3.3 THE ASSESSMENT OF SURVIVORS' NEEDS

PRINCIPLE: The accurate assessment of survivors' needs is in the short term more important than a detailed assessment of damage to houses and property. Partial or inaccurate assessments of the human needs by assisting groups have been a frequent cause of past failure of relief efforts

Audience

- ○ Private sector: manufacturers/contractors
- ● Professionals: architects/planners/engineers
- ● Policy-making administrators: national (tertiary) level
- ● Managers of post-disaster shelter/housing programmes: regional (secondary) level

Time phases

- ○ Pre-Disaster Phase—Preparedness/mitigation/risk reduction
- ● Phase 1—Immediate relief period (impact to day 5)
- ● Phase 2—Rehabilitation period (day 5 to 3 months)
- ○ Phase 3—Reconstruction period (3 months onward)

Common failures of assessment

One of the first responses to natural disaster is to estimate the extent of the damage. Assumptions are then made about the kind and scale of the survivors' needs. Specific failures in assessment occur in three categories:

1. *Lack of familiarity of assessors with the local situation.* A lack of knowledge of housing conditions prior to the disaster often makes it difficult, if not impossible, to distinguish between disaster-related needs and pre-existing housing shortages. Consequently, shelter requirements may be overstated, attributing residual housing deficiencies to the disaster. Lack of familiarity with the local situation can also result in overlooking all forms of local resources, which may be extensive: social "coping mechanisms" which can assist in providing emergency shelter; all forms of material goods, including existing supplies of building products and tools stocked—in the normal course of events—within any large community; local skills and manpower which can be used for both emergency shelter and reconstruction; local agencies or institutions (e.g. co-operatives) able to manage shelter and housing programmes.

2. *Lack of understanding of appropriate techniques for damage and needs assessment.* Conventional methods of data collection do not work in the chaotic conditions of the immediate post-disaster phase, and assessment techniques to measure survivors' needs have to draw the subtle, but vital, distinction between 'needs' and 'wants'. However, information-gathering technology may not be appropriate to the technical level of the country being surveyed (data requiring computer analysis, for instance, is useless if a computer is not readily available either in time or locally).

3. *Weak management of the assessment.* Inappropriate assessments can be characterized by:

The over-estimation of needs by local or national officials in order to receive maximum assistance.

A higher priority being placed on damage surveys than surveys of basic human needs.

A lack of active participation by the surviving community (or even the surviving local administration) in the assessment of needs.

Confusion as to who has the responsibility for making the assessment.

Problems of communicating the assessments of assisting groups.

Lack of definition of the objectives of the assessment (for example, is the assessment of needs aimed at regenerating the self-help process in housing reconstruction, or is it aimed at providing emergency shelters before all other considerations?).

Defining who should make the assessment the problem of authority and information needs

It is a characteristic of all major disasters that too many regard it as their role to make an assessment of survivors' shelter needs. There may be confusion within government departments about where this responsibility lies Health, housing and emergency planning officials have all often regarded it as their particular task. In addition, groups such as the military frequently make their own assessments, as do voluntary organizations, representatives of international agencies, etc. They often do so either to suit their own views and operational policies, or as verification of official assessments which they may be inclined to distrust, or which may not be sufficiently detailed for their purposes.

Given this situation, if the government is to maintain full control it will be necessary for assisting groups to accept ultimate governmental authority in the assessment of needs, as in all other relief matters. On the other hand, the government must recognise the value of assisting groups' advice on assessment, since many of these groups will probably have more experience of dis-

aster impact than the government itself. Further, the government must be prepared to accept—where the assessment of needs and damage is a task beyond its resources—to enter into a close working relationship with all assisting groups, and, from the information so collected, to act as the clearing-house for information.

Policy guidelines

Policies to avoid

1. Policies that encourage a proliferation of independent assessments, without co-ordination or agreement on the sharing of information.
2. Requesting the assessment of needs from those without pre-disaster knowledge of the locality.
3. Awaiting the results of damage surveys and subsequent vulnerability analyses before starting any housing reconstruction. Although damage surveys reveal the need for detailed vulnerability and risk analyses of various building types and sites, the evidence indicates that if such studies do not already exist, it is *not* advisable to wait for their completion before starting the reconstruction process—both should proceed in parallel, for delays dissipate commitment and resources.[9]
4. Isolating damage or structural surveys from the assessment of social, cultural and economic needs.
5. Assuming that the assessment of needs and damage surveys can be undertaken after a disaster, without having set up a methodology beforehand.
6. Over-reliance on sophisticated technology, such as remote sensing or high altitude photographs, for damage surveys.

Policies to adopt

1. The governmental body in charge of relief must allocate all roles as a matter of priority to those individuals or organizations best equipped to make the assessment. It is advisable for the assessment of shelter needs to be undertaken by a multi-disciplinary governmental/inter-agency team, covering public works, housing, sanitation, community development, relief, etc. The composition of the team will vary according to the type of disaster and local conditions. Although there may be extensive damage to housing, damage to the infrastructure and other sectors of the economy may be of equal, or greater, concern to the survivors.
2. Some members of the team should be familiar with the normal pattern of life in the affected area, so as not to confuse immediate emergency needs with the norm for the area. This is not an easy task in marginal or squatter settlements, where, for the most part, people subsist in a state of chronic housing shortage and need.
3. The assessment must be verifiable. Many assisting groups will be well experienced in disaster management, and will be quick to detect over-estimations. Once assisting groups recognise the accuracy of the assessment, they will be less likely to insist on their own independent assessments. It is essential to capitalise on relief assistance for the medium to longer terms. There is an urgent need to transcend exclusive preoccupation with immediate relief needs, and to give more thought to reconstruction needs at the outset.

[9] Following the 1963 earthquake in Skopje, Yugoslavia, the authorities undertook detailed damage surveys *in parallel* with vulnerability analyses. Both activities continued whilst reconstruction began on less hazardous sites. In contrast, following the 1970 Peruvian earthquake, the microzoning studies of Huaraz delayed the start of reconstruction for 3 to 4 years. This resulted in social disruption, declining value of cash allocations, and the dissipation of will to rebuild.

Guidelines for the assessment of needs and damage

1. *Pre-disaster planning (preparedness)*

The establishment of procedures for post-disaster needs' assessment and damage surveys are a vital part of the preparedness planning process. The first requirement is for a data base against which the conditions following the disaster can be measured. To this end, certain pre-disaster conditions should be met:

(*a*) Identification and mapping of hazardous zones.

(*b*) A description of prevailing building techniques.

(*c*) Mapping of elements at risk.

(*d*) Estimation of housing demand. In the event of the need to reconstruct housing, the scale of demand will be a function of:
- The rate at which the region is being urbanised, and under what conditions;
- The economic profile of the area (incomes, level of employment, skills, the building industry, etc.),
- The demographic profile of the area, especially the rate of population growth and the distribution of age groups;

(*e*) Preparation of a sociological profile of the community. Part of the information produced by the profile should include a description of the "coping mechanisms" by which survivors, institutions and public services respond with assistance and shelter.

(*f*) Description of the building industry. Such information is vital if an outside agency is to formulate a shelter programme well co-ordinated with local procedures and resources.

The above information provides not only a basis for estimating emergency shelter needs following a disaster rapidly and accurately, but it is also the foundation for long-term risk reduction and prevention.

2. *Information needed immediately after the impact of a disaster*

(*a*) The approximate number of housing units that have been destroyed.

(*b*) The approximate number of housing units that are too severely damaged (and in danger of collapse) to provide safe shelter.

(*c*) An assessment of exposure to climate and weather.

(*d*) The capability of the community's social 'coping mechanisms' to provide emergency shelter, i.e. how many survivors can be housed by family or friends, or find refuge in public buildings, etc.

(*e*) The feasibility and likelihood of survivors fashioning their own emergency shelter from salvaged materials.

(*f*) The proportion of survivors that have access to emergency shelter provided by the authorities and assisting groups within the first 24 to 48 hours.

(*g*) The most appropriate and accessible emergency shelter types available (if any) for survivors without shelter.

(*h*) Accessibility to the disaster sites.

(*i*) The risks of secondary disasters that may influence shelter needs (e.g. fire, after shocks, landslides etc.)

(*j*) The manpower at the disaster site, capable of assisting in erecting emergency shelter

3 *Information needed for reconstruction*

The information needed for the subsequent post-emergency phases depends on the objectives of reconstruction, especially in terms of development. This is a major policy issue that will be made at the national level following all major disasters. In contrast to the emergency phase, the assessment of needs and resources for reconstruction requires a thorough and systematic collection of information. The specific tool for information collection will again be a function of the type of disaster, geographical limitations of accessibility to the disaster sites, and social conditions.

4. *Damage surveys*

Survey methods. The process for collecting the necessary information obviously cannot be a systematic family by family survey. Therefore some type of survey is essential to obtain usable data. However, natural disasters often reduce access to the stricken area by cutting lines of communication (rail, roads, bridges.) The most useful survey method may include low level reconnaissance flights. A trained observer can determine the geographic extent of the disaster area, the relative degree of damage at each location, detect patterns of damage, and perhaps see patterns of the survivors' emergency response. The aerial survey can also be used to identify areas that are accessible by land for limited though more accurate ground assessments, and to identify those areas on which to concentrate relief efforts.[10]

But it should be noted that although such a survey can help calculate the number of buildings damaged, it cannot, of course, provide information on damage invisible from the air (e g. cracked adobe walls, weakened foundations, roofs in a near state of collapse, etc.). For this reason, the data assembled must be assessed in conjunction with that collected by sample field surveys. Interviews with reliable eye witnesses may also provide additional information of value.

Field surveys. The field survey must be regarded as the most useful method of information collection, as opposed to aerial survey or sample interviews. Field surveys may be limited by the following factors:

Depending on local conditions and survey objectives, the cost can be high in money, time and expertise;

The affected areas may be difficult to reach.

Cultural heterogeneity in the area to be studied may make it difficult to obtain useful data from sampling;

Interviews may distort the information, depending on the interviewer/interviewee relationship;

Field surveys require considerable local knowledge to distinguish damage from poor building techniques;

Cultural differences between the affected population and foreign or national experts may produce differences of understanding and therefore difficulties in designing appropriate reconstruction programmes.

Nevertheless, field surveys have some important advantages:

They generally cost less than more sophisticated assessment methods, such as remote sensing.

They use less sophisticated, and therefore more accessible, technologies and equipment than in aerial observation and remote sensing.

They yield high volumes of information. In sudden disasters, data collection includes estimates of the number of injured people, types of injury, number of deaths, availability of health facilities, medical and paramedical resources, quantity of medical supplies still available, damage to water supply and waste-disposal systems, risk of communicable diseases, damage to lifeline systems, and to physical structures. Field surveys are also particularly valuable for inventorying useful resources, such as building materials for temporary and permanent shelter, reusable debris, labour, building contractors, etc.

They make it possible to generalize from relatively small samples, if adequate techniques are used.

They permit the participation of local personnel who, after a short period of training, can conduct interviews and assist in other field survey tasks. Skilled personnel is needed, however, to plan, supervise and analyse the collected data.

5. *Checklists for the assessment of needs and damage*

(*a*) Figure 1 contains an outline for a needs assessment in the field. It is intended to demonstrate the scope of information that is useful in planning a shelter programme It can be modified to reflect the specific conditions of the community and its culture. But it should be recognised that the specific design of the survey and the manner in which it is implemented should be as open to influence by the survivors as it is to that of assisting groups. Both can bring specific skills and expertise to this task.

(*b*) The survey form (Figure 2) is designed to identify structural problems and so provide information necessary for safe rebuilding or repair. A person trained in structural evaluation should study several damaged houses of each basic type of construction in order to be able to describe the general pattern of structural behaviour in the disaster Once the structural expert has established the general pattern of damage, he should train local personnel in carrying the survey. They will then be able to complete the survey and to tabulate the number of damaged houses.

The damage assessment form includes a general evaluation of how well different structural elements and materials held up. To be useful, the survey should note

[10] Following the Guatemalan earthquake of 1976, aerial photography was extensive, ranging from low-level high resolution material to photographs obtained from high altitude flights. The photographs provided basic information on damage to buildings, life-lines, and access ways

FIGURE 1

Suggested information requirements for a needs assessment

1. Data of head of family at time of interview
1.1 Name .....
1.2 Address .....
1.3 City or district .....
1.4 State (province) .....
1.5 Marital status ..... married or living together .....
..... single
1.6 Age .....
1.7 Occupation .....
1.8 Identification number .....
1.9 Name of spouse (partner) .....
1.10 Age ..... occupation .....
1.11 Number of minor children .....
1.12 Sex .... ages .....

2. Housing data before the disaster
2.1 Tenency of the house
1 ..... owner occupied with title
2 ..... owner occupied without title
3 ..... rented
4 ..... occupied (squatter)
If the land is rented or occupied
Name of owner .....
Address .....
2.3 Available resources
1 ..... savings ..... amount
2 ..... monthly savings ..... annual .....
3 ..... building materials that can be salvaged
.....
4 ..... time available for work .....
per week or other .....

3. Conclusions
3.1 Total damaged
1 ..... completed destroyed
2 ..... seriously damaged
3 ..... light damage
4 ..... no apparent damage
3.2 Safety of House
1 ..... inhabitable
2 ..... unsafe but can be repaired
3 ..... unsafe and unrepairable
4 ..... not sure of safety
3.3 Resolve housing on the same site
1 ..... rebuild or repair with owners own resources
2 ..... rebuild or repair with loan
3 ..... rebuild or repair but does not have funds
3.4 Move to another site
1 ..... rent at another site
2 ..... build at another site
3.5 Immediate assistance needed
1 ..... materials for immediate shelter .....
roofing .....
2 ..... site and materials
3 ..... help to clean the site
4 ..... temporary shelter (refugee center)
5 ..... information on how to rebuild safely
6 ..... other .....
3.6 Long-term assistance
1 ..... building materials
2 ..... technical information
3 ..... loan
4 ..... other .....

4. Information for the family
4.1 Evaluation of safety of house
1 ..... good
2 ..... needs repair
3 ..... unsafe without repair
4 ..... unsafe, must abandon the house
5 ..... not sure
6 ..... other
4.2 Your housing plans
.....
(the same as 3.3 or 3.4)
4.3 Assistance requested
.....
(the same as 3.5 or 3.6)

for more information, go to
.....
.....
.....
or call
.....

the quality of the materials, their arrangement in the building and the distribution of cracks, deformations, and so on. Information should also be obtained on the type of soil, peculiarities of the building, or interference from neighbouring structures.

6. *Role of survivors in the assessment of needs*

As has been stated, survivors must have a full and effective role in determining their emergency needs, especially shelter. This principle must be applied to the process of damage and needs assessment. In the event of a slowly developing disaster, such as drought, there is usually ample time to involve the affected population. However, these types of disasters seldom affect shelter, unless the community is relocated. In the immediate aftermath of a sudden disaster, when there is considerable damage and chaos, the immediate involvement of survivors in assessment may be inappropriate, at least until the initial rescue and relief operations have been organized.

Beyond the emergency period, however, survivors should begin to take an active role in the assessment of needs. The interview of key individuals within the community is often considered the appropriate course of action. For this to be successful, the individuals interviewed must be not only well informed about the extent of damage and needs, but willing and capable of providing information, and fully representative of their community. Obviously, the more familiar the authorities and assisting groups are with the community, the more secure they will be in obtaining reliable information.

7. *Dissemination and sharing of assessment information*

The dissemination of information to all interested parties must be assured. A possible means of information sharing might be the creation of a council of assisting groups working in the disaster area. The council could be structured with one agency responsible for liaison and acting as the information clearing-house. Whatever the means, it is essential that the information reaches the head of the housing task force, and is placed in the hands of staff capable of effectively interpreting it.

FIGURE 2

Damage assessment survey form

Description

Size .....
.....
Materials .....
.....
Original cost .....
Replacement cost .....
Cost of repair .....
Per cent of damage
0-25% .....
26-50% .....
Over 50% .....

(*Photo*)

Site

Urban ..... Rural ..... Open ..... Protected .....
If protected, describe: .....
Description of terrain .....
.....

Foundations

Anchoring foundation .....
Materials used .....
Evidence of failure .....
Preservatives .....

Walls

Materials used .....
.....
Height and width .....
.....
Reinforcement system .....
.....
Damage description location .....
.....
Evidence of explosion or implosion .....
.....

(*Configuration*)

Roof and roof support

Roof configuration
Gable ..... Hip ..... Shed ..... Other .....
Roof support system .....
Roof/wall attachment .....
Estimated Pitch .....
Overhang .....
Description of damage .....
Evidence of uplift .....

Damage to utilities .....
.....
Description of sequence of failure .....
.....

General information

Community .....
Location .....
Use .....
Age .....
Builder .....
Hazard type .....
Magnitude .....
Frequency/return period .....
Owner/occupant plans .....

Observations .....
.....
.....
Recommendations .....
.....
.....
Date .....

SUMMARY OF POLICY RECOMMENDATIONS

1. *Primary level (local)*

(a) *Pre-disaster*

Carry out hazard mapping, and the mapping of elements at risk.

Prepare assessment and survey methodology accordingly.

Prepare logistics for duplicating, distributing, and collecting survey forms.

(b) *Post-disaster*

Identify local people who can participate in the execution of field surveys (they need to be literate and capable of learning basic survey and analytical skills).

2. *Secondary and tertiary levels (regional and national*

(a) *Pre-disaster*

As part of disaster preparedness, develop the data base of existing housing conditions, housing demand, house types, labour and material resources, the normal building process and related social conditions against which a post-disaster needs assessment can be measured.

Develop an assessment procedure that co-ordinates the efforts of all the assisting groups in collecting and sharing information.

Support the establishment of a national team of experts, who will train local government officials and technicians in administrating pre- and post-disaster surveys (this team should also be 'on call' to assist in the execution of post-disaster surveys).

Prepare post-disaster survey models, identifying all essential information, adapted to specific disaster-prone communities.

(b) *Post-disaster*

establish policy and programmes for the reconstruction of housing, in harmony with the prevailing development patterns.

TABLE 3

The application of data obtained from damage surveys to various assisting groups

	Information obtained from damage surveys		
	Damage to infrastructure such as roads/services	*Damage to local stocks of building materials*	*Number and location of houses damaged or destroyed, forms of damage degrees of damage*
Method of assessing damage	Air surveys of roads, bridges, etc Field sampling techniques for well contamination, village-by-village surveys of damage to water supply, sanitation	Air surveys when damage is to raw materials, such as trees, coupled with field surveys of warehouse stockpiles, etc.	A mixture of low-level and high-level air surveys coupled with field survey sampling techniques.
Survivors	Useful for avoiding blocked roads, contaminated water supplies, etc.	Of possible use, but this data is probably already known to locals	Limited use.
Local voluntary agencies and private sector	Necessary for private sector in deploying their resources	Essential in determining whether to order supplies from external sources. Also useful in determining stockpiles for future preparedness planning.	Useful for determining: (*a*) The supply of essential materials for construction; (*b*) The supply of tools
Local government	Essential in preventing secondary disasters such as epidemic diseases due to contamination, and in restoring services.	Essential in determining whether to request supplies of materials from external sources	Essential to determine the need for: (*a*) Supplying, in particular circumstances, emergency shelter (e.g. tents); (*b*) Allocating funds to survivors; (*c*) Establishing what materials will be needed for reconstruction.
National government	Essential in the event of major disasters, to determine the resources needed.	Useful in determining what contributions are needed, particularly from adjoining countries	Needed to determine (*a*) Whether to provide temporary or emergency shelter; (*b*) Whether to provide building supplies (e.g roofing materials), (*c*) Whether expertise is needed to guide reconstruction
Local military	Essential.	Useful, since the army may use their own stockpiles of materials	Not needed
Foreign experts	Essential for all consultancy work.	Essential for advice on the import of materials.	Essential for any advice being offered on safe reconstruction.
External voluntary agencies	Not relevant.	Useful.	Useful in determining which areas to deploy maximum resources
External donor governments	Relevant, if there is bilateral aid	Relevant, if there is bilateral aid	Relevant of there is bilateral aid.
International agencies	As above	As above.	Relevant for the co-ordination of international assistance

NOTE

Table 3 provides synoptic guidance on the relevance of damage survey data to the various assisting groups concerned, including the survivors themselves.

Key references

COMMITTEE ON INTERNATIONAL DISASTER ASSISTANCE (CIDA), *Assessing International Disaster Needs*, National Academy of Sciences, Washington, D.C., 1979.

TAYLOR, Alan J., "Assessment of Victim Needs", *Disasters and the Small Dwelling*, Pergamon, Oxford, United Kingdom, 1981, pp. 137-144.

STEPHENSON, R.S., *Understanding Earthquake. Relief Guidelines for Private Agencies and Commercial Organisations*, International Disaster Institute, Foxcombe Publications, Farnham, United Kingdom, 1982

AMERICAN INSTITUTE OF ARCHITECTS (AIA), *How to Evaluate Housing Failure following Earthquakes* (form with checklist for assessors of damage), AIA, Washington, USA.

HUGHES Richard, *Guide to Post Earthquake Building Damage Assessment*, Disasters, vol 5, No 4, 1982.

CUNY, Frederick C., Scenario for a Housing Improvement Programme in Disaster Prone Areas, *Disasters and the Small Dwelling*, Pergamon, Oxford, United Kingdom, 1981, pp 117-121

3.4 EVACUATION OF SURVIVORS

PRINCIPLE: The compulsory evacuation of disaster survivors can retard the recovery process and cause resentment. The voluntary movement of survivors, where their choice of venue and return is timed by their own needs, on the other hand, can be a positive asset (in the normal course of events some surviving families seek shelter for the emergency period with friends and relatives living outside the affected area).

Audience

- ○ Private sector: Manufacturers/contractors
- ● Professionals: Architects/planners/engineers/public health officials
- ● Policy-making administrators: National (tertiary) level
- ○ Project managers of post-disaster shelter/housing projects: Regional/provincial (secondary) level

Time phases

- ● *Pre-disaster phase*—Preparedness/mitigation/risk reduction
- ● *Phase 1*—Immediate relief period (impact to day 5)
- ○ *Phase 2*—Rehabilitation period (day 5 to 3 months)
- ○ *Phase 3*—Reconstruction period (3 months onward)

CONFLICTING PRIORITIES

After disasters there are normally two conflicting sets of priorities:

1. The desire of officials to clear the affected region of everyone, except those involved in relief activities, so as to relieve public services which may be only partially operational.
2. The desire of families to remain as near as possible to their damaged homes, in order to protect their title to property, their belongings, animals etc. In addition, there may be an even stronger motivation, probably based on a psychological need for security: to remain close to home (even if it has been largely destroyed).

PROBLEMS OF COMPULSORY EVACUATION

The compulsory evacuation of a disaster zone creates the following problems:

It may increase the problems of distribution of relief supplies and services.

It reduces the possibility of families to salvage their belongings and to gather building materials.

It creates an artificial need for temporary shelter.

It turns survivors into refugees.

It reduces the capacity of the surrounding communities to assist the survivors

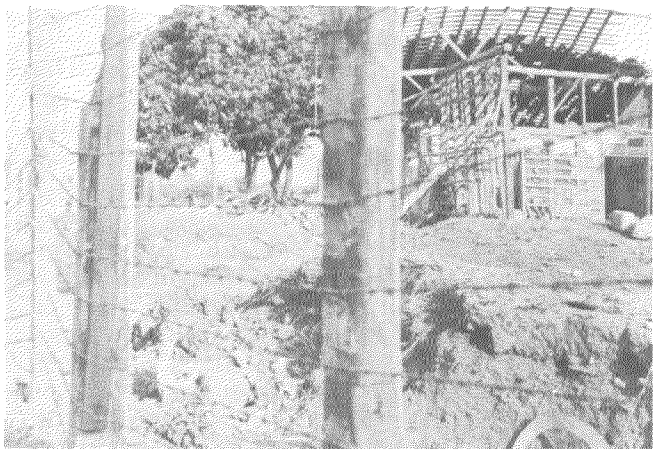
It retards reconstruction.

It retards the psychological recovery of the survivor by introducing additional stress: family separation and an unfamiliar environment.

In the majority of cases where major evacuations were ordered, it was later established that the decisions were made.

Without waiting for full knowledge of the services that could have been brought into the affected area; and

Without any awareness of the potentially adverse social and economic costs of a major evacuation.



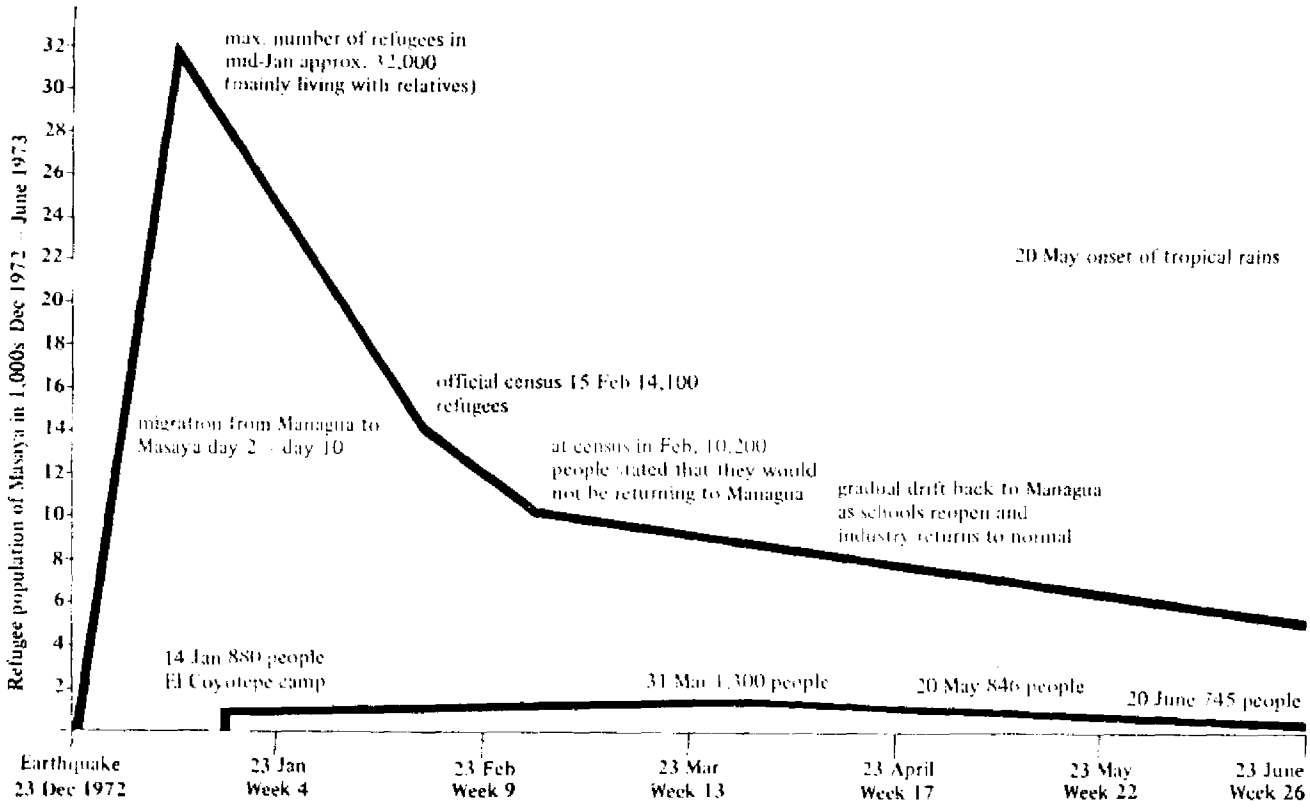
Cordon surrounding the prohibited zone following the enforced evacuation of Managua, Nicaragua, in December 1972.

Most of the reasons given for evacuation—protection from epidemics caused by contact with the dead, looting, panic, and so on—have proved to be ill-founded. The policy only seems justified in the exceptional circumstances of immediate threat of a secondary disaster (e.g. the risk of fire after an earthquake, as in San Francisco 1906, and Tokyo 1923, or the breakdown of essential services such as water and sewage).

In the case of cyclones or earthquakes there may be doubt about whether or not to order an evacuation. But in the event of a major flood there is usually no such option, and public authorities may need to evacuate the entire population of a region until the water level drops. However, flood hazard mapping allows planners to designate areas for evacuation. If such a provision does not exist, a rapid inventory of unaffected areas must be made after flooding, listing the public buildings (schools, halls churches etc.) which can be made available for emergency accommodation.

CHART 2

Comparative movement of population following Managua earthquake, 1972



This chart is of the situation in Masaya, a town about 20 miles from Managua, Nicaragua. Thirty-two thousand people were absorbed by friends or their families during the first ten days. In contrast to the numbers with extended families, the low occupancy of the El Coyotepe campsite can be seen.

Policy guideline

(See chart 2)

Unless there are exceptional circumstances, compulsory evacuation should be avoided. However, the voluntary movement of families or parts of families (such as women, children and the elderly) from the affected area may be a positive assest to recovery and the problem of emergency shelter.

Key references

DRABEK, T., "Social Processes in Disaster Family Evacuation", *Social Patterns* 16, 1969, pp. 336-349

HAAS, J. E., H. C. COCKRANE and D. C. EDDY, *The Consequences of Large-scale Evacuation following Disasters. The Darwin, Australia Cyclone Disaster of 25 December 1974*, Natural Hazards Research Working Paper No. 27, July 1976

PERRY, Ronald W., Marjorie R. GREENE and Michael K. LINDELL, "Enhancing Evacuation Warning Compliance: Suggestions for Emergency Planning", *Disasters* vol. 14, No. 4, 1980, pp. 433-449

3.5 THE ROLE OF EMERGENCY SHELTER

PRINCIPLE: Assisting groups tend to attribute too high a priority on the need for imported shelter units as a result of mistaken assumptions regarding the nature, and, in some cases, relevance of emergency shelter.

Audience

- Private sector: Manufacturers/contractors
- Professionals: Architects/planners/engineers
- Policy-making administrators: National (tertiary) level
- Project managers of post-disaster shelter/housing projects: Regional/provincial (secondary) level

Time phases

- *Pre-disaster phase*—Preparedness/mitigation/risk reduction
- *Phase 1*—Immediate relief period (impact to day 5)
- *Phase 2*—Rehabilitation period (day 5 to 3 months)
- *Phase 3*—Reconstruction period (3 months onward)

COMMON PROBLEMS OF EVALUATION [1]

1. *Criteria.* Emergency Shelter has more often than not been regarded as a product with design criteria developed by the donor. This approach has consistently failed to satisfy the needs of surviving families. It stems from a number of mistaken assumptions:

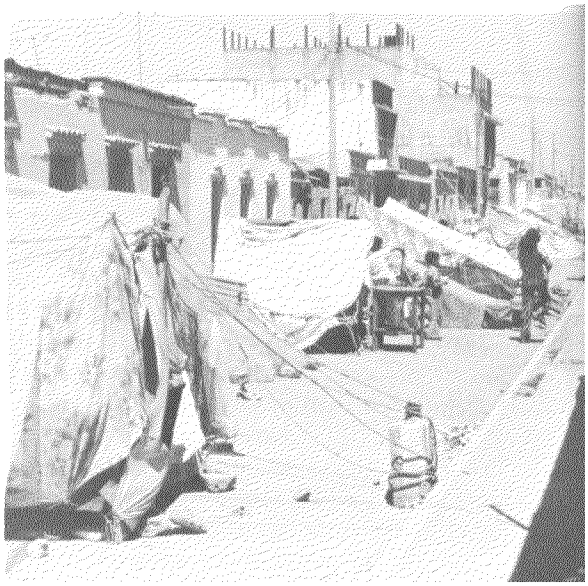
That there automatically exists a need for outside agencies to provide large numbers of imported, prefabricated shelters;

That universal, prefabricated (and preconceived) shelter systems are desirable and feasible;

That "Shelter" implies an industrial product rather than a social and economic process;

That survivors do not possess building skills, or resourcefulness in salvaging materials or obtaining traditional materials to carry out their own building;

That survivors are passive, dazed and willing to accept any form of emergency shelter;



(Credit: UNDRO)

Within 24 hours of the 1976 Guatemala earthquake, thousands of families moved into streets, public parks, or open spaces. They improvised emergency shelters from plastic streets, earthquake rubble, linen, etc. The authorities assisted the process with the provision of water supply tanks, and by digging latrine trenches.

[1] Reference here is made principally to prefabricated products, manufactured in industrialized countries, rather than to that ubiquitous relief item—the tent—which is in a privileged category of its own.