful in providing an informed basis for decision-making, thereby minimizing decision-making based on myth or conjecture.

For example, disaster plans for food storage warehouses could include such preventive measures as making recommendations concerning siting and building specifications; maintaining a certain level of stocks to meet emergencies; ensuring that tarpaulins and other emergency supplies are available for emergency measures; ensuring that protective cabinets are provided to secure office records and equipment; and providing training for co-operation staff, store managers, warehouse keepers and other staff on emergency procedures.

6. TRAINING AND PUBLIC AWARENESS

Training programmes are likely to have the greatest impact if incorporated into established organizational training programmes. Rehearsal is an important tool for acquainting people with the roles they may be asked to assume, and for identifying potential problems.

7. REVISING AND UPDATING PLANS

Disaster plans can be effective only if they are regularly updated and revised to incorporate changes within organizations; changes in the plans and actions of other agencies; and changes that constantly occur in any community. Disaster plans need not be lengthy. In fact the longer they are, the less likely they are to be used. As discussed earlier, disaster plans cannot be too specific for fear of not meeting actual situations. The statement of principles or general guidelines permits the implementer to make necessary independent decisions. Roles and responsibilities are best designated by position rather than a particular individual, since individuals frequently change.