Wednesday

10:00 -
12:00

Principles of Emergency Management

I. Introduction: What are we going to do in this Hr. & ½?

A. Introduce the scope of Em. mgmt.

B. ÷ Em mgmt. into segments & phases

C. Explore how one phase affects others

D. See how actions in one phase sets the stage for subsequent

E. Id sectors involved

F. Id skills needed & who provides them

G. " mgmt skills needed

H. " where the gaps often occur

Next 1st - we're going to define Em. mgmt

II. What do we we mean by Em. mgmt?

A. Most people think of post-dist actions - but also pre-dist.

B. Definition: The full range of activities that focus on disasters and em. situations that are designed to help the persons at risk avoid or recover from the impact of the disaster. Em. mgmt deals with all situations that occur prior to, during, and after disasters. - Avoid control

D. Objectives of Em mgmt:

- to reduce or avoid human, physical and Eco. losses suffered by:
  - individuals, families & specific persons at risk
  - Society
  - country
- to reduce suffering
- to speed recovery - explain time concept
- (In conflicts) protection - we define protection much broader than HR. & envision. Sometimes
- prevent recurrence

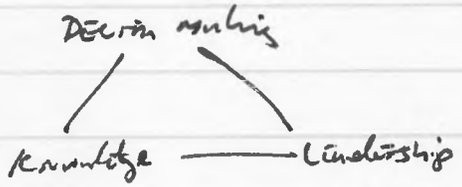
III. Who are Em mgrs and where do you find them?

Everyone!

There are specialists but in an Em Everyone must be some Em. oriented.

IV. What are the key elements of Em. mgmt?

Concept:



A. knowledge: The Same - ~~at~~ without knowledge you're dead

- what kind of knowledge do you need?
  - Expert generalist

    pilot flag concept - where to go, who to ask, how to evaluate information

B. Decision-making

- Always making decisions under conditions of uncertainty
- 1. understand implications - scenarios - EDM
  2. move dec-making forward
  3. make dec-routine - know SOP's, policies, ~~etc~~ staffs.

C. Leadership

There are different styles of leaders - from dictator to facilitator.

How do you get to be a leader?

- Positive - formal, traditional
- Power
- natural popularity - opinion leader
- knowledge/command power - ex. Mr. Wiki

~~LESSON 2:~~

CONCEPTS AND TERMS IN DISASTER MANAGEMENT

WHAT CONSTITUTES A DISASTER

There are many definition's of a disaster and among relief organization's definitions vary according to each agency's roles, biases and capabilities. In this course a disaster is defined as a situation resulting from an environmental phenomenon or armed conflict which produces stress, personal injury, physical damage, and economic disruption of great magnitude. It is important to note that even though disasters are referred to by the event that caused them, a disaster is not the event itself. For example, an earthquake is a natural phenomenon; if it does not strike a populated area with weak buildings, it is not likely to be a disaster.

Whether or not an event qualifies as a disaster often depends upon who is doing the defining. To a government, an oil refinery explosion could be a major disaster, but it is unlikely to trigger a massive response from the United Nations or voluntary agencies (VOLAGS) unless hundreds of low-income families are hurt in the explosion. Conversly, disasters caused by long-term environmental degredation will often draw attention from VOLAGS long before governments mobilize their resources.*

It is necessary to differentiate between disasters and accidents. An airline crash is certainly severe and costly, but the number of people affected is relatively small. What separates a disaster from an accident, or incident, is its magnitude of need and victims involved.

MacDonald, Franklin, Presentation at the Symposium on the Role of Education in Disasters, Harvard University, 1984.

It is also important to differentiate disasters from individual, non-extreme or small-scale suffering. For example, hunger is a growing world-wide phenomenon; and while it is a major concern, it is often endemic and is addressed with different approaches. Only when hunger becomes widespread and accute, in other words a famine, does the situation qualify as a "disaster". This distinction is important because it helps define disasters as a separate set of events and gives us a starting point for studying and understanding their importance, their impact, and the proper responses that are required.

Natural Disasters

The term "natural disasters" refers to those disasters that are triggered by natural phenomena. These phenomena (such as earthquakes, cyclones, floods, etc.,) are known technically as natural hazards.

Put word on flip chart

The term natural disaster can be misleading because it implies that the disasters are solely a result of natural hazards - when in fact, human endeavors are a major contributing factor in creating a disaster. For example, if settlements or farms were not located in flood plains, disasters would not result from floods. If housing was built to earthquake - and cyclone-resistant standards, these hazards would be of scientific interest only and not result in disasters. (Natural hazards, their courses and effects are covered in detail in the UWEX course "Natural Hazards".

In recent years, a special type of natural disaster has begun to occur more frequently. This disaster is environmental degradation, and typically it results from poor farming, grazing, or settlement practices, or because of demands for fuel wood. As natural resources are over-exploited, or as lands are improperly used or maintained, the ecological balance changes and the effects; deforestation, desertification, erosion, siltation, flooding, often result in disaster. Primary examples are increased flooding due to overgrazing or poor farming practices in the upper portions of a watershed, and

increased desertification resulting from overgrazing or improper use of water resources. This type of disaster is a growing concern not only because of the environmental consequenses but also because large numbers of people can be displaced and the resulting social disruption can cause massive problems. For example, in the 1970's thousands of Sahelian farmers and herdsmen were forced to abandon their lands and migrate to urban areas in search of food and work due to a massive drought. Few of these urban migrants returned to the rural areas and the towns were unable to provide adequate services or decent housing. The result is that the towns now contain large slums with high unemployment.

Man-made Disasters

The term "man-made disasters" usually refers to disasters resulting from man-made hazards. Man-made disasters can be divided into three categories -- armed conflict; technological disasters; and disasters which are not caused by natural hazards but which occur in human settlements.

Armed Conflicts and Civil Strife

Disaster management concerns itself with various aspects of armed conflicts, and civil strife including the protection and support of displaced persons and refugees during the conflict; physical and economic reconstruction; and social rehabilitation in the aftermath of the conflict.

Technological Disasters

Technological disasters are usually caused by accidents or incidents occuring in the manufacture, transport or distribution of hazardous substances such as fuel, chemicals, explosives, or nuclear materials. In many cases, these disasters are more economic than physical. For example, large refineries have exploded with minimal loss of life, but the cost of restoring those facilities can be a

major burden and can substantially affect the entire economy of a small country.

- Disasters in Human Settlements

The principal disaster of this type is urban fire. When fires break out in Third World shanty towns they can have a devasting affect because flimsy, wooden shanties packed closely together create conditions that allow the fires to spread quickly and burn virtually out of control. As unchecked urban growth continues throughout the Third World, this threat will grow even larger.

other Ex. subsidence + collapse

Disaster Victim

A victim is a person affected by a disaster. The term victim has many negative connotations. It provokes images of helplessness, of people who must be taken care of. For this reason, many agencies use substitute words such as beneficiaries or recipients. Unfortunately, these terms do not adequately describe all the people affected and may not accurately depict the actions taking place. The term "survivors" could be used, but technically the word applies only to those who have escaped a life-threatening situation, whereas many individudals may be drastically affected by the consequences of a disaster even though they were not directly threatened by loss of life.*

Victims are not helpless. They are capable of making intelligent choices and when allowance is made for their special need to cope with personal losses and put personal affairs in order, they can participate effectively in all post-disaster activities. In fact, participation in constructive activity is one of the most effective means of coping and disaster victims are usually highly

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Frederick C. Cuny, Disasters and Development, Oxford University Press, 1983.

active and thoroughly dedicated relief workers. Furthermore, as local people, they are particularly well suited to deal with the needs of their communities.

In armed conflicts there are two groups of victims which are of special concern to disaster managers. They are refugees and displaced persons.

Displaced persons are individuals and families forced to leave their homes because of the conflict, but who remain inside their country. Refugees are non-combatants who have sought (or are seeking) safety by leaving their homeland and entering another country.

The laws regarding refugees and displaced persons are vague in many ways. For example, do persons who flee their home because of extreme economic hardships coupled with human rights oppression qualify as refugees or as illegal immigrants? For the most part, this and other questions are unresolved, and it is outside the scope of the University of Wisconsin Disaster Management Program to discuss the fine points of refugee and immigration law. For the purpose of these courses, a refugee will be defined as a person who flees his homeland as a result of armed conflict and not for reasons of economic hardship or as a result of a natural disaster.* (For other definitions, see Box.)

Disaster Types

In addition to the categories already discussed, disasters may be classified according to how rapidly they begin and the period of their duration. In this classification system there are two types of disasters -- (1) rapid-onset, or cataclysmic disasters, and (2) long-term or continuing disasters.

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*An entire ciricula on management of refugee and D.P. operations is offered by the University of Wisconsin DMC.

Rapid-onset disasters include earthquakes, cyclones, floods and tsunamis (popularly known as "tidal waves"). Slow-onset, long-term or continuing disasters include civil wars, droughts and famines, and epidemics.

This type of classification is useful because the general approaches that are used to respond to the disasters in each category are very similar. For example, in supporting refugees and displaced persons, feeding programs similar to those that are required for famine victims are used.

In a cataclysmic disaster, one large-scale event causes most of the damage and destruction. Following this event there may be a tremendous amount of suffering and chaos and secondary disasters such as landslides may occur, but things soon begin to improve. By contrast, in a long-term, continuing disaster the situation remains constant or may even deteriorate as time passes. In a cataclysmic disaster the damaged area is usually relatively small, while the area affected in a continuing disaster may be extremely large.*

The Relief "System"

In disaster management there is much talk about a "relief system". However, there is in fact no one specific system, but rather groups of organizations that provide different types of assistance at different levels. These include governments; intergovernmental organizations, such as the U.N.; Red Cross Societies international voluntary organizations; international credit institutions (such as the World Bank, I.M.F.), local social and economic groups; and many peripheral organizations such as cooperatives, trade unions, etc., that often become involved when disasters strike. In any one country or in any one disaster, these groups band may together formally or informally to provide relief to the disaster victims. Some agencies act in the capacity of

*Op cit. Disasters and Development

fund-raisers, others as donors. Some provide funds directly to the victims while others provide funds to other agencies to help the victims.* It is the role of the disaster manager to insure that coordination to the greatest extent possible is carried out.

Certain relief systems have evolved to provide assistance to refugees and displaced persons; and other systems have evolved to provide assistance to victims of natural disasters. The general workings of each general type of system is explored in more detail in the courses "Disasters and Development" and "Introduction to Refugee and Displaced Persons Assistance".

Sectors in Disaster Relief

In disaster relief efforts, activities typically address a variety of needs. In disaster management, this spectrum of human endeavors are classified by sectors. The most common are health, housing, agricultural, economic and social sectors. These sectors are known as the prime sectors, because they are of prime concern to the disaster victims. A second group of sectors include urban settlements, transportation, lifelines and critical facilities. These are known as secondary sectors (or support sectors) because they have indirect effects on the disaster victims.

Most disaster-related programs take a sectoral approach. That is, most programs focus on the problems unique to a particular sector, and usually require technicians with skills that are specific to that particular field.

Intervention

Intervention refers to an action taken in order to change the course of events. In disaster management the term is used similarly to the medical sense, i.e., the purpose of disaster intervention is

to improve the circumstances of disaster victims. Any disaster response initiated from outside the affected community is a form of intervention and as such, must be handled with care because it does come from without, and therefore always runs the risk of being more disruptive then productive.*

Other Important Terms in Disaster Management

coping mechanisms - accountability

Pre-disaster planning is the process of preparing, in advance, to meet a future disaster. Pre-disaster planning is divided into disaster prevention, mitigation and preparedness.

Disaster prevention is action taken to eliminate or avoid harmful natural phenomena and their effects. Examples of prevention include cloud seeding to control meteorological patterns; pest control to prevent locust swarms; erection of dams or levees to prevent flooding; etc.

Mitigation is action taken to reduce the effects of extreme natural phenomena, to lessen both human suffering and property loss. Measures include land use planning, improved disaster-resistant building techniques, and better agricultural practices.

Preparedness encompasses those actions taken to limit the impact of natural phenomena by structuring response and by establishing a mechanism for effecting a quick and orderly reaction. Preparedness activities could include pre-positioning supplies and equipment; developing emergency action plans, manuals and procedures; developing warning, evacuation, and sheltering plans; strengthening or otherwise protecting critical

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*Davis, Cuny, Krimgold and Issues Problems in the Provision of Shelter and Housing: A Review Experiences and Lessons from Recent Disasters; ARTIC, India, 1978.

facilities; etc. (The subject is covered in detail in the UWEX course, "Disaster Preparedness.)

Risk is the relative degree of probability that a hazardous event will occur. An active fault zone, for example, would be an area of high risk.

Vulnerability is a condition wherein human settlements, buildings, agriculture, or human health, are exposed to a disaster by virtue of their construction or proximity to hazardous terrain.

Secondary threats are hazards such as landslides, erosion, etc. that are created or triggered as a result of a larger or stronger hazard (e.g., an earthquake, clyclone). Secondary threats can ocur during the primary disaster event or may happen days, weeks, or even months afterward. After a recent earthquake in Central America, hillsides which had been loosened by the tremors, finally slipped 5 months later when they became saturated with water during the rainy season. The resulting mudslide killed dozens of low-income families who were squatting on the slope.

Secondary threats are a major concern of disaster managers in the immediate aftermath of a disaster and a top priority of assessment teams is to identify secondary threats and evacuate people before they become secondary disasters.

Health usually a secondary threat

Phases of Disaster Response (Natural Disasters)

show transparency

The Preparatory Phase

The preparatory phase of disaster response includes all of the activities that help a society and the disaster agencies prepare for a disaster event. Activities carried out in the preparatory phase include organization, legislation, development of

procedures, inventories of resources, and establishment of response plans. These activities are broadly classified as disaster prevention, mitigation and preparedness.

In general, disaster prevention is event-focused. In other words, the objective of prevention is to prevent the disaster from occuring. Disaster mitigation accepts the fact that some natural event may occur, but tries to lessen the impact by improving the community's ability to absorb the impact with minimum damage or disruptive effect. Disaster preparedness assumes that a disaster will occur, and focuses on structuring the emergency response and on laying a framework for recovery.

Warning Phase

In most disasters, there is a period of time before the disaster strikes when it becomes obvious that something hazardous is going to happen. Certain specialists focus on trying to detect signs of a building threat monitoring events, looking for indicators or other signs that tell when, where and what magnitude the event may be. This is known as prediction or forecasting and the objective is to provide disaster managers with enough information so they can give the people at risk adequate notice or warning to prepare for the disaster and, if necessary, to evacuate.

At the present time, warning is possible for droughts and faminies; cyclones and most severe weather phenomena; volcanoes; large scale fires; and in some cases, earthquakes. Work is also underway in refugee management to develop early warning techniques that will let relief agencies know of impending refugee crises. (UNEX offers a course on techniques and methods of warning and evacuation.)

Emergency Phase

This phase of disaster response is characterized by actions that are necessary to save lives and reduce suffering. They include search-and-rescue, first aid, emergency medical assistance, restoration of emergency communication and transportation networks, and in some disasters, evacuation from areas still vulnerable to further disaster events and provision of temporary shelter, food, and water. Other actions taken during the emergency phase include initial disaster assessment and emergency repairs to critical facilities.

Rehabilitation (or Transitional) Phase

The transitional phase is a time period when people begin to return to work, to repair infrastructure, damaged buildings and critical facilities, and to take other actions necessary to help the community to return to normal. During this phase, emotional recovery occurs as families and individuals regroup and try to put their lives back in order. In many ways, the rehabilitation period is the most difficult for the victims, and relief agencies must be sensitive to varying degrees of need and provide appropriate forms of assistance. It is especially important that emergency relief measures be discontinued during this phase so people can begin to regain their self reliance. (Response and rehabilitationa are covered in more detail in the UWEX course "Disaster Response.")

Reconstruction Phase

The reconstruction phase of a disaster is characterized by the physical reordering of the community and of the physical environment. During this period, people reconstruct housing and other community facilities; and agriculture returns to normal. The actual time span is often very difficult to define. It may start fairly early, and may last for many years. (Housing and

agricultural reconstruction are subjects of UWES Disaster Management Courses.)

The Phases of Refugee Relief Operations

show transparency

The phases of refugee relief operations parallel in many ways the operations in natural disasters, but there are some significant differences.

Emergency Preparedness is the set of activities taken by oganizations to plan and prepare for reacting to a new refugee emergency. These preparations can (and should) be to meet any contingency or may be focused on a known situtation that is predictited to develop into an emergency. Preparedness activities usually include organizing, developing contingency plans, stockpiling emergency supplies, developing procedures, and training staff.

Monitoring and Early Warning is the process of keeping watch on current events in order to predict when political, economic or social events may deteriorate to a point at which conditions develop that cause civil strife, which in turn could cause persons to be displaced or flee their homeland. The objectives of monitoring are to provide information to diplomats to allow them to mediate a crisis before it develops and to provide relief agencies with timely data which will enable them to develop contingency plans specific to the area of concern.

Forward Planning is advanced planning carried out when an emergency crisis is imminent, e.g. refugees are known to be displaced and moving toward a border. Some of the usual activities include preparations for protecting the refugees and granting them refugee status, alerting agencies that will provide assistance*,

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"Assistance" in refugee operations applies to relief and material aid.prepositioning supplies, designating sites for the arrivals, and attempting to determine the health and nutritional status of the people when they arrive (remote detection).

Emergency Response encompasses the activites that occur immediately after the refugees arrive in the care of humanitarian agencies. Typically, emergency activities include protection and legal assistance; provision of health services -- food, shelter, water, sanitation, and many other basic necessities for survival; and a variety of social services to people with special needs such as unaccompanied minors* and widows with small children.

Maintainence refers to the services that are provided to refugees during the period after the emergency but before a permanent solution to their plight is developed. Maintainence operations may include tracing and family reunification, general care and food distribution, a variety of social services such as education and cultural activities, and efforts to help the people to become as self sufficient as possible under the circumstances.

Durable (Permanent) Solutions is the term used to collectively describe the three long term solutions that resolve a refugee situation -- voluntary repatriation, assimilation, and resettlement (to a third country). In this phase, any number of activites can take place including transportation of the refugees, legal assistance, and providing financial and material aid to the refugees to help them start their new lives. If the solution is repatriation or assimilation, the patterns of assistance often resemble reconstruction and development assistance given to the victims of natural disasters.

The term "unaccompanied minors" is used in lieu of "orphans" because relatives, extended family members, and even parents can often be found after carful searches among the refugee population.

Evaluation occurs as a refugee operation ends or as a new phase begins. Evaluation should be carried out by every manager and key members of the staff and the results and lessons learned should become the basis for further emergency preparedness activites.

Key Concepts

In disaster management, there are several themes and key concepts that should be kept in mind. They are:

1. The relationship of disasters to development: There is a tendency among people to regard disasters as being separate and distinct events, having little or no relationship to the political or economic development of a country. In recent years however, the relationship between disasters and development has become clearer, and disasters are now recognized as being one of the major contributors to underdevelopment and underdevelopment is one of the major contributors to disaster. It has also been recongnized that if disaster response is mishandled, many years of progress can be wiped out and the chances for further progress set back. Disasters can alter agricultural patters, settlement patterns, patterns of migration, work habits, diets, and even basic family structures. If disaster management is well planned and takes a development-oriented approach, a disaster can provide opportunities for excelerating the pace of development, and constructive changes can be made.*

   It is extremely important that disaster managers be aware of the impact of disasters and the role which development programs can play in mitigating disasters and reducing vulnerability.

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*Disasters and Development

2. The relationship of various disaster activities to the appropriate phase of a disaster: All disaster-related activities are divided into distinct time periods. The length of any one period can vary greatly, depending on the type of disaster and other factors. It is important that disaster managers recognize the different phases and know what activities are appropriate in each phase. For example, emergency activities often include the distribution of free relief supplies. But if this activity is carried on in the later phases of a disaster, there is a danger that dependencies may be fostered and that the relief may provide disincentives to agricultural or economic recovery.

   In general, disaster activities can be divided into three broad categories: pre-disaster, emergency response, and post-disaster recovery activities.

The Relationship of Various Time Phases to Each Other

show continuum transparency

The phases of a natural disaster can be depicted graphically as a continuum, as shown in Figure 2-1. The activities that are carried out to mitigate a disaster closely resemble the activities that would be carried out during reconstruction and are essentially "development" activities since they not only reduce the disaster impact, but also provide economic or social benefit. By understanding how these activities relate to each other and to development, one can see that good disaster management and development activities are closely interrelated.

How Activities in One Phase Should Set the Stage for the Next

Referring again to Figure 2-1 and to Figure 2-2 which depicts the phases of refugee relief operations, it is possible to see how activities in one phase relate to the preceding and following phases. For example, emergency response can be facilitated if the operations

have been planned prior to the disaster, not during it. As a general rule, each phase and each activity of a disaster lays the framework and sets the stage for activities in the next phase. Therefore, when planning an emergency response, the disaster manager should keep in mind how that activity can help promote faster recovery. A simple example would be as follows -- if a house has been destroyed in a windstorm or flood, there are several options for providing shelter during the emergency. The relief agency can provide a tent which will offer shelter; or it can provide building materials that the victims can use to build a temporary shelter and then later reuse in the reconstruction of their permanent house. The tent solves one need during one phase, but the building materials not only solve needs in the emergency phase and help prepare for activities during the reconstruction phase. Therefore, by opting to provide building materials rather than tents, the disaster manager maximizes the utility of resources at his disposal and paves the way for a speeder recovery.

Principles of Em. Mgmt:

1. Support local community
2. Support local initiatives
3. " " coping mechanisms
4. Involve the victims in meaningful decision-making
5. focus on process not products
6. " " opportunities that the disaster provides (first dev't)
7. move decision-making forward

AIM AND SCOPE OF DISASTER MANAGEMENT

LESSON 1:

INTRODUCTION TO DISASTER MANAGEMENT

The Scope of Disaster Management

The term "disaster management" encompasses the complete realm of disaster-related activities. Traditionally people tend to think of disaster management only in terms of the post-disaster actions taken by relief and reconstruction officials; yet disaster management covers a much broader scope, and many modern disaster managers may find themselves far more involved in pre-disaster activities than in post-disaster response. This is because many persons who work in the development field, or who plan routine economic, urban, regional or agricultural development projects have disaster management responsibilities. For example, housing specialists planning a low-income housing project in a disaster-prone area have the opportunity (and an obligation) to mitigate the impact of a future disaster if the houses incorporate disaster resistant construction technologies. In the same manner, agricultural development projects must be planned in such a way that they help stem environmental degradation and thus lower the farmer's vulnerability to losses from droughts, floods, cyclones, or other natural hazards. In fact, in dealing with natural hazards, the vast majority of disaster management activities are related to development projects; only a small portion are related to emergency response.

Of course, disaster management also encompasses the field of emergency assistance and long-term maintenance for refugees and displaced persons. The refugee field of disaster management is highly specialized and requires not only many development skills, but also a broader awareness of political, legal, and humanitarian issues.

Figure 1-1 is based on a conceptual model, developed by the Office of U.S. Foreign Disaster Assistance that shows some of the many sets of activity in management of natural disasters. Figure 1-2 depicts the principal sets of activities in management of refugee and displaced persons.

Definition of Disaster Management

Disaster management can be defined as the range of activities which focus on disasters and emergency situations ~~and which are~~ designed to ~~maintain control over events and provide a framework~~ to help the persons at risk from the disaster avoid or recover from the impact of the disaster. Disaster management deals with situations that occur prior to, during and after the disaster.

The Objectives of Disaster Management

The objectives of disaster management are:

--- to reduce or avoid the human, physical and economic losses suffered by individuals, by the society and by the country at large;

who is at risk?

--- to reduce suffering;

--- to speed recovery.

When assisting refugees or displaced persons, a fourth objective is to provide protection to victims or persons whose lives or property are threatened by armed conflict, tribal animosity, religious persecutions, etc. In the University of Wisconsin Disaster Management Programs, protection is defined as intervention by governments, international organizations, or private relief organizations to protect persons threatened by armed conflict. Intervention may include provision of sanctuary or a means of escape from conflict; and emergency support to victims threatened by disease, starvation, and by exposure to the environmental elements while they are refugees or displaced persons. (It should be noted that this definition may be broader than the usual interpretation by the United Nations and International Committee of the Red Cross.)

Who are Disaster Managers and where do you find them? : Everyone!

The term "disaster manager" is applied to a person who has responsibility for planning and managing pre- and/or post-disaster activities. Disaster managers may be found in a variety of positions in many different types of agencies. The most prominent disaster managers are the personnel in governmental disaster preparedness or emergency management agencies. National agencies such as civil defense, disaster preparedness agencies, national emergency or relief

agencies, national reconstruction agencies or emergency service agencies, departments or ministries-, all require disaster management specialists.

Muncipal or provincial governments often have disaster managers. Large cities will often have a director of emergency services; and persons in public health departments, police departments, or public works departments may be assigned additional responsibilities in emergency management.

Intergovernmental organizations often have specialized disaster or emergency management agencies. For example, the United Nations Disaster Relief Office provides a wide variety of emergency management services to member governments. The United Nations High Commissioner for Refugees (UNHCR) and the United Nations Relief and Works Agency (UNRWA) provide specialized assistance to refugees*. Even within the non-disaster agencies of the U.N., there are often special emergency management offices. Examples include UNICEF, which has an Emergency Unit; the World Health Organization which has a Director of Emergency Relief Operations and the Pan American Health Organization (a regional office of WHO), which has an Emergency

* UNRWA provides assistance to refugees and persons displaced as a result of the partition of Palestine in 1948, UNHCR which was established in 1951, provides protection and assistance to most others.

Preparedness and Disaster Relief Coordination office that focuses specifically on the Americas. The World Food Program also has a special Office for Emergency Relief.

Some non-governmental organizations, both at the local level, and at the international level are specifically organized to provide emergency services. The most prominent of these are National Red Cross and Red Crescent Societies, the League of Red Cross and Red Rescent Societies and the International Committee of the Red Cross, but there are also hundreds of other private relief organizations throughout the world organized to provide specialized assistance to victims. These agencies range in size and scope from small, local, ambulance corps to large UN agencies with scores of staff and multimillion dollar budgets.

- eg. oxfam, CARE, CRS

Many non-governmental development organizations have disaster specialists on their staffs. This is in recognition of the fact that disasters often occur where development agencies have normal programs, and they cannot avoid becoming involved in post-disaster activities. This is also because of the frequency in which NGO's are called on to assist disaster victims. These specialists are helping to develop disaster plans for their organizations and help manage post-disaster operations.

Disaster management specialists can also be found outside of the systems specifically oriented towards disaster management or relief. Government ministries, such as agriculture, forestry, public health, defense, and public works, will often have major departments or key

personnel assigned to disaster management or mitigation roles. It is not uncommon to find personnel in a public works department assigned responsibilities for flood control activities and to be effective, the person in charge would have to exercise responsibility not only in flood fighting, but also in land use, settlement planning and evacuation. Thus, we can see that the disaster manager must have input into a variety of activities in order to be effective.

Key Personnel and Specialists Related to Disaster Management

Slow Transparency

There are many people who serve in critical roles that provide useful services in disaster management and while they are not considered disaster managers per se, it is important to recognize their potential contribution and function in disaster management because of their technological knowledge and skills and especially their experience. Some examples are:

--- city and regional planners;

--- watershed management specialists;

--- flood control engineers and specialists;

--- code enforcement officials;

--- public health specialists;

--- economic development specialists;

--- social scientists and welfare specialists

--- clergy and religious/ecumenical personnel

--- agricultural development specialists;

--- structural engineers;

--- architects;

--- doctors and nurses;

--- dietitians and nutritionists;

--- reforestation and range land management specialists;

--- water resource development specialists.

--- firefighters;

--- police.

--- development workers in general

In addition to those who are in a decision-making capacity, there are other specialists who often have an impact on disaster management decisions. These are:

--- civic groups

--- academics;

--- media

--- persons from research institutions focusing on disasters or disaster consequences;

--- disaster management consultants;

--- directors of development agencies; and

--- city managers and other government officials.

The Role of a Disaster Manager

Table 1-A is a chart that depicts the major natural disasters and some of the principal professions and specialists that should be involved in order to meet the needs in each particular phase. From this chart it is easy to see that scores of different professionals are involved and thus, the primary role of a disaster manager is the planning, coordination and orchestration of actions in each time-phase. In order to be successful, a disaster manager must have a wide variety of knowledge in many different subjects and be able to blend this knowledge into workable coordinated programs to meet the needs of those affected by disaster.

TABLE 1 - A

ACTIVE IN VARIOUS PHASES OF DISASTER MANAGEMENT

Type of Disaster	Prevention	Mitigation	Preparedness Planning	Emergency	Reconstruction
Droughts	Climatologists, agronomists	Agronomists, agricultural engineers & extensionists, water engineers	Water engineers, agronomists, nutritionists NGO disaster specialsists	Nutritionists, physicians, nurses, social workers	Agronomists, agricultural engineers, irrigation & water engineers
Earthquakes	Seismologists, engineers	Architects, engineers, contractors, land use planners	Architects, engineers, physicians, nurses, planners, city managers NGO disaster specialists	Physicians, nurses, social workers, housing specialists	Financial specialists, architects, engineers, contractors
Floods	Engineers, rangeland managers	Engineers, rangeland managers	Engineers, planners, city managers, NGO disaster specialists	Social workers, housing specialists	Architects, engineers, planners
Cyclones	Meteorologists	Engineers, architects, planners, contractors, agronomists	Planners, nurses, physicians, meteorologists, city managers, NGO disaster specialists	Physicians, nurses	Engineers, architects, contractors, agronomists
Volcanoes	Volcanologists, seismologists	Planners	Planners	Housing specialists social workers	Planners, architects, housing specialists
Insect infestation	Entomologists, climatologists, meteorologists	Entomologists agricultural extensionists, agronomists	Chemical Engineers	Pesticide applicators	Entomologists, agricultural extensionists, agronomists

Table 1 - B

SPECIALISTS ACTIVE IN VARIOUS PHASES OF REFUGEE OPERATIONS

Preparedness	Early Warning	Forward Planning	Emergency Response	Maintanence	Durable Solutions	Evaluation
Operations Managers,	Political Scientists	Operations	Nutritionists	Social Workers	Political Scientists	Operations Managers
Medical Personnel	Media Representative	Managers	Nurses	Engineers	International Legal Specialists	Medical Specialists
Public Health	Diplomats	Planners	Doctors	Planners	Diplomats	
Planners	Communications	Engineers	Engineers	Administrators		
Engineers		Medical Staff	Planners	Logistitians		
Communications Specialists		Communications	Social Worker	Dietitians,		
Logistitians		Diplomats	Communications	Nurses		
Food Aid Specialists		Logistitians	Housing Specialists	Housing Specialists		
		Public Health	Sanitarians	Sanitarians		
		Sociologists	Diplomats	Vector Control Specialists		
		Food Aid Specialists	Food Aid Specialists	Agricultural Specialists		
				Appropriate Technology Specialists		
				Self-help Specialists		
				Teachers		
				Physical Therapists		

ELEMENTS OF DISASTER MANAGEMENT

A disaster manager must deal with six distinct sets of activities in order to sucessfully affect the course of events related to disasters. These are known as the elements of disaster management and include: (1) risk management, (2) loss management, (3) control of events, (4) equity of assistance, (5) resource management, and (6) impact reduction.

1. Risk Management

Risk management consist of (1) identifying threats, (hazards likely to occur) (2) determining their probability of occurrence, (3) estimating what the impact of the threat might be to the communities at risk, (4) determing measures that can reduce the risk, and (5) taking action to reduce the threat.

In natural disasters, risk management includes:

--- hazard mapping;

--- vulnerability mapping;

--- estimation of potential losses, which can include:

--- losses of housing and physical structures;

--- agricultural losses;

--- economic losses; and

--- losses to physical infrastructure (such as roads, bridges, electrical lines, etc.);

--- the development of appropriate disaster prevention and mitigation strategies.

Risk management is accomplished either by lessening the effects of the natural hazard or by taking actions in normal development projects that will reduce the risks to an acceptable level. For example, if flooding is determined to be a major risk, the risk can be reduced by (1) physical measures such as dams, (2) flood control embankments, or (3) channelizing the streams. Alternatively, risk can be reduced by moving threatened communities from flood plains and/or restricting economic activities in the flood zone to those that could absorb flood losses (such as forestry or agriculture). (Risk management is covered extensively in the UWEX course "Disaster Mitigation".)

2. Loss Management

Losses in a disaster include human, structural, and economic losses. Loss management addresses each of these through both pre- and post-disaster actions designed to keep losses to a minimum. The most effective loss management

activities occur prior to the disaster and are focused on reducing the society's vulnerability to the disaster. Actions include:

--- improving the resistance of buildings and physical structures in the event of a disaster;

--- providing improved safety for the occupants of buildings or settlements situated in hazardous areas; and

--- increasing and/or diversifing the network of social support, or "coping", mechanisms available to victims and communities in threatened areas.

Post-disaster loss management focuses on improving the response and broadening the range of support given to victims. This includes facilitating relief delivery and stimulating a rapid recovery. These are accomplished through (1) emergency preparedness, which is the estimation of post-disaster needs and development of approaches and programs to speed relief, (3) response, (2) warning and evacuation of persons known to be at risk from an immediate threat the provision of emergency assistance to help reduce the impact of losses, and (4) reconstruction, to lessen the economic burden of long-term recovery. (See Table 1-C).

Disaster preparedness encompasses a broad range of activities, such as establishing emergency policies, developing

evacuation plans and designating emergency shelters, developing methods for rapid assessment of the disaster and determining emergency needs, organizations, pre-positioning supplies and materials, planning emergency services, training and drills for emergency staff, training seminars and courses, and broad campaigns of public awareness aimed at preparing communities for the onset of a disaster. (Disaster Preparedness is explored in detail in the UWEX course "Disaster Preparedness".)

A second means of improving response is to expand or diversify the portfolio of assistance given to the disaster victims. Shelter, water, food, medicine and clothing are usually considered as the normal emergency response. The potential range of assistance however, is much broader and should include economic assistance, family reunification, assistance to small businesses, rehabilitation of a community's public utilities, emergency assistance to farmers to enable them to harvest the remnants of crops, provision of food to livestock and draft animals, reduction of erosion caused by floods, social and psychological counseling, and literally hundreds of other activities.

3. Control of Events

A ~~The~~ critical element of disaster management is the control of events during and after the emergency. It is important that disaster managers control a situation rather than respond to it. Control is maintained through:

-- Anticipation of a disaster and the cause and effect relationships generated by each type of event.

-- Mitigation, or reduction, of the scope of a disaster. Mitigation is the most important function in bringing disasters under control. The more that can be done to reduce the effects of disaster, the fewer problems a disaster manager will face in the aftermath.

-- Preparedness -- by reviewing the anticipated scope of a disaster, it is possible to plan adequate responses, develop organizational procedures, and prepare to meet the needs that are going to arise.

-- Accurate information collection and assessment -- once a disaster has commenced, the manager needs to have reliable data upon which to base priorities and to guide response.

-- A balanced response -- each type of disaster will require a different set of responses. The disaster manager must review the different strategies and approaches for meeting disaster needs and develop an appropriate mix of responses, so that all sectors of the community can be equitably assisted. It should be remembered that more than one approach may be

necessary in order to meet a variety of needs in the same sector.

-- Knowledge -- there are few events in disaster management that cannot be anticipated, and a wealth of information now exists about how to respond to different threats and different problems based on experience. Maintaining control of events often means knowing which is the best response to a specific set of needs. Therefore, there is no substitute for knowledge and preparation on the part of the disaster manager.

-- Action -- once a problem has been identified and a response strategy selected, it is important that action commence immediately. Appropriate actions must also be phased in a timely manner and they be taken before demands and needs escalate. Action delayed means opportunities lost, and a lessening of control and adds to the suffering of the victims.

-- Leadership -- disaster management should lead, rather than follow, public action. If programs are timely, the first element of leadership is attained. Rapid response and timely aid give people hope, and encourages them to take positive actions themselves to help meet their needs. A delayed response leads to

confusion and frustration, and may force disaster managers to choose alternative courses which are ultimately less desirable.

-- Discipline -- it is important that disaster managers, disaster management systems and organizations, and all key personnel in the relief and disaster management system operate in an orderly, precise, and disciplined manner. The appearance of discipline and self-assuredness will reassure the public, and promote compliance with and participation in planned recovery operations. The success of a disaster manager is directly related to the leadership excercised and ability to coordinate the actions required to bring order out of chaos.

4. Equity of Assistance

All disaster assistance should be provided in an equitable and fair manner. Assuring that all disaster victims are treated fairly and equally is an important element of disaster management. This is especially important at the national level when a variety of different relief agencies, each with different constituencies and demands by their management and donors, are trying to provide assistance. Doctrines of fairness must underlie uniform relief and reconstruction policies in order to

insure that disaster victims are treated fairly, and have adequate access to the resources available.

5. Resource Management

Few disaster managers have adequate resources to meet all the competing needs and demands of a post-disaster environment. Thus, resource management becomes a critical element of disaster response. The disaster manager must be familar with the resources available, know how to form them into a balanced package of assistance, and must maximize their use to the greatest advantage. For example, suppose in the aftermath of a flood, a relief agency receives seeds that will enable 1,000 farmers to replant the crops that were destroyed by the flood, but disaster assessment surveys indicate that there are 2,000 farmers in need of replacement seeds. The manager who decides to give away all the seeds will only meet half the needs. A manager who decides to sell the seeds and reinvest the proceeds from the sales to purchase additional seeds can expand the number of persons serviced and thus maximize the contribution.

The most vital resource is the energy and manpower of the disaster victims themselves. For this reason resource management must consider ways in which to effectively utilize and involve disaster victims in all aspects of a disaster program.

6. Impact Reduction

Disasters can have an impact far beyond the immediate human, physical or economic losses. In a very real sense, disasters represent a loss of opportunity, not only to individuals, but also to entire societies. They can also be a serious setback to the country's entire development program. The impact of the disaster on individuals and their society should be reduced to a minimum. For a nation struck by a disaster, this means managing the disaster in such a way that recovery is accomplished quickly and that the recovery efforts contribute to the overall development needs of the country and all its citizens.

FIXED

USE
Transparency DP-1

Disaster Preparedness

1. Introduction

   A. What is Preparedness?

   B. Relationship of Preparedness to other parts of the disaster continuum

   C. Scope of Preparedness Activities

      - Public awareness

      - Evacuation and sheltering

      - Emergency operations

      - Recovery and rehabilitation

      - Transition from emergency to recovery

2. Prerequisites for Preparedness Planning

   A. Information Requirements

   B. Institutional Requirements

   C. Legal authority/ some kind of legislation

3. Preparedness Tools

   A. Plans

      1. The national plan

      2. Local/Regional Plans

      3. Action Plans

         - communications networks

         - evacuation plans
         - protection of critical facilities
         - pre-positioning of equipment
         - search and plan
         - disaster assessment
         - emergency relief and logistics
         - security and control

   B. Inte. Agreements

   C. Legal authority/

4. The Planning Process
   - A. Steps in Planning
   - B. Updating and Maintaining Plans
5. Organizational issues and models
   - A. Drills
   - B. Simulation
   - C. Exercises
   - D. Training
6. Organizational issues and models
   - A. Governments
   - B. NGO's
   - C. International Organizations
7. Preparedness Roles and Responsibilities
   - A. Governments
   - B. NGO's
   - C. I.O.s
   - D. Inter-agency coordination
8. Public Awareness
   - A. Role

   Typical Activities
9. Linking Preparedness to Mitigation and Development Plans
   - A. Opportunities
   - B. Requirements
   - C. Inter-agency /models

Early Warning & Contingency Planning

I. Intro.

A. A lot of talk of EW

B. Much of action is misplaced - building "systems"

C. Problem not EW - it's early reaction

D. For EW to work & WE need to ① shift emphasis and ② remove obstacles to action - biggest obstacle? - Funding

II. Define EW

The ID, (interpretation and recognition) of events that indicate an emergency is about to occur

- Basically, it's separating the usual from the unusual events
- Some types of emergencies are easier than others.

III. Lets look at the three elements

A. ID of events - requires:

1. ✱. Awareness of normal situation - Baseline Data
   ✱. Identification of underlying or contributing factors
   ✱. Understanding of how the society normally deals with stress
2. Understanding what is abnormal
   - M. Death rates, malnutrition rates, etc.
3. Monitoring to detect changes

B. ~~Recognition~~ Interpretation of events: What are we looking for?

✱ Rapid changes in a situation

3 ✱. Triggers

1 ✱. Patterns

2 ✱. Indicators - especially

C. Interpretation

1. Patterns
2. Indicators
3. Thresholds

We want to know when a society's ability to deal w/ stress or an unusual situation ~~has been~~ is about to be exceeded.

How do we know that?

1. Compare to past situations
2. Use intl recognized stds for indicators
3. Personal, organizational judgment

IV. Practical Exercise

What types of disasters will UNICEF encounter where EW could have an effect?

- Conflicts
- Epidemics
- Famine

In which sectors is UNICEF likely to be involved?

- water & sanitation
- others
- Nutrition
- MCH

Divide into 3 teams

Identify - <u>underlying causes</u> & contributing factors to the em. that can be identified in advance
- <u>indicators</u> to watch
- <u>Triggers</u>
- <u>Thresholds</u>

V Discussion: ~~How do we get people (systems) to react~~

VI ~~Summary~~ - What do you do next? C.R.A.M

Communicate, React, Activate, Motivate

↳ How do we get people (systems) to react?

VI How to get reaction to EW

1. Multiple messages from different reputable or credible sources
2. Collective action - committee
3. Answer the likely questions - M. Give your evaluation of credibility of others in EW system
4. Decide what <u>you</u> want to do and seek concurrence - <u>Don't</u> ask for suggestions from HQ
5. Report statistics graphically (if possible)
6. Use the correct reporting terms, sheds, etc. and refer to baselines Ex. Death rates
7. Communicate in <u>person</u> if possible
8. Establish and use priority classifications for communications

Contingency Planning / Focused Planning

I. Definition: actions taken in preparation for an impending Emergency

II. Types of actions:
- Personal - checklists
- organizational - Contingency Plan
- Societal - Natl Plan - if they have one! most are pretty poor!

III. Focus: organizational

Activities:

1. Collect Data - (remember maps)
2. Forecast workload
3. Explore funding alternatives
4. Order supplies - esp. a. food
5. Preposition resources
6. make / revise administrative arrangements
7. Build in some redundancy

IV. EXERCISE

A. Divide into three groups - same as before

B. Prepare lists of:

1. Data that should be collected
2. Decide how you would forecast the levels of assist. that might be needed

V. Discussion

Technologies to assist contingency planning: (DOCTRINE (see Initial Response))

A. Modeling and needs - look at past performance / needs
B. Rules of thumb M - 1 SFP per 5,000 people
C. Use Landsat
D. Remote Detection for D.P.S

Thursday

PART I

LESSON 1

This lesson introduces emergency assessment, describes its importance, and provides general background about assessment techniques. At the end of the lesson, the emergency manager should be able to define assessment and the role it plays in program implementation, and to differentiate between the types of assessment activities.

DEFINITION OF ASSESSMENT

The term "~~disaster~~ emergency assessment" refers to the survey and information collection activities carried out to determine the ~~situation in an refugee~~ emergency and the condition of the ~~refugees~~ people, the adequacy of the services being provided and the conditions of the ~~environment~~ where they are living ~~being placed~~. Assessments are also concerned with determining the impact of the emergency on the host community and the society in general. Assessments may be carried out in several stages. An immediate reconnaissance is one of the first activities carried out. The purpose is to provide information that can guide emergency services to the refugees, insure that adequate protection is being provided, develop information about the status of local government capacity to assist the refugees, to provide information for developing contingency plans, and to provide information upon which to base initial appeals for international assistance.

After the initial reconnaissance is completed, the assessment process continues with surveys designed to compile more detailed information to provide program planners with information needed to develop and execute relief programs. In this phase, needs and resources are identified and quantified and more detailed estimates of future needs are projected. In summary, the emergency assessment process is first initiated to enable agencies to plan lifesaving activities, and then continues as a means of monitoring the situation and forecasting future needs of the victims and the operational agencies.

IMPORTANCE OF ASSESSMENT

Emergency assessment is a key element of successful emergency response. The purpose of assessment is:

1. to save endangered lives;

2. to determine the ~~refugees'~~ victims' needs;

3. to help set priorities for action; and

4. to provide the data needed for program planning.

The importance of an accurate emergency assessment cannot be overstated. A swift, accurate and credible assessment will enable program planners to proceed expeditiously with program plans. An assessment that is incomplete or inaccurate, does not address major needs, or provides misleading data, may lead to inappropriate relief efforts and costly delays.

HOW ASSESSMENTS VARY

Assessments and assessment information needs vary according to who is carrying out the assessment. Generally, three types of organizations carry out assessments: host governments; the international agencies with a refugee mandate (UNHCR, ICRC, UNRWA); and the large donor governments. Smaller, more problem focused assessments such as those of a specific ~~refugee camp, a particular~~ health problem such as cholera or malnutrition, etc. are normally carried out by non-governmental agencies (NGOs) providing direct relief to the ~~refugees~~ victims.

The information needs of the local government and the international "mandated" agencies are more comprehensive than those of the others. They need information not only about the extent of the emergency on the numbers of incoming refugees, but also about local capacity to support and assist the refugees. Information about sites, water, sanitation, communications and transportation networks, and availability of food; critical facilities such as hospitals and government facilities; transportation facilities such as ports and warehouses, airports, and fuel supplies; must all becollected. The information helps in deciding where to place their assistance first, identifies constraints on operations, and helps to provide data for structuring aind requests.

Relief agencies are primarily concerned with collecting data that will enable them to respond more efficiently to emergency needs and provide the information needed to plan relief programs. This information normally includes data about the condition of the refugees and their means of coping with the emergency. Since NGOs normally focus on meeting family and individual health, nutrition, and personal needs, they will generally focus on collecting this type of data.

ASSESSMENT ACTIVITIES

Emergency assessment can be divided into four sets of activities.

1. Situation assessment (also known as initial reconnaissance) is the immediate estimate of the overall situation. A situation assessment is normally carried out immediately to determine the extent and nature of the emergency, locations of critical need, and to identify any protection problems.

2. Needs assessment is a determination of the needs of the victims. These may be classified as immediate needs which usually concern health, life support and safety, and long-term needs which refer to shelter and economic needs.

3. Sectoral/activity assessment - eg. Transport

4. Resource assessment is a determination of the resources available within the country to support the refugees and the impact that large-scale purchases might have on the local economy. This helps planners determine the aid levels that are required.

5. Epidemiological surveillance is the early identification of threats to public health precipitated or aggravated by the disaster, and the establishment of a monitoring and medical response capability to identify, isolate and eliminate any actual health problems.

ELEMENTS OF ASSESSMENT

Disaster assessment can be divided into six primary elements:

1. Preparedness Planning: An accurate emergency assessment depends on thorough planning and preparation. Information needs can be identified well in advance; the means of collecting the necessary data and selection of formats for collection and presentation of the information should be established as part of an organization's general emergency preparedness activities. By planning assessment procedures in a non-crisis situation, all potential information needs can be identified and adequate resources can be devoted to the assessment teams.

2. Survey and Data Collection: The gathering of the information must proceed rapidly and thoroughly. In the immediate situation assessment, surveyors look for patterns and indicators© of potential problems. Standard survey techniques, questionnaires, checklists and procedures are needed to make sure that all areas are examined and the information is reported using standard terminology and classifications.

3. Interpretation: Analysis of the information is the most critical part of emergency assessment. Those doing the analysis must be trained to detect and recognize indicators of problems, to interpret the information, and to link the information to action programs.

4. Forecasting: On the basis of an analysis of existing data, the interpreters must estimate the entire situation and forecast needs and trends during the emergency. Forecasting is based on an understanding of emergency trends and requires input from trained or experienced personnel.

5. Reporting: When data analysis and forecasting are complete, it is necessary to report the results. In a situation assessment, it is important that the data be communicated to operational agencies. When a relief agency carries out a needs assessment, it is important that the data be reported in a format that enables managers to formulate plans and projects. Efficient reporting requires that the analyst present only essential information and structure the analysis so that the main patterns and trends are clear.

6. Monitoring: Emergency assessment should not be seen as an end result; rather it is a process that should continue throughout the emergency. The initial assessment should provide baseline data and a basis for monitoring the situation to determine whether it is improving or deteriorating. (It is important to set up monitoring systems during the initial assessment.) It also provides a means of measuring the effectiveness of relief activities. Each survey activity should be designed so that it builds upon previous surveys and expands the data base.

ASSESSMENT METHODS

The two primary methods used for gathering emergency information are:

A. On-site inspection by trained observers: Qualified and experienced observers can often interview key

personnel in the emergency zone, visually review the extent of situation, and prepare fairly accurate estimates about the scope and magnitude of the emergency situation.

B. Surveys: More detailed surveys relying on interviews and collection of statistical information provide the data needed for selecting certain interventions. Generally, sample surveys are used to determine refugee needs and health and nutrition patterns. Of these, health status assessment and epidemiological disease surveillance require specialized training and accurate survey techniques. (Epidemiological surveillance is the early identification of threats to health precipitated or aggravated by the emergency and the establishment of a watch and medical response capability to identify, prevent and/or eliminate any actual health problems.)

3. Another technique that can be used is "modeling" 4. though few agencies have tried it. In modeling, the assessment team takes known data about a population, develops a series of profiles of the group (eg. family size, living patterns, etc.) and compares sample data about new arrivals with the profiles to develop estimates of the situation and needs. This process is particularly valuable in deriving estimates of needs for populations that are expanding while the assessment is being conducted. It is also the technique used in "remote detection", the estimate of needs for an incoming population not yet inside the receiving country. (See Remote Detection, page _____.)

Methods for Improving Assessments:

1. Overflights: The widespread availability of light aircraft and helicopters has enabled emergency managers to quickly fly to an emergency zone, overfly areas of concern, and gather a fairly accurate picture about the extent and magnitude of the situation. However, overflights may also be misleading and therefore must be verified with information developed on the ground from reliable, qualified observers. (This is called "ground-truth".)

2. Aerial Photography: Aerial photography is of limited value for refugee assessments. It is used primarily to improve the estimates of the numbers of people that may be living in a refugee camp or other type of settlement. The aerial photos still require that a ground survey be taken to form the basis of

interpretation, thus the process is not as rapid as many persons believe. Aerial photography can be useful in the immediate influx of refugees for estimating the magnitude of the influx and estimating emergency needs, but to do so will require trained photo enterpreters. It is also useful for identifying sites and environmental hazards (e.g., potential landslide zones, flood zones, etc.) that threaten the sites. Aerial photography methods range from simple, out-of-the-window photography with hand held cameras to precision oblique and vertical photography using special cameras and specially modified airplanes. Because it is an expensive tool, it must be used wisely.

KEYS TO SUCCESSFUL ASSESSMENT

Several key factors that contribute to design of a successful assessment are:

1. Identification of Users: Assessments should be designed to collect information for specific users. In planning an assessment, the users can be identified (usually be agency or function) and they can help specify their information requirements. For example, health and medical organizations need certain types of information, whereas a procurement office has very different information needs. Each agency has specific information needs and general information is usually of little value.

2. Defining the Information Needed for Appropriate Response: Information must be collected that is useful to program planners. Too often assessments collect information that is of little value and often waste valuable time by collecting detailed information when representative information would be just as useful. In designing an assessment, it is extremely important to consider the user, i.e., how the information will be used and what information is required to help operational agencies identify and respond to different types of needs.

3. Format: It is important that the information collected in the assessment be organized and presented in such a way that its implications are clear to the reader. This often means that some form of baseline information is necessary in order to be able to determine priority problems and trends. If an agency such as UNHCR is collecting the information, it is also important that the reports be separated and prepared according to the needs of the various users. For example, information about health and medical needs should not be buried in a massive report that also includes information on food

needs, refugee camp infrastructure, etc. and the status of port facilities.

4. Timing: Timing is a crucial element in obtaining accurate information. Situations and needs change dramatically from day to day and assessments must be timed to collect relevant information at a time when the information is both available and will have an impact on response planning. Relief needs are always relative; it is imperative that assessments determine the priorities of those affected and the most appropriate time to respond to various needs. As a general rule, initial surveys should be broad in scope and should determine overall patterns and trends for the basis of contingency planning. More detailed information can wait until emergency operations are well established.

5. Location: Because many assessments must rely on sample surveys to obtain emergency information, it is important that the proper areas be surveyed in order to get an accurate picture of needs and priorities. For example, determining the total number of refugees living in a border town would require that low-income neighborhoods (especially squatter settlements) receive more attention in sample surveys than middle-income neighborhoods.

6. Standardized Rating and Classification of Information: Assessments will invariably be carried out by numerous people operating independently. Therefore, in order to provide a basis for evaluating the information, it must be classified and reported using standard terminology, ratings and classifications. Standard survey forms that give clear guidelines for descriptive terms are usually the best way to ensure that all information is reported on a uniform basis.

7. Interpretation: Interpretation is the most crucial element of the assessment. Analysts must know which situations are normal under the circumstances and which are abnormal. They must be able to spot trends and determine whether the information collected is reasonably accurate or obviously erroneous. To a large extent, this means that the persons conducting the analysis must be experienced and know what to expect. Separating myth from reality is very difficult, but without an understanding of what actually happens in an emergency, assessment can complicate rather than speed the emergency response and recovery process.

8. Dissemination: Once the data analysis is complete, it is important that information get to the decision makers in a useful form so that it will stimulate

LESSON 2

COMMON APPROACHES TO ASSESSMENT

LEARNING OBJECTIVES

The overall objective of this lesson is to provide emergency managers with an understanding of the different ways to approach assessment. At the end of the lesson, the student should understand the different types of assessment and the various perspectives from which to approach assessment, should know what the priority areas are in an emergency, and should know the critical sectors and methods that are effective in collecting the necessary data.

APPROACHES

There are two ways to approach disaster assessment: comprehensive assessment and critical sector assessment. Comprehensive assessments collect information about every aspect of an emergency and managers weigh the importance of each in deciding where to assign priorities. Comprehensive assessments are normally carried out by agencies that are uncertain about where to become involved or by agencies that have an overall responsibility for the emergency (such as the host government, UNHCR, etc.). They usually take longer to complete than sector assessments and run the danger of wasting time collecting information that is not an immediate priority. Therefore, they are often conducted in phases, starting with emergency assessment of relief needs and resources. Comprehensive assessments can be valuable and, if properly planned, can be staged so that important information is acquired when it is needed. The primary result of a comprehensive assessment is the establishment of priorities.

Critical sector assessments focus on those sectors that are known to be a life-saving priority in almost every emergency. For example, nutritional status of refugees is a priority concern in every emergency. Critical sectors include water, health, food and nutrition, sanitation, and in extgreme environments, shelter.

Once the information needs in each sector have been identified, assessment planners can determine the best ways to collect the information and the best places and time to conduct the surveys. An important part of this process is determining indicators. For example, the number of deaths, expressed as death rate, is the single most important indicator of problems among displaced persons. Indicators are aspects of a situation that can be monitored; when certain events occur or when certain thresholds are crossed, an overall picture of the situation can be clearly established.

or a trend can be identified. Indicators are most often used in public health; for example, a reported increase in infant mortality (infant deaths) could be a result of disease, starvation or contaminated water. By cross-checking food consumption at the family level, water quality at distribution points, and diseases reported to aid stations or clinics, a more accurate picture of health and nutrition in the refugee population can be gained. Thus, it is important to know which indicators to examine as "points of entry" in each sector.

CONSIDERATIONS

There are several important considerations in understanding approaches to assessment. Among these are:

1. Data Needs: The manner in which an agency will respond to a disaster often helps define data that should be collected in the assessment. For example, an agency that will respond with material assistance will need to know about availability of transport, availability of fuel, road conditions, etc.

2. Assessment Timing: The planned response of an agency also helps to determine the appropriate timing and location of the assessment. For example, if the agency is going to provide emergency medical assistance, the assessment must use rapid survey techniques, focus on priority areas, and be completed within days after the refugee influx has commenced.

2. Distinguishing Between Emergency and Chronic Needs: Virtually all Third World nations have long-standing, chronic needs in most, if not all, sectors. One of the important tasks of assessment is to distinguish between chronic and emergency-related needs. For example, malnutrition is unfortunately prevalent in many disaster-prone countries, and assessment surveys in an emergency will almost certainly reflect a poor nutritional status. The surveyors must differentiate between what is normal for the population and what is occurring as a result of the emergency so that food aid and health care can be provided to those most in need. (Assessments may bring to light previously unrecognized or unacknowledged problems in a society. Thus, the data collection system should be careful to structure the information so that critical data such as health status, etc., can be used in helping to determine options for long-term assistance that can make an impact on the refugee's development.)

3. RELATIONSHIP OF NEEDS TO TIME

When examining critical sectors, it is important to remember that needs change with time. In other words, what is important in an emergency period may not be so important in the transitional or maintenance phase. Protection, lifesaving and humanitarian concerns usually predominate during the emergency phase, whereas social, economic and educational concerns predominate in the later phases.

Needs also change according to environment. Shelter needs, for example, vary greatly according to the climate and season in which the emergency occurs.

RELATION OF STANDARDS AND BASELINE DATA TO INDICATORS

It is difficult to differentiate between chronic and disaster-related needs without having baseline data, accepted thresholds that define the point at which a problem exists, and recognized and acceptable standards in each sector.

Baseline data are normally used as a reference in health and nutrition programs, social service programs, and economic assistance programs. For example, in determining whether a disease reported in a refugee camp is a result of the emergency, health officials must know the prevalence of disease in the community before the refugees arrived in order to determine whether there is an increase in the number or severity of cases occurring.

Reference marks are usually used to determine whether or not a situation is "normal". For example, the normal death rate of a population in a refugee camp should not be more than 1 death per 10,000 per day. This ratio is a reference number or "datum." By determining the average daily death rate in a camp and comparing it to the datum, it is possible to determine whether or not a problem exists.

Standards are normally used as the basis for determining minimal requirements for human services, life-sustaining elements such as food and water, and minimum space requirements for camps, shelters and other occupied facilities. For example, water quantity requirements are usually expressed as a number of liters per day per person. While some persons such as infants and small children require less, adults conducting heavy work in warm environments require more. The average standard is a means of making sure that the families' total supply needs are met.

CREDIBILITY

A major problem is establishing the credibility of an assessment. The survey must be thorough and provide information in such a way that it reduces the necessity for

other agencies or personnel to conduct their own assessments. In reality, few agencies accept the assessments of others because there seems to be a felt need for each agency to assess the situation itself in order to ensure that the assessment is accurate. To some extent, this duplication of effort can serve as a means of verification. But if an assessment is well-planned, if the methodologies and procedures utilized provide an objective, clear, concise and rapid picture of the situation, and if the assessment report describes the information-gathering techniques, procedures and standards; the need for verification and follow-up assessments can be substantially reduced.

BE Brief on this section

LESSON 3

ASSESSMENT TEAMS

LEARNING OBJECTIVES

This lesson explores the different types of assessment teams and examines the role and potential uses, advantages and disadvantages of each type. At the end of the lesson, the emergency manager should be familiar with the different types and be able to select a team that is appropriate for different types of agencies.

TEAM MODELS

There are many different ways that an assessment team can be structured. Four "models" have emerged as the most common types used by both international relief agencies and governments. Each type of team has advantages and disadvantages and some are more appropriate to certain types of organization that others.

The four common emergency assessment team models are:

1. Teams of designated specialists;
2. The use of on-site staff;
3. Reconnaissance by a single individual (known as a key man); and
4. Two-person teams.

Designated Specialists

A popular approach for governments and large organizations with multi-disciplinary staff is to form stand-by teams of specialists who receive training in emergency assessment methods in addition to their normal assignments. When a disaster occurs, these specialists are transferred from their normal jobs to form an assessment team. These teams can range in size from 3 or 5 persons to as large as a dozen or more technicians. The use of designated specialists is often likened to a volunteer fire brigade, and for this reason the approach is often known as the "fire brigade" model.

The advantages of using designated specialists are:

1. The cost of maintaining large teams is minimized;

2. Personnel familiar with various sectors and the needs in each sector can be quickly mobilized, thereby improving the quality of information;

3. Because the cost of maintaining the team during normal periods is minimal, more money can be placed into personnel for the team, thereby enabling the assessment to cover more areas more thoroughly;

4. The same personnel may be involved in other emergency preparedness activities, thereby increasing their awareness of their agency's information needs.

One disadvantage of specialist teams is that training may be problematic because training schedules to accommodate large numbers of people with diverse commitments are difficult to make. Since assessment is not a full-time responsibility or priority of the majority of members of the assessment team, interest in assessment may be minimal until an actual emergency occurs. There is also the problem that, when the emergency does arrive, key members of the team might not be present, although this can usually be remedied by assigning backup specialists.

Overall, the "fire brigade" approach has proven to be a fairly effective model for conducting assessments.

Use of On-site Staff

When an emergency occurs in an area where an agency is already operating, a decision may be made to rely on local staff to conduct the assessment. This method has met with mixed results, depending on the scope of the assessment that is required, whether or not the expertise available to the local staff is appropriate for analyzing the various sectors, and the degree of guidance that is given to the persons conducting the assessment.

In order for local staff to be effective in assessments, orientation and training must be provided. In addition, it is necessary to provide structure and guidance on how to conduct the survey, what information to collect, and how it should be reported. Checklists, questionnaires, manuals and other tools are required (see Lesson 4).

The primary advantage of using local staff is that costs are greatly reduced. In addition, persons conducting the assessment will be familiar with conditions in the local community.

The disadvantages of using local staff are the possible lack of available skills, unfamiliarity with information

needs and survey techniques, and lack of appropriate training and preparedness for the assessment.

Single-Surveyor Approach

A single surveyor or "key man" is often used by agencies with experienced emergency specialists on their staff, generally to assess conditions in one particular sector. For example, if an agency specializes in emergency feeding programs, a nutritionist might be sent to assess nutrition needs and gather the information needed to set up a feeding program. The key man approach is dependent upon experienced and qualified staff who are familiar not only with emergency operations and needs, but also with the program which the agency plans to set up.

The primary advantages of using a key man approach are cost and speed.

The disadvantages are that one person may not be able to gather all the facts quickly and (if the disaster area is large) the process may be delayed, and the single surveyor gives only one point of view so that the quality of the assessment is totally dependent upon one person.

Two-person Teams

A two-person assessment team has proved to be an excellent way of conducting a rapid assessment for agencies with predetermined approaches to emergency operations. Usually the team is composed of a specialist familiar with refugee camp infrastructural needs or general relief programs (such as a logistics specialist, an architect or engineer) and a person who is familiar with public health, medical and nutritional aspects of an emergency. If the two are equipped with a systematic method of conducting the assessment and standardized reporting forms or procedures, have access to the required transport and fuel, a two-person team can be very effective.

The advantages of a two-person team are that they can move quickly at relatively small cost and can gather information about a variety of problems in different sectors that can be cross-checked to indicate problems and priorities.

The primary disadvantage of a two-person team is that the team cannot assess a large geographic area much faster than one person.

LESSON 4

SURVEY METHODS

INTRODUCTION AND LEARNING OBJECTIVES

The objective of this lesson is to introduce the emergency manager to different field survey methods that can be used to guide an assessment team, collect information, and structure the information in a usable form. At the end of this lesson the emergency manager should be able to identify the different types of surveys, determine which method is most appropriate for a particular type of organization, and know the advantages and disadvantages of using each.

SURVEY METHODS

There are four general methods used to collect information in emergency assessments: (1) checklists, (2) questionnaires, (3) survey procedures manuals, and (4) decision trees. There is no one correct way of conducting an assessment survey; whether a particular method is suitable for an individual, an organization or a particular situation often depends more on training and experience than on the particular method chosen.

Checklists

Checklists are the most common method used in emergency assessment. A checklist is simply an abbreviated, written document that provides the assessment team with a reminder and guide to all the types of information needed by the team's organization.

In general, there are two types of checklists -- topic heading checklists and formatted checklists.

Topic heading checklists are an abbreviated one- or two-page list of items that the assessment team needs to check. Topic headings are usually no more than "key" words or brief sentences. The survey team collects the data, compares notes and prepares a report using the checklist as an outline. Topic heading checklists are normally used when the assessment team is experienced and knows the information needs of the organization. Topic heading checklists are often used in sector surveys or in gathering information about specific problems; they are utilized more often by voluntary agencies than by governments or international organizations. An example of a topic heading checklist is shown in Appendix IV-A.

Transparency

Formatted checklists are structured forms that provide the assessment team with a more comprehensive outline of information needs. Formatted checklists are normally used for preparing situation assessments and providing an overview of a disaster and the needs. A sample formatted checklist is shown in Appendix IV-B.

The advantages of using checklists are that they are easy to prepare, easy to use, and can provide a comprehensive yet flexible guide for an assessment team.

The disadvantage of checklists is that usually no guidance about priorities is given to the team because all information needs are treated equally. Therefore, the format itself can steer the team into collecting information that may be of low priority for a particular [illegible]. This disadvantage, however, can usually be partially remedied by organizing the checklists according to priorities and structuring the checklist so that more detail is collected about the items of interest to the organization.

Questionnaires

A questionnaire is a set of printed questions used by a surveyor for obtaining statistically useful or personal information from an individual or family. In the questionnaire method, an individual questionnaire form is filled out by or for each person or family being interviewed and the results are later tabulated and analyzed.

Questionnaires are most commonly used in needs assessments to help determine the individual needs and priorities of the refugees. In such assessments, questionnaires may be used in several ways: for interviewing officials knowledgeable about needs, or for direct interviews with households and families.

Questionnaires may be used for interviewing a total target population, but sample surveys are more commonly used (see Lesson 6).

The main advantage of questionnaires is that detailed information about needs can be obtained and the tabulated results can provide much needed statistical information about families and their condition. Not only can this give a good analysis of the impact of the emergency of individuals and families, but if the survey covers a significant part of the population to be served by the relief agency, the questionnaires can also be used as the initial record for individual casework.

The disadvantage is that surveys using questionnaires are slow. If a large percentage (sample) of the target population is to be interviewed, the number of interviewers

required to conduct the survey can be quite large (and therefore more costly in terms of time and resources). Some emergency specialists also question the validity of questionnaires as an emergency assessment technique because they feel that all needs are relative depending on the time that the survey is taken. Interviews of relief officials are also often criticized because they rely on people's opinions and are only as good as the persons chosen to be interviewed. If the survey is being conducted by expatriates, the process generally depends upon interpreters or use by national staff. Language difficulties and the objectivity of the interviewers regarding the refugee population may tend to make the results less than reliable.

In summary, questionnaires appear to be a useful method for obtaining specific information for programming and planning purposes in certain sectors, but not a good tool for collecting situation information in the immediate aftermath of the disaster.

(Assessment) Procedures Manuals

Some agencies prefer to provide the assessment team with a combination of procedures, forms and specific instructions about how to obtain the information needed by the organization. These instructions are put into a brief procedures manual which gives the assessment team a framework for carrying out the assessment. The manual provides a description of the different types of emergency situations and provides the team with insights as to what to expect in different phases of an operation. Ideally, it identifies the critical sectors, describes how different types of need should be met, and outlines the data needs required to develop the organization's response to programs. The purpose of the manual is to orient the team, provide information about how to conduct the assessment, identify persons or organizations that should be interviewed, and specify which systems or programs should be assessed. Some manuals provide questionnaires that can be used for sample surveys in different sectors and give the survey team suggestions about methods that can be used to obtain other types of information.

The manual method limits the flexibility of the assessment team but, by giving the team the background and a logical framework for conducting the survey, it enables the team to adapt the assessment to the local situation.

The primary advantage of the manual approach is the ability to structure the assessment to obtain the data required by the organization. Furthermore, a tremendous amount of guidance can be given to the assessment team, and a variety of different approaches can be included in the

manual, so that the most appropriate survey technique can be employed in each different situation.

The primary disadvantage is that the survey is only as good as the people that develop the manual. By focusing on certain issues of interest to the agency and not on others, a manual may cause the team to overlook critical data. If the procedure is too highly structured, the survey team may be unable to adapt to the situation.

Some surveyors find the approach too cumbersome; therefore, some organizations prefer to use checklists and questionnaires.

A sample table of contents for an assessment procedures manual for assessing refugee camps is shown in **Appendix IV-C**.

Decision Trees

A decision tree (or algorithm) is a method of rapidly analyzing a situation and identifying specific problems in a sector. The method provides surveyors with the means of examining a particular subject in depth. Problems are presented and analyzed in sequence and the users are led along a "critical path" to the most important information as quickly as possible. The technique is not widely used now but may become more popular with increased use of micro-computers by relief organizations.

A surveyor starts the assessment by identifying key "access points" or indicators of a problem. The tree then poses specific questions or instructions for gathering more information. The team collects the specified data, the results of which lead along a path to a node, or "decision point," where new information is collected and analyzed. Each branch extending from a decision point represents one of the alternatives that result from the analysis of the information collected at that specific point. The procedure continues until all relevant data has been collected and a picture of a specific problem has been developed. The process of using a decision tree can be represented as a network diagram as shown in **Figure 4-1**, and some emergency managers utilize these diagrams as an aid to the assessment process. Most however are in the form of loose-leaf manuals. These decision tress are normally quite bulky and require the use of extensive referencing and cross-referencing; thus they are not useful for the initial emergency assessment. Sample pages from a decision tree used in a health assessment are shown in **Appendix IV-D**.

Decision trees are ideal for use with portable, powerful micro-computers, and standard assessment software programs are currently under development. For this reason,

several agencies are now exploring the use of hand-operated systems that can be converted to micro-computers in the near future.

Decision trees will be best suited for analyzing specific sectors and gathering data for program implementation.

The primary advantage of a decision tree is that it enables the assessment team to move through critical information quickly, discarding irrelevant information and getting to the specific data needs and problems that need to be addressed. The decision tree takes the team through the procedure according to responses or situations and allows the surveyor to adapt to an unlimited number of possible situations. Also, because the system is so highly structured, it can be used by less-experienced surveyors.

The primary disadvantage of a decision tree is that it is dependent upon a thorough analysis of all the different possibilities and paths that must be taken from each decision point. Therefore, the persons preparing the decision tree must be completely familiar with all aspects of an refugee emergencies and must anticipate all of the possible questions and responses at each decision point. This in itself is difficult enough; trying to present this information in a form usable in the field is extremely difficult unless a micro-computer is used.

DATA PROCESSING

Whatever method is chosen for collecting information, data processing can be speeded with the use of computers. In assessment planning, it is important to try to structure the data-gathering so that it can be quickly fed into a computer and analyzed.

Handout

LESSON 6

ASSESSMENT PLANNING

INTRODUCTION

When planning an emergency assessment, it is important to remember that the assessment information must trigger specific action and continue to feed information to relief agencies throughout the emergency period and beyond. Thus, emergency assessment must be developed as part of a comprehensive emergency preparedness activity and should reflect the information needs of the various agencies receiving the assessment reports. This lesson demonstrates how to organize and plan an assessment.

The following steps may be used as a general checklist for planning any emergency assessment activity.

Step 1:

Identify the users of the assessment information and the sectors in which they operate both during emergencies and during "normal" times. Each relief organization will have its own unique combination of information requirements. The users within an organization may be the field staff, the headquarters, the agency's donors, or the victims themselves, or any combination of the above. It is important that the potential users of the information be consulted and involved in designing the assessment.

Step 2:

Identify the information that is needed from each sector that will permit detection of specific problems and provide guidance for planning relief programs.

Step 3:

Determine which data identified in Step 2 can be obtained by observation and which require more detailed or more quantitative investigations such as sample surveys or other forms of analysis.

Step 4:

Determine the most appropriate time to collect the information. It may be necessary to conduct assessments in different time periods in different sectors to obtain the most useful information. As part of this step, it is important to identify those data that must be collected prior to an emergency, i.e., baseline data. This is especially vital for monitoring health and nutrition so that

chronic or endemic problems can be separated from emergency problems.

Step 5:

Identify the skills and qualifications required for the assessment team to collect all the necessary information. This will determine the size of the team.

Step 6:

Choose the survey model(s) most appropriate for the organization, and decide which tools, techniques and equipment should be incorporated in the survey procedure in order to quantify or verify the information being gathered.

Step 7:

Determine how the information will be interpreted. It is important to decide who will analyze the data (i.e., which specialists are required to interpret technical information) and what standards, or baseline data and indicators, will be used to determine the severity and implications of existing problems. The criteria for this include:

- the sectors to be assessed;
- the geographical extent of the area;
- accessibility of each area;
- the population density;
- availability of transport;
- need for translators; etc.

Step 8:

Determine the most appropriate format(s) for presenting the analyzed data. If the analysis is to be carried out in the field and reported back to a field office or central headquarters, it is important that standard reporting terms, sample cable formats and standard language be established to eliminate the possibility of misinterpretation of the information at the receiving end.

Step 9:

Formalize the plan. When all planning activities have been completed, the overall plan and procedures should be written and formally accepted by those staff members within the organization who would be involved in disaster response.

Copies of the procedures, questionnaires, terminology, etc., should be compiled in a manual or other standard reference and distributed to all personnel or offices who might be in the emergency.

Step 10:

Orient the assessment team. Once the complete system has been accepted by the organization, the survey team members should be identified and given instructions on how to use and follow the assessment procedures. Without these instructions, problems are likely to occur that can delay the assessment and may cause misinterpretation of the information. It is especially important to focus on reporting and terminology to ensure that the data are collected, analyzed and transmitted in such a way that they trigger the appropriate action.

PART II

LESSON 7

ANALIZING SPECIFIC PROBLEMS

The following pages contain suggested procedures for analizing problems commonly found in refugee emergencies. They provide an explanation of the problem and a procedural guide for analyzing that problem.

PROBLEM: DEATHS

BACKGROUND:

Mortality rate (death rate) is the single most important indicator of serious stress (illness/malnutrition, etc.) in a population. Knowing the causes of death is crucial since it helps set priorities for appropriate relief intervention. In addition, deaths are indicators/events of obvious interest and concern to refugees, relief administrators and the media.

A sample listing of crude (overall) mortality rates, expressed as deaths per 10,000 persons per day, is given in the accompanying table. In refugee populations served by well-run relief efforts, overall mortality rates should not exceed 1.5 times those of the host population. An elevated mortality rate is a sign of some ongoing problem and should serve as a stimulus for a basic investigation of the situation.

The lower part of the table shows mortality rates for several emergency situations. In general, even initially high mortality rates should fall to or below 1 per 10,000 per day within 4-6 weeks of beginning an adequate basic support program (sufficient food and water, simple health care, etc.) for a population. Rates which stay above that level should be a cause for concern.

STANDARD:

Death rates exceeding 2.0 deaths per 10,000 population per day indicate a serious situation; immediate actions should be taken. Ideally one should seek rates below 1.0 deaths per 10,000 per day.

Because the number of deaths changes from day to day, it is important that rates be calculated over a period of days. The usual periods are one week or one month. For example, take the number of deaths occurring each day over a 7-day period and average the total; the resulting average daily number is used in analyses.

DATA SOURCES:

Camp population	_____	(From interviews)
Total deaths in last week	_____	(From camp health officials)
Childhood deaths (under 5 years) in last week	_____	(")
Major causes of death:		(")

Cause	Number
_____	_____

ANALYSIS PROCEDURE:

$$\text{Death rate} = \frac{\text{Number of deaths} \times 10{,}000}{\text{No. of days} \times \text{Population}} = \text{Deaths per } 10{,}000 \text{ per day}$$

Example: If 21 deaths have occurred over a 7-day period in a refugee population of 5,000 people, the death rate would be calculated as follows:

$$\text{Death rate} = \frac{21 \times 10{,}000}{7 \times 5{,}000} = \frac{210{,}000}{35{,}000} = 6$$

which is expressed as 6.0 deaths per 10,000.

(To convert to deaths per 1,000, which is the preferred method of some public health personnel and epidemiologists, divide the rate above by 10. For example, 6 divided by 10 equals 0.6 deaths per 1,000 per day.)

SOME REPRESENTATIVE MORTALITY RATES FOR COMPARISON

Recent Mortality Rates:

PLACE	YEAR	DEATHS PER 10,000 POPULATION PER DAY
Africa	1980	0.47
Burkina Faso	1980	0.60
Sudan	1976	0.49
Egypt	1976	0.41
Asia	1980	0.30
Kuwait	1976	0.22
Yemen (People's Rep.)	1976	0.58
Latin America	1980	0.22
Guatemala	1976	0.41
Costa Rica	1976	0.14

Sample Mortality Rates During Past Emergencies:

Thailand: Refugee Camp	early Nov. 1979	9.10	(overall)
		8.99	(children under 5)
Thailand: Same Refugee Camp After Intervention	Dec. 1979	0.7	(overall)
		2.12	(children under 5)
Mozambique: Famine	1983	2.63	(overall)
		3.07	(children under 5)
Sudan: Refugee Camp I	Feb. 1985	6.5	(overall)
Sudan: Refugee Camp II	March 1985	21.3	(overall)

EPIDEMIOLOGIC SURVEILLANCE AS AN ASSESSMENT TOOL

Epidemiologic surveillance is the collection and interpretation of data on the risk or actual occurrence of communicable diseases and other health problems. As an assessment tool, epidemiologic surveillance is important not only in health status assessment but as a guide for the planning and management of health interventions, as a tool for quality control of health programs. Epidemiologic surveillance should be carried out by government health authorities whereeverpossible, but may involve voluntary agencies and intergovernmental organizations, specially those involved in health and feeding programs.

Surveillance procedures are aimed at detecting changes in disease occurrence. To detect an increase in the incidence of disease caused by a disaster (or by relief activities), pre-emergency baseline data must be available. If it is not, an immediate baseline survey should be taken. While changes over the pre-emergency norm may not be easy to detect, changes in relation to the baseline can be noted. The assessment or surveillance team should set up a simple record-keeping system that will provide the data necessary to determine any changes. It should be recognized that some data is always available. Surveillance activities should commence with the initial assessment.

Disease is of special concern in ~~refugee emergencies~~ complicts (especially those that occur during famines) because food supplies are often disrupted and ~~malnutrition~~ becomes an increasing problem, increasing the incidence of malnutrition. This makes people (especially small children, pregnant and lactating women) more susceptible to both acquiring and dying from disease, and the convergence of people in refugee camps increases the likelihood of the spread of communicable diseases. Of special concern are "childhood diseases" such as measles, chicken pox, malaria, cholera, and simple diarrhea which can sweep through a concentrated population causing large numbers of deaths among small children. Other diseases of concern include dysentery, typhoid, and specific nutritional deficiencies.

Traditional epidemiologic surveillance focuses on priority health problems and infectious diseases. Data are collected from medical teams operating int he affected areas or by conducting health surveys among the target population. The three principal surveillance techniques are:

1. Systematic reporting of confirmed cases of predominant diseases;

2. Systematic reporting of symptoms that could indicate diseases of concern;

3. Rapid field investigation of any reports or rumors of an abnormal increase in the incidence of disease.

In refugee emergencies, the major health issues are diseases due to poor sanitation, environmental health hazards, and malnutrition as well as related health problems. For this reason, in recent years another method of surveillance that permits broader assessment and monitoring has been developed; this is called " nutrition-centered health assessment".

NUTRITION-CENTERED HEALTH ASSESSMENT

Nutrition-centered health assessment (NCH assessment) evaluates the health and nutritional status of children under 5 years old (i.e., 12 months to five years(as the "point of contact" to detect and assess a full range of health problems. The method is used for initial assessment of health and nutritional status; for long-term surveillance of disease, malnutrition, death and water quality; and for long-term monitoring of food supplies, logistics, water quality and food quality.

Nutrition-centered health assessment was first developed as a means of analyzing the plight of refugees and displaced persons; later it was adapted for use with drought and famine victims, and most recently to any situation where people live in camps or concentrations and are supplied wholly or in large part by relief agencies. The system works well in both urban and rural environments and in virtually any type of climate.

NCH assessment uses children on through five years of age as the focal point for the assessment because their health and nutritional status reflects reliably what is happening to the whole population. Pregnant and lactating women and children under 5 are known as "vulnerable groups" because their needs for food and proper nutrition are greater than for other population groups and, for a variety of health and social reasons, illness and death affect this group first.

As health and nutritional data are collected about this group, planners can determine indicators of many problems. for example, if a large number of malnourished children are detected, several problems may be present such as food shortages or illness. By cross-checking food supplies, medical records and water supplies, the contributing factors can be traced. When remedial measures are instituted, such as supplementary feeding for women and small children, NCH assessment becomes a tool for monitoring the program. Suppose that after several4several weeks of feeding,

children still show no improvement. By checking to see if those children have diarrhea, problems in water supply or hygiene would be suspected and traced. If water were not a problem, illnesses symptomatic of diarrhea would then be assumed.

A skilled surveillance team, using NCH assessment methods, could conceivably detect:

- food shortages due to logistics problems;
- food distribution problems, such as unequal distribution to certain areas or groups;
- intra-family food distribution problems (food being given/taken by working males);
- problems in diet (of relief foods);
- illnesses;
- water shortages;
- water contamination;
- problems of personal hygiene;
- psychological problems among vulnerable groups.

A more detailed discussion of NCH assessment is included in Lesson #10.

PROBLEM: DISEASE

BACKGROUND:

Refugees on the move or in camps face both the normal disease risks associated with life in a developing country as well as additional disease risks associated with aspects of being a refugee (such as overcrowding, poor sanitation, etc.). The objective of this section is to help you identify emergency disease measures that should be taken to reduce deaths or permanent severe disabilities.

DISEASE CONTROL PRIORITIES:

1. Detection: Establishing a simple surveillance system to detect and confirm diagnosis is the first priority in disease control (see page 41).

2. Analysis: The relative importance of diseases can be assessed by determining certain characteristics.

   (a) Prevalence -- how common is the disease itself, the risk of the disease, or the susceptibility to disease? This is determined by dividing the number of cases of a disease by the total population at risk. (Not all people are equally at risk from a disease; for example, children are more likely to be than adults.) Some diseases, especially measles, are so important that only one detected case is of concern.

   (b) Severity -- is the disease or condition potentially life-threatening or permanently disabling (e.g., blindness from Vitamin A deficiency), or is it mild?

   (c) Responsiveness to Control Measures -- can currently available control measures reduce disease incidence, prevallence, severity or mortality?

Transparency

The accompanying table outlines a number of potentially serious infectious disease and non-infectious disease/health problems in refugee populations, and appropriate actions for anticipation and intervention. The list is not all-inclusive; certain diseases or health conditions may develop depending on local circumstances in each case.

The actions that are usually most useful in refugee situations are underlined.

PROBLEM: VACCINE COLD CHAIN

BACKGROUND:

The "cold chain" system for protecting vaccines by refrigeration is crucial to any immunization program. Cold chain failure means that weak or inactive vaccines will be given to children who thus remain unprotected. The following principles apply to every cold chain.

1. Clearance through customs of imported vaccines can be a major source of problems, especially if the vaccine is unrefrigerated in the customs area.

2. Storage facilities at the central (capital city) and regional level should have temperature alarm systems and backup (ememgency) generators.

3. Vaccine control cards should be posted on the refrigerator or cold room door; temperatures should be checked twice daily and noted on the cards.

4. A cold box or other form of refrigeration should be used to transport vaccine at every transfer step.

5. Vaccines should be stored on central shelves of refrigerators. They should not be stored in refrigerator doors.

6. DPT vaccine and tetanus toxoid should never be frozen.

7. Vaccines should be wrapped in foil for field use.

8. Vaccines beyond their expiration dates should not be stored with current vaccines.

ANALYSIS PROCEDURE

Although cold chain analysis requires an expert, even a novice can easily evaluate at least some of the following critical points in a cold chain.

At the central level:

1. Record of last shipment received; how long in customs; at what temperature.

2. Functioning temperature alarm system.

3. Functioning emergency generator.

4. Vaccine control card on refrigerator or cold room door.

5. Written evidence of twice-daily temperature checks.

6. No vaccine stored in refrigerator doors.

At the regional level:

7-11 See 2 - 6 above

During transport:

12. Use of a cold box.

At the local facility:

13-15 See 4-6 above

16. No vaccine beyond label expiration date.

During use:

17. Vaccine wrapped in aluminum foil.

PROBLEM: RATIONS

BACKGROUND:

Food supply may be the most critical problem faced by refugees or displaced persons. Inadequate food supplies quickly result in childhood malnutrition. Increased death rates are a direct result.

The mix of food provided to refugees as a basic ration by relief agencies is called the "food basket".

STANDARDS:

The following concepts are most important in assessing food supplies:

1. A recommended minimum is 1800 calories per person per day (including total population, even chilcren in this calculation).

2. Levels under 1500 calories per person per day are directly associated with increases in deaths from starvation and nutrition-related diseases.

3. The general rations during the emergency must contain oil, a staple grain, and a source of protein.

4. More activity (e.g., heavy labor, a moving refugee column) means more calories are needed.

5. A high rate of illness or recent starvation in the population also increases calorie requirements; extra calories are needed for recovery.

6. <u>The bottom line for avoidance of starvation is what people/families actually get to eat</u>. Food in a warehouse does not count if it is not distributed.

DATA SOURCES:

Camp Population _____ (from camp administrators)

Food List on Hand	Data from Camp Administrators	In Households
(e.g., sorghum)	12.2 MT	1.5 kgs)

_____ _____ _____

_____ _____ _____

Feeding Agency _____ (From interviews w/administrators)

Daily Calorie Supply _____ calories (From interviews
or _____ unknown w/administrators)

Food Animals: Yes/No: Kind _____ (From Observations)

FURTHER PROBLEM ANALYSIS: FOOD SUPPLY/MALNUTRITION

Although refugee food supply problems are ultimately reflected in childhood malnutrition (and its consequences) and/or increased food prices, such problems may also come to light in a number of other ways. Conversely, when trying to trace the source of disrupted food supply, you may encounter what appears to be a nearly endless list of possible problems. The following Table I indicates the expected linkages and activities which need to successfully occur if an adequate food basket is to be supplied to refugees and if childhood malnutrition is to be avoided.

1. Review the "food basket" for quality and quantity. If a specific deficiency disease has been observed (e.g., xerophthalmia), examine the food basket for an adequate source of the appropriate vitamin (e.g., Vitamin A). If the malnutrition is general calorie/energy deficiency (also called protein-energy malnutrition, wasting or marasmus), find out the intended number of calories in the food basket. Remember that at least 1800 calories per day for everyone (including children) is an absolute population minimum for reasonable growth.

2. If the food basket is adequate, find out from mothers of some malnourished children the circumstances of malnutrition. Possibilities include:

   a) <u>pipeline problem</u> -- not enough food available to the family.

   b) <u>family education problem</u> -- a relatively simple questionnaire administered to a dozen such mothers would indicate no illness, adequate family food supply, but not enough food being given to child.

   c) <u>support problem</u> -- adequate food available to family but inadequate cooking fuel.

   d) <u>support problem</u> -- supplementary feeding not available to the child.

   e) <u>illness problem</u> -- illness prevented normal appetite.

   f) <u>illness problem</u> -- <u>excessive calorie loss/waste due to diarrhea</u>.

PROBLEM: FOOD DISTRIBUTION

BACKGROUND:

The method and timing of the actual distribution of food is as important as the amount and quality of the food. In some cases, distribution of too much food at one time can be as harmful as too little food. If the amount of food in the pipeline appears adequate, yet malnutrition is still present, it is important to check the distribution system and schedule. Common problems include:

1. Theft. Refugees involved in the distribution may be stealing a portion of the food. This can usually be detected by measuring the amount of food families are receiving and by interviewing households.

2. Diversions. Refugees may be diverting a portion of their rations to send to relatives or to combatants back in their homeland (usually more likely when camps are close to the border). This can be detected by checking food levels in the home one or two days after distribution and/or by observing departures from the camp during the same period.

3. Hoarding. If the distributions are not regular, people may hoard the food, not consuming all of it for fear that there may not be more coming. This can be detected by household survey. Only regular ration distributions can correct this problem.

4. Sale. Refugees may be forced to sell a portion of their ration in order to obtain cash, goods or services they feel are critical. The most common reasons for selling food are:

   (a) to purchase water
   (b) to pay for milling grains
   (c) to raise money for purchasing other supplies
   (d) to raise money for paying "protection" or bribes

   The significance of the amount being sold can be determined by talking with local merchants, observing relief goods in nearby markets, and interviewing refugee camp administrative personnel.

5. Rapid Consumption. Hungry refugees may have trouble limiting or rationing their supply of food. This can be a major problem in the early stages of an operation, especially for new arrivals who may eat their entire ration within a few days after receiving it. This may be compounded by relief officials who, in an effort to reduce the administrative burden, may issue large

amounts of food (up to 30 days' worth) to each family. Thus, when people consume the food early in the distribution cycle, they may end up with no food for a significant time before the next distribution. For people who are severely malnourished, this can be critical.

APPROACH:

The monitoring and control of distribution problems is dependent on a simple system of distribution and a timely distribution interval. Experience has shown that a 7-10 day ration interval is the most practical (and has the added advantage of reducing the amounts of food on hand to levels where they can be monitored throughout the pipeline); also, distributing food in bulk through traditional community leaders provides a convenient way to monitor the distribution levels and pinpoint thefts and diversions.

DATA SOURCES: Household Surveys
Interviews with camp administrators
Interviews with health workers

PROBLEM:
NUTRITIONAL STATUS AND SUPPLEMENTAL FEEDING

BACKGROUND:

Inadequacies in food supply are detected by observing nutritional status and consequent increased occurrence and severity of nutrition-related illnesses (e.g., diarrhea, measles, beri-beri).

STANDARDS:

Arm circumference greater than or equivalent to 13.5 cm. in children from 12 months to 5 years is satisfactory. Readings between 12.5 - 13.5 cm. indicate malnutrition, and readings less than 12 cm. indicate severe malnutrition.

Occurrence of certain nutrition-related illnesses also indicates an ongoing problem.

Illness	Dietary Deficiency or Problem is	Possible Outcomes
Kwashiorkor	Calories, protein	Death
Marasmus	Calories	Death
Xerophthalmia	Vitamin A	Blindness, death
Beri-beri	Vitamin B	Death
Scurvy	Vitamin C	Severe joint disease, death
Pellagra	Niacin	Dementia, death
Severe Measles	Severity due to overall malnutrition	Death
Malnourished children (less than 1 yr.)	Insufficient breast feeding and/or excess use of feeding bottles	Death

ANALYSIS:

1. Total Population _____ Interviews/administration

2. Children under 5 yrs. (as % of

DATA SOURCES:

	total)	_____%	Household surveys
3.	Total under 5 yrs.	_____	Calculation
4.	% with arm circumference less than 12.5 cm.		
5.	% with arm circumference 12.5-13.5 cm.	_____	Household surveys
6.	Feeding bottles in use?	Yes/No	Interviews/observation
7.	Food supply adequacy	OK/Deficient	Food supply analysis
8.	Supplementary feeding program operating?	Yes/No	Health worker interview
	Frequency: ____ meals per week		
9.	Percent of children in SFP:	_____%	Household surveys
10.	Are any of the following being seen?		Health worker interview
	Xerophthalmia	Yes/No	
	Beri-beri	Yes/No	
	Scurvy	Yes/No	
	Pellagra	Yes/No	
11.	Other nutrition-related diseases:	_____	Health worker interview
12.	Other nutritional status data:		Agencies in area

Example: UNICEF random survey indicates 20% malnutrition bvy weight-for-height standards among children under 5 yrs.

Specify source of sample (random, hospital, clinic, other _____), number of children measured, type of measurements, and agency collecting data.

PROBLEM: SITE

BACKGROUND:

Temporary settlements have a way of becoming permanent. Therrefore, the considerations (in order of priority) for selecting a site for an emergency settlement or refugee camp are that the site should be:

1. near a reliable supply of water;
2. near a good all-weather road ensuring all-year access;
3. reasonably safe from armed attack from outside the camp;
4. dry and safe from flooding;
5. located where latrines can be dug without polluting the drinking water supply;
6. adequate in size to hold all refugees (including anticipated arrivals) without overcrowding.

ANALYSIS PROCEDURE:

All the considerations listed above, with the exception of No. 5, can be determined from observations, from interviews, from consulting knowledgeable engineers, or by referring to the maps you have collected.

Look up in written Handbook

To determine whether adequate space is available in a camp with defined or limited area for expansion, determine the total number of square meters available for the camp and divide by the total number of people that are expected to occupy the site. If the result is less than 7.5 square meters per person, the space is NOT ADEQUATE to meet all the needs of a temporary settlement. An area less than 7.5 square meters per person results in overcrowding and has been shown to result in increased health, social and administrative problems. The standard provides adequate space for shelters; roads and paths; administrative, health, feeding and supply facilities; and it permits installation of firebreaks.

PROBLEM: WATER QUANTITY

BACKGROUND:

People need water not only for drinking but also for cooking, washing cooking utensils, bathing and washing clothes. If average water supplies fall below certain levels, problems of skin disease, diarrhea and finally dehydration may occur.

STANDARD:

The supply of water to refugees in an emergency should be no less than 10 liters of water per person per day and, as soon as the initial emergency is over (i.e., a significant decline in the number of new arrivals), no less than 15 liters of water per person per day should be provided.

ANALYSIS PROCEDURES:

To determine if water supplies are adequate, determine the source of the water. Possible sources include:

A. Flowing rivers. If the settlement is adjacent to a flowing river, the quantity of water should not be a problem.

B. Intermittent streams, ponds, small lakes or open wells. It is important to determine how much water people are able to gather and store in their shelters, and to determine whether or not bathing and washing take place at the same location where drinking water is drawn.

If bathing and washing is not at the shelter, the amount of water available to each family should not be less than 5 liters per person per day.

If washing and bathing is at the shelter, the amount of water available to each family should be approximately 10 liters of water per person per day.

C. Pumped water wells. If water is drawn from wells with pumps, determine the volume available from each pump per day and divide by the total number of people. The total amount of water par day should not be less than 10 liters of water per person per day.

$$\text{Water per} = \frac{\text{Total volume (in liters) available daily from all sources}}{\text{Total \# of people}}$$

person Total number of people

D. Water deliveries. If water is delivered to the site by truck, cart or tanker, determine the volume delivered each day and divide by the total number of people. The amount of water available to each family should not be less than 10 liters of water per person per day.

~~If deliveries are less frequent than daily, please note it in the table.~~

$$\frac{\text{Total volume of water available daily (in liters)}}{\text{Total number of people}} = \text{Amount of water available per person per day}$$

E. Piped water: If water is obtained from a municipal water system, it is important to note the number of water taps. If people are forced to line up throughout the entire day, additional taps may be needed. Remember to check if the water flow is constant or if water is rationed, at certain hours, through the pipes.

Note: Anytime refugees are found to be paying for drinking water, the quantity of water delivered by relief agencies is below the standard.

PROBLEM: WATER QUALITY

BACKGROUND:

Pure water is needed by people for drinking, cooking and washing their eating utensils. (Water that is not pure but is generally clear may be used for bathing and washing clothes during the emergency.)

Purified water may be obtained by:

- Boiling -- this requires adequate fuel and kettles for boiling.
- In-home filtering -- this requires a filtering device.
- Adding chemicals such as bleaching powder or water purification tablets in the home -- this requires an adequate supply of chemicals or tablets.
- Adding chlorine at water tanks where people receive water -- this requires a clean water storage and distribution tank(s), and a person or team to inspect and clean the tank and then treat the water.
- Adding chlorine to the water at the source before delivering it to the site -- this requires a team to inspect and clean the water tankers before they are filled and to treat the water before or after it is put in the tanker; if the water is put in tanks for distributing to the people, a second team is needed to maintain the water tanks.
- Drawing the water from a clean source.

ANALYSIS PROCEDURE:

The method for purifying water should be determined from observation and verified from interviews with refugees and camp administrators.

An unusually high percentage of children and adults ill with or dying from diarrhea may indicate a problem of contaminated water. If more than 25% of the adults and children report diarrhea during household surveys, further analysis should be undertaken.

PROBLEM: SHELTER

BACKGROUND:

The provision of adequate shelter during the initial emergency is a critical concern where people are exposed to cold or rainy conditions. In dry, arid areas, shelter is a lesser concern.

STANDARDS:

When evaluating emergency shelter, the following aspects (listed according to priority) should be assessed:

- Protection from the environment:

  1. Do the roofs provide adequate protection from rain?

  2. Are shelter sites safe from flooding?

- Overcrowding: Each family should have private space equivalent to approximately 3.0 square meters per person. During the emergency, any form of habitation is acceptable if: 1) this space standard can be met, and 2) some degree of privacy can be given to each family, and 3) adequate ventilation can be provided.

TYPES OF SHELTERS:

One or more of these types of shelters may be encountered:

1. Self-built shelters: normally, one-room structures built of scavenged materials such as cardboard, plastic sheeting, cane, bamboo or sticks.

2. Emergency shelter units: shelters provided by relief agencies such as tents, prefabricated shelter units, wood frames covered with plastic sheets.

3. Temporary shelter in large buildings: warehouses, schools, barracks, etc.

4. More permanent structures: structures built of durable materials such as wood, cement block, adobe, brick or metal sheets designed to provide long-term shelter.

5. Scattered-site housing: families sheltered in existing housing dispersed throughout the emergency zone.

Any of the above shelters may be considered adequate if the standards outlined previously are met. The long-term suitability of each type should be considered, however; and, as a general rule, tents and other emergency shelter units should be used only as a last resort due to their cost and general poor durability. If it is possible that a long-term settlement is to be established at the initial site, more permanent shelter options should be considered immediately.

PROBLEM: PROTECTION

BACKGROUND:

International law guarantees refugees the right to protection from physical harm or coercion during the period they are refugees. This includes protection from armed attack from their country of origin and from the country of asylum, the right to remain in the country of asylum until they can return without fear of repression or persecution, and the right to protection from mistreatment while they are refugees.

The most important emergency concern is protecting the refugees from being forced to return to the country from which they fled (refoulement). An important indicator of a host government's intentions is the status or classification they extend to the refugees. If the arrivals are officially classified as refugees, refoulement is not usually an immediate threat. If, however, they are classified as "illegal immigrants", "economic migrants", etc., forced repatriation may be a threat.

By international law, the United Nations is assigned responsibility for guaranteeing refugees' rights. Most refugees are protected and assisted by the Office of the United Nations High Commissioner for Refugees (UNHCR). Others are handled by certain designated or specialized agencies of the UN, including UNRWA (for Palestinians), UNBRO (for Thai-Kampuchean border) and UNICEF (in certain cases only). The UNHCR has protection specialists on its staff and usually investigates protection incidents. The International Committee of the Red Cross (ICRC) may also become involved in protection issues.

NSH Ambiance

Problems to look for (in order of priority) include:

- Any instances of forced repatriation of refugees;
- Incarceration or physical violence against refugee leaders or members of any ethnic group among refugees;
- Evidence of violence, intimidation of refugees by other refugees or armed elements in the camp;
- Discriminate refusal of refugee status and/or protection status by host government;
- Official disregard for violence against refugees by host country nationals, especially military or police;

- Confiscation of refugees' belongings by host government forces/officials;

- Unexplained or high incidences of murder, disappearance, rape or other violent crimes;

- Closed borders (by country of asylum).

PROCEDURE:

Any incident that might indicate a problem of protection should be reported. Early detection and constant monitoring is a high priority. UNHCR and/or ICRC should be asked to verify or corroborate information on any incident.

Data Sources: Interviews, media, personal observation, household surveys.

PROBLEM: STAFFING FOR OVERALL COORDINATION AND MANAGEMENT OF THE EMERGENCY

BACKGROUND:

In a large-scale emergency operation, there are certain institutional and personnel requirements that are considered minimal to a successful relief operation.

Institutional Requirements:

1. An overall lead agency should be designated. This may be the host government's refugee organization, the UNHCR, ICRC, or other international agency.

2. A central food logistics agency should be selected. Normally, this would be UNHCR, WFP, ILO, or the host country's refugee organization. In some cases, AID/FFP has assumed this role.

3. If more than one volag is working in a refugee camp on the same type of program, one should be designated as the lead agency for that camp and all other agencies should provide services at a level equal to that of the lead agency.

Personnel Requirements:

1. A single person within the lead agency should be designated as coordinator for the emergency.

2. If the region where the emergencyis occurring is remote, an on-site coordinator should be designated.

3. One person in each camp should be appointed as camp administrator.

4. For overall coordination of certain facets of the operation, one person should be appointed to each of the following positions:

   (a) Food Logistics Coordinator
   (b) Feeding Program Coordinator (Supplemental Feeding Programs)
   (c) Health Program Coordinator
   (d) Water and Sanitation Coordinator
   (e) Protection Officer
   (f) Transport Officer

PROBLEM: STAFFING IN THE REFUGEE CAMPS

BACKGROUND:

A certain minimal staff is required in order to operate and maintain a refugee camp. Many of the critical jobs can be assigned to refugees.

STANDARDS:

The following staff are the minimum usually needed in a refugee camp during an emergency where new arrivals are sick and/or malnourished. Note: If several small camps are grouped close together, a mobile staff may be adequate.

Position	Number/Ratio
Camp administrator	1 per camp
Assistant administrator	1 per camp
Storekeeper	1 per camp
Storekeeper's assistant (distribution)	1 per 5,000
Warehouse guards	4-6 per whse.
Senior health officer	1 per camp
Nurses	____ per 10,000
Medical personnel	_____
Supplemental feeding coordinator	1 per camp
Supplemental feeding center administrators	1 per camp
Sanitation officer	1 per camp
Sanitation workers	1 per 500
Water maintenance officer	1 per camp
Housing/shelter officer	1 per camp
Shelter construction teams	as needed
Registration officer	1 per camp
Registration and screening teams	10 per 1,000 daily arrivals

PROBLEM: TRANSPORT AND LOGISTICS

Keeping one or more large refugee camps adequately supplied with all of the basic necessities for life support can be a logistical nightmare. Since relief organizations often fail to devote adequate resources and technical expertise to this necessary and vital task, you can expect to find problems in the logistics system in almost every relief operation. The problems can be classified as:

1. problems that occur before materials and supplies arrive in the country;

2. problems that occur in the distribution network of relief supplies within the country.

Of the two sets, the second is generally where most problems occur. In a "best case scenario", the problems are simply mismanagement and failure to apply adequate resources to meet logistics needs. In a "worst case scenario", the problems are due to intentional slowdowns, pilferage, theft and sometimes official diversions of items such as food from the refugee camps.

The figure on the following page provides a schematic view of a typical refugee supply pipeline, identifies the types of problems that may occur at each point in the system, and gives some options that can be considered to eliminate the problems.

The following problem analysis table further describes some of the most common transport and logistics problems and their causes.

INSERT TRANSPORT/LOGISTICS PROBLEM ANALYSIS TABLE

Problem	Cause	How to detect

EXERCISE for class

PROBLEM: SOCIAL SERVICES

The trauma of becoming a refugee can be very great. Social and psychological problems are created or exacerbated. Appropriate measures for resolving these problems are essential. It must be remembered that refugees are people with normal hopes, dreams and expectations. Being a refugee interferes with normal life, creating additional stress and fear. It can also lower the sense of self-esteem.

Social services must be designed to enable the refugees to participate in meeting their own needs. Care must be taken to utilize the refugee cfommunity's own resources for these efforts.

At a minimum, the following social services should be in place after three months:

1. family reunification.
2. Programs of care and/or protection of unaccompanied minors.
3. Self-help programs (e.g., gardening, works projects, markets).
4. Public health and nutrition programs.
5. Mail services

After six months, the following programs should be in place:

6. Programs for individuals who need special assistance in adapting socially or psychologically to their situation (especially teenage children).

7. Programs to assist the physically handicapped.

Determining whether or not these services are adequate is always difficult and usually <u>not</u> an emergency concern. However, some indicators that social services need to be increased or adjusted include the following:

<u>Indicator</u>	<u>Problem</u>	<u>Options</u>
Vandalism by teenagers	Boredom, frustration	Work, school and sports
Child abuse	Frustration	Work, counseling
Strikes or other organized protests	Frustration, specific grievances	Respond as appropriate
High incidence of women not	a. Stress, psychological problems,	Counseling, womens programs, mother

	menstruating	missing family (esp. children)	and child activities; step up tracing
		b. Ongoing malnutrition	Improve nutrition for women of childbearing age

action and speed response. This often means structuring the information in such a way that it will be useful and highlight or underscore the critical locations or concerns. Dissemination must be timely and must be available when the agencies need it for decision-making. Failure to disseminate and share information derived from assessments is one of the major problems in emergency management.

LESSONS LEARNED

A review of disaster assessment indicates the following lessons:

1. Assessment requires forethought and planning to determine critical information needs. Agencies should review their information needs and prepare assessment plans as part of their general emergency preparedness activities.

2. Any emergency assessment that takes longer than two weeks to conduct and interpret would be of doubtful value.

3. Surveys should be designed to develop data for long-term program planning as well as for emergency response.

4. Sophisticated survey techniques, such as modeling, can yield accurate and useful information but require that the plans for using the technique be developed long before the emergency assessment takes place.

SUMMARY OF COMMON PROBLEMS IN DISASTER ASSESSMENT

1. Failure to structure the survey to obtain the most critical data;

2. Failure to have an adequately-trained assessment team;

3. Poor assessment timing (i.e., too early, too late or at an inappropriate time);

4. Gathering too much information;

5. Improper interpretation; and

6. Failure to disseminate the interpreted results.[1]

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[1] "Establishing Needs After a Disaster: Assessment", INTERTECT, Dallas, Texas, 1981.

ASSESSMENT visual aids

DISEASE TABLE (From RP assess. manual)

EXERCISE 5

Group A - C

What type of assessment team should which have

Group B - D

What type of survey method should which employ

Group C

Information needs by sector + how to get that info

Group D

~~Info needs~~ What information can be collected in a camp by observation from interviews from statistics and what needs to be verified.

LESSON 9

ASSESSMENT OF REFUGEE EMERGENCIES OCCURING DURING DROUGHTS AND FAMINES

INTRODUCTION

In many parts of the world, refugee emergencies occur in the midst of, and in some cases may be triggered by, droughts or famines. Among natural disasters, droughts and famines© are unique, because, like refugee emergencies themselves, the overall situation may continue to deteriorate despite competent relief efforts. Crop failures and water shortages brought on by a drought severely reduce people's ability to remain in drought-affected areas and may force large numbers of people to seek food, water and temporary shelter elsewhere. And finally, as people are displaced, their long-term health and nutritional status maybe affected.

The record of disaster assistance to drought and famine victims is very poor, to a large extent because disaster assessments have been poor, focusing almost exclusively on people's immediate food needs and failing to link initial drought assessment to famine prediction and assessment. For example, in the early 1980s, the World Meteorological Organization began to issue warning of an impending drought in widespread regions on the Sahel; however, the warnings were mostly communicated to local meteorological organizations and agricultural ministries. Not until after widespread famine conditions began developing were relief agencies alerted to the need for food and other family assistance in the areas.

Although a drought does not necessarily result in famine, in this lesson we will treat droughts and famines together because they are so closely intertwined. (For more information see the DMC course, Droughts and Famines.)

ASSESSMENT CONCEPT

In order to conduct a successful assessment of a refugee emergency in a country affected by a drought or famine, it is important to understand the cause-and-effect relationships that are present and to identify the problems, such as competition for food, that may occur. First, drought conditions develop for climatic reasons. The impact of the conditions depends on a number of factors including: natural and ecological adaptations to the drought; the effect of human endeavors on the land surface (especially mismanagement of natural resources, agricultural development, over-grazing, etc.); water supplies in the

area; and measures that have been taken by humans to anticipate or counter a drought (such as stockpiling food reserves, storing additional water, etc.).

If a drought persists, and if counter-measures and drought survival techniques are not effective, a second set of events may occur. First, people may be forced to leave the land in search of food, water and temporary employment. This displacement may lead to the convergence of people in cities or large towns, or at aid stations or temporary camps. Often persons displaced by the famine may percieve that by claiming refugee status they may be eligible for food or other services given to the refugees. This is especially the case wehen the local people are culturally or linguistically similar. Thus, the first problem to be anticipated is an influx of persons claiming to be refugees.

By the time displacement occurs, the health and nutritional status of the persons most affected (marginal farmers, herdsmen and low-income families from small rural towns or villages) will probably have deteriorated. As nutritional status deteriorates, susceptibility to disease increases. When non-refugees enter a camp they may be suseptible to diseases the refugees are bringing or, conversely, may transmit diseases to the refugees.

Assessment of refugee emergencies under these conditions must consider several factors. First, at what point does a specific condition cause the next event in the sequence to start? For example, at what point do famine conditions result in displacements of local people?

Second, what conditions should trigger specific responses? For example, at what point is it important to share food and health services with local people?

Third, what sets of deteriorated conditions (called thresholds) should, when reached, automatically escalate the emergency response?

Fourth, at what point will local conditions affect the administration of relief to refugees?

In each country, these factors may differ depending on the government's ability to respond to the drought and to take effective countermeasures. Only the thresholds which are generally related to people's health and nutritional status as defined by standards of international relief practice remain fixed. Thus, an assessment team must not only identify what is happening but also predict what may happen in the future and determine appropriate interventions for both present and future needs.

Famine early warning[e] is a technique that should play a key part of assessment in these situations. In recent years, much research has been carried out to identify the indicators and thresholds of an impending famine. For example, Oxfam has identified four indicators for an experimental drought monitoring program. Two early warning indicators: rainfall and crop forecasts (given by the meterological service and the Ministry of Agriculture) and two late warning indicators: livestock and food grain prices in the local markets; and nutrition status. It is suggested that these could show deteriorating circumstances and thresholds, that would then lead to more detailed assessments of other complex indicators like migration, with a view to the adoption of relief measures.

ASSESSMENT CONSIDERATIONS DURING DROUGHTS

1. Assessment when a famine is anticipated:

   a. Define the extent of the drought and delineate the potential drought-affected region;

   b. Locate pockets of greatest need and quantify the needs, especially in the agricultural and animal husbandry sectors;

   c. determine assistance priorities and appropriate interventions;

   d. Monitor famine early warning systems;

   e. Gather baseline data for establishing the thresholds that will automatically escalate response should the famine persist;

   f. Project the overall level of assistance that may be required if non-refugee populations must be added to the caseload;

   g. Identify drought prevention and mitigation measures that can be taken and identify appropriate institutions to initiate countermeasures.

2. Assessment during advanced stages of a drought and/or famine:

   a. Determine needs of and available resources for refugees and local famine victims including food, water and interim economic assistance;

   b. Determine assistance priorities and appropriate interventions;

c. Identify further famine countermeasures;

d. Identify institutions which can take effective drought and famine countermeasures and/or participate in relief operations.

TIMING

Famine assessment activities should commence as soon as drought conditions are detected. Famine monitoring should continue as long as drought conditions are present and at least two years afterwards (because many droughts experience temporary breaks lasting from several months up to one year; for example, flash floods often occur after three or four years of drought, but the overall drought conditions may continue for several more years).

Surveillance of health and nutritional status should continue until all people return to normal health and can maintain health and nutritional status on their own.

ADDED ASSESSMENT COMPONENTS:

In addition to the normal assessment procedures, certain additional aspects of the situation should be assessed. They are:

1. The impact of the drought on agriculture, animal husbandry and local economic systems.

2. The impact of the drought on people living near the sites of refugee camps, especially their health and nutritional status.

3. The impact of the drought on water supply.

Appendix 9-A

DROUGHT ASSESSMENT PROCEDURE

The following procedure should be used to conduct drought and famine assessments:

1. Identify organizations and personnel active int he affected area.

2. Identify the priority zones. Priority areas can be determined through:

a. preliminary reports;

b. other disaster assessments;

c. meteorological data from the affected area;

d. remote sensing or aerial photography;

e. interviews of persons who have been working in the affected areas.

3. Determine the areas to be assessed, and obtain permission and support of your intentions from appropriate authorities.

4. Conduct the assessment. The disaster assessment should consist of several activities including:

a. An overflight of the project area: A flight over the disaster-affected area can provide a good picture of the extent of drought conditions and can help identify areas of priority concern. During the flight the observer should note the general lay of the land; indications of drought, such as dying crops, trees and other vegetation; dry rivers, lakes, reservoirs or other surface water sources normally full; dead animals; and changes to the land form such as encroaching sand dunes. Of special concern is the status of irrigation systems. Also try to note the status of draught animals and livestock herds. Observers should try to take low-level oblique photographs of the priority areas and, if possible, high altitude, vertical or near-vertical photographs of the same zones. Photos may be either in color or color infrared.

b. Ground surveys: The assessment team should then visit the priority areas to collect data regarding the extent of the drought and patterns of damage or losses and to develop estimates of current and projected losses. It is important that the ground survey verify priority areas of concern.

During the ground survey, emphasis should be given to collecting information about the availability of food and water, and on social behavior of the people in the affected communities. Food data that is critical includes:

- crop forecasts;

- food availability in local markets and estimates of continued availability;

- prices of basic foods;

- current, on-going measures to reduce food deficits, especially food aid.

Data about availability of water includes:

- calculations about the average amount of water available for each person (the generally recognized emergency standard is 15 liters of water per person, per day);

- estimates concerning the continued availability of water for both people and animals;

- data concerning the quality of the water, especially data that would show if quality is deteriorating over time.

Socio-economic indicators supplement crop forecasting and food accounting systems and social behavior can precisely indicate an impending famine.[1] An important "window" on social behavior is provided by the performance of various markets, especially food, animal, labor, and land markets, which can also provide quantitative data on changing relationships.

c. Interviews: The assessment team should conduct a series of interviews int he affected area. Persons to be interviewed include disaster victims, local public officials, personnel of relief and/or development organizations working in the area, persons form agricultural institutions (such as agricultural extensionists), persons from agricultural co-ops and farm credit institutions, the sellers of farm implements, fertilizers and seeds, and most important, people and families most at risk from the drought or famine.

d. NCH assessments: The assessment team should conduct a random sample of health and nutritional status, including mortality/morbidity data, among the most vulnerable groups (pregnant and lactating women, and children under five) of the people most likely to be affected by the drought (small farmers, families of herdsmen and low-income village dwellers). The NCH assessment procedure is more fully described later in this chapter.

e. Summary: Before leaving the project area, the assessment team should review the data collected,

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1 "Food Crisis Detection, Going Beyond the Balance Sheet", by Peter Cutler, Food Policy, August 1984, pp. 189-192.

identify any gaps that exist in the information, and attempt to collect the missing information before leaving the area. All information that may be subjective should be verified so that inaccuracies can be reduced.

5. Conduct post-field-assessment interviews. After leaving the affected area, the assessment team should interview persons outside the area who are knowledgeable about conditions and agriculture in the affected communities. The assessment team should share their findings and ask those being interviewed if any major discrepancies or gaps appear in the assessment. During these interviews, it is important that any plans for agricultural rehabilitation, water resource development and/or food aid be explained, so that the persons being interviewed can understand the reasons for the inquiry and can help identify additional sources of information useful in the assessment.

6. Prepare a final report. Once the assessment is complete, it is important that the findings be disseminated in written form to provide program planners with a ready source of information. As additional information is developed during the project or obtained from other assessments, it should be compared to the initial assessment to make sure that underlying assumptions are still valid.

Explanation: By graphing the total annual rainfall each year, trends can be detected that show when dryer periods may occur. In this example, based on rainfall records for Eastern Sudan, a planner in 1980 and 1981 might be able to forecast a developing drought, by 1983 it would be very

evident from the downward trend in rainfall. It should be noted that downward trends (i.e., developing droughts) are usually easier to forecast than a period of increased rainfall. For example, the meteorologist studying the downward trend on this graph from 1971-1974 had no way to predict the upward trend that began in 1975. Likewise, the heavy rainfall in 1985, ending the 1981-1984 drought could not have been accurately predicted, though from the previous trend it might have been expected as it appears that dry periods in the region last 4-5 years.

2. Agricultural Damage Assessment and Monitoring: The procedures for damage assessment are the same as those set out in Chapter 9.

3. Animal Herd Evaluation: An important concern in droughts is the status of food, milk and draught animals such as cows and oxen, camels, goats, sheep and horses. It is important to analyze the status of animals in the affected region to determine:

   a. the extent of losses;

   b. changes in migratory patterns caused by scarce water (that could lead to overgrazing in areas currently unaffected by the drought);

   c. the economic impact of animal losses;

   d. the impact on nutrition from the loss of the animals.

   Assessment of animal losses is especially critical among nomadic and pastoral peoples.

   In this assessment is important to identify:

   a. water supply needs;

   b. alternatives or sources normally used during dry periods and their status;

   c. fodder needs;

   d. normal drought responses practiced by the herdsmen during droughts. (Over the years, many pastoral people have developed insights on how to deal with drought conditions. For example, when conditions reach a certain point, they may sell their animals or slaughter them and cure the meat for long-term use. It is important to know what the traditional responses are and at what point assistance may be required.)

   During the assessment it is important to photograph representative animals and their condition.

(This should be ~~kept as~~ a separate ~~document~~ USSM)

NCH Assessment:

LESSON 2

PROGRAM PLANNING

The delivery of all forms of disaster assistance can be improved through detailed program planning and sound program management. Program planning is the more important, for if all aspects of the program are thoroughly considered, if objectives are clearly defined and tasks are properly sequenced, many of the management problems that often develop can be avoided. Program planning is not difficult and does not take a lot of time. The following is a description of some of the key considerations and steps in program planning and management.

The planning function includes all managerial activities which determine the program's objectives and the appropriate means to achieve these objectives. In order to analyze the planning function in more specific terms, the function can be broken down into six interrelated steps:

Step 1 Determining how and where the agency can provide assistance.

Step 2 Stating and implementing policies which direct activities toward the desired objectives.

Step 3 Establishing goals and objectives, and putting them in order according to priority.

Step 4 Quantifying objectives.

Step 5 Determining strategies and approaches for implementation.

Step 6 Making the plans operational through budgeting and resource allocation.

Each step must be undertaken and related to the other steps in order to complete the planning function. The end result is an overall plan which guides the organization toward predetermined objectives.

In this lesson we shall examine the basic terminology and concepts of planning as well as some basic techniques used in planning.

DETERMINING HOW AND WHERE TO INTERVENE

The first step in intervention is deciding how and where the agency can be most helpful. One of the first activities following a disaster is disaster assessment. There are three types of assessment: damage assessment, needs assessment and situation assessment. For most relief and reconstruction programs, needs

assessment is the more critical during the emergency phase of an operation. Needs can best be determined by visiting representative areas and talking to selected groups in the affected communities. Emergency needs are usually obvious; long-term needs may be more difficult to ascertain. Furthermore, needs change from day to day. What is important is identifying the needs at the times they must be met.

Once the basic needs have been identified, they should be quantified. Agencies should be careful not to become too involved in surveying, but should attempt to estimate percentages of families requiring different types of assistance.

> "A count needs to be taken of the reserves of food, medicine, clothing and building materials existing within the community, and of the capacity of the victims to help themselves and each other. Rarely will everyone in the area be stricken, and of those who are, not all will take advantage of the relief offered."[1]

The next step is to determine what gaps exist in the overall delivery of assistance. Agencies should remember that usually other relief organizations will provide aid, and their plans should be taken into account before the agency decides which activities it will undertake in any particular area. (One way to ensure that activities do not overlap is to use a "Gap Identification Sheet" as shown in Appendix II-A.)

INITIAL STEPS IN PROGRAM PLANNING

Once an agency has decided on a certain course of action, the next step is to define precisely what the program hopes to achieve, and to establish a framework for guiding the decisions that will be required in subsequent activities. To do this, an agency first sets its policies, then establishes goals and objectives, and finally selects the strategies and approaches by which to attain the objectives. The process sounds simple and, in fact, it is. Yet it is surprising how many agencies fail to utilize it and flounder because no one is sure precisely what the goals of the program are.

SETTING POLICIES

Policies are used to shape the response. They provide a framework, or standard, by which choices are evaluated. Setting policy is one of the easiest of all the program planning steps, but unfortunately is the one that is the most often neglected and is often made more difficult by limited mandates of the organization or by prior constraints set by donors. Ideally, an agency that frequently responds to disasters sets flexible policies as part of

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[1] Alan J. Taylor, Assessment of Victim Needs, INTERTECT, Dallas, Texas, 1978.

its preparedness activities; when a disaster occurs, those involved in the initial program have a general guide for structuring their decision-making.

The following policies were set by the Catholic Relief Services staff in the Dominican Republic to guide the CRS housing reconstruction program following Hurricanes David and Frederick in 1979. They demonstrate how simple a policy framework can be:

To support and expand local actions or groups;
To conduct all activities in such a way as to meet development goals;
To maximize all expenditures through recapture of funds, extension of buying power, multiple objective planning;
To give priority to people who are not eligible for any other form of assistance;
To rely on appropriate technology;
To spend majority of funds within the project areas;
To give priority to [a particular] area or sector.[2]

Once having formulated its policy framework, every time an organization subsequently needs to make important choices, it can first review them against the policies it has set to determine whether or not the choices "fit".

Policy-making ensures that action is objective-oriented. Policies determine how the objectives are to be achieved (the strategies). Managerial control includes specification of action before the fact, and policies serve this end.

Effective policies must be:

1. Flexible. A policy must strike a reasonable balance between stability and flexibility. Conditions change and policies must change to meet them. On the other hand, some degree of stability must prevail if order and a sense of direction are to be achieved.

2. Comprehensive. A policy must cover any contingency. The degree of comprehensiveness depends upon the scope of action encompassed by the policy itself. If the policy is directed toward very narrow ranges of activity -- for example, hiring policies -- it need not be as comprehensive as a policy concerned with broader issues.

3. Coordinative. A policy must provide for the coordination of the various sub-units of the organization whose actions are interrelated. Without coordinative direction provided by policies, each sub-unit is tempted to pursue its own objectives. The ultimate test of any sub-unit's activity should be its relationship to the policy statement.

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[2] Housing program proposal of CRS/Dominican Republic, 1979.

4. Clear. A policy must be stated clearly and logically. It must specify the intended aim of the action which it governs, define the appropriate methods and action, and establish the limits of freedom of action permitted to decision-makers and suborbinates.

SETTING OBJECTIVES

Managers must consider three aspects of objectives: the priority of each objective; its timing; and its delegation to the appropriate person or department in the organization.

Priority of Objectives

In program planning, the accomplishment of certain objectives may be relatively more important than others. Therefore, the establishment of priorities is extremely important so that the resources of the organization can be allocated rationally. Managers are constantly confronted with alternative objectives which must be evaluated and ranked. Of course, the determination of objectives and priorities is often a judgmental decision and, therefore, can be difficult.

Timing

An organization's activities are guided by different objectives depending upon the duration of the action and the point in time at which they are being carried out. In emergency operations, it is common to refer to actions as "short-term" (those that take place in the period immediately before, during or after an emergency), "intermediate" (those that take place in the transitional or rehabilitation phase), and "long-term" (those that take place during the reconstruction or recovery period or long before a disaster). The relationship between priority and timing is quite close since the objectives tend to be stated in terms of "ultimates", that is, those objectives which must be accomplished in order to ensure the continuity of a program in each successive time phase.

Delegating Objectives

Because agencies are organized into departments according to function -- e.g., procurement, operations, finance -- or by area, it is important that objectives be assigned to the appropriate person or department in the agency to be carried out.

The delegation of objectives should be reviewed for conflicts and problems of coordination, because in certain cases achieving the objectives in one department may make it difficult to achieve objectives in another. For example, a procurement objective of lowering procurement costs by mass purchase of low-cost, short-life materials may conflict with an operational objective of providing high-quality, durable materials. This problem can be resolved by a careful review of objectives and the balancing of objectives through group consensus (with the understanding that the objectives of neither unit can be maximized).

Conflicts in Objective Setting

Many diverse groups have interests in the operation of relief agencies that are potentially in conflict. At any point, disaster victims, the agency's staff, donors, suppliers and governmental oversight groups are all concerned with the operation of an agency. During the process of setting objectives, the relative importance of these interest groups must be recognized, and the plans must incorporate and integrate their interests.

Some of the most common planning trade-offs faced by managers in relief organizations are the following:

1. Short-term versus long-term programs.

2. "Relief" versus "development"programs.

3. Service to present areas versus expanding to new areas.

Measurement of Objectives

Objectives must be stated in terms that are understandable and measurable to those who must achieve them. In fact, there is evidence which clearly indicates that specific, measurable objectives increase both staff and organizational performance, and that difficult objectives, if accepted by employees, result in better performance than easier objectives.

The real difficulty lies in determining what should be measured in each area, and how it should be measured. The more abstract the objective, the more difficult it is to measure performance.

An obvious side effect of the necessity for measurable objectives is the tendency in some organizations to focus attention on the measurement and away from the true substance of the objective. A relief agency which measures accomplishment in terms of numbers of persons receiving aid, instead of the quality of supplies delivered and the benefit provided, exemplifies over-concern for the measurement process instead of what is being measured.

QUANTIFYING OBJECTIVES

The fourth step in program planning is the quantification of objectives. The purpose is to determine how much assistance is to be provided and how many beneficiaries there will be. (It is at this point that the quantifications provided by the different parts of the disaster assessment are helpful.)

Some examples from the Catholic Relief Services program in the Dominican Republic were:

To reach 25 percent of the low-income people within the project area (1,500 families);

To provide 1000 loans, 5000 subsidies, 1000 grants in the project area;

To double the margin of safety in the housing rebuilt by the program.

The quantification of objectives is not a difficult process, but establishing realisistic numbers requires much forethought and discussion. It is at this point that the agency must balance its desire to help against a realistic assessment of its own capabilities.

DETERMINING STRATEGIES AND APPROACHES

Determination of strategies and approaches is the fifth step in conceptualizing a relief or reconstruction program. A strategy is the plan for attaining a goal, while an approach is the the method used. The following example should clarify the differences. To provide replacement housing after a disaster, some strategies open to an agency are:

1. To provide indirect assistance by stimulating the housing industry;

2. To provide direct assistance by giving loans and grants;

3. To provide direct assistance by establishing a construction program.

Assuming that the strategy chosen by an agency is to establish a housing program, some approaches that might be available include:

1. To provide the needed construction materials and tools;

2. To provide materials and technical assistance in an "aided" self-help construction program;

3. To establish a construction team and build the frames and roofs of houses, but leave the remainder of the construction and finishing details to the homeowner;

4. To establish a construction team and build complete replacement houses for a designated number of people in the project area.

The selection of one strategy or appraoch should not preclude the adoption of others if the resources of the agency allow. It is especially important that approaches be balanced and complementary.

SETTING UP THE PROGRAM

Once an organization has defined its program, the process of putting it into operation begins. This means finding funds, allocating resources, developing program management, and monitoring the projects.

Budgeting and Resource Allocation

The allocation of resources, especially money, is one of the most difficult choices that an agency will face. It involves a continuing process of estimating financial and other resource needs, obtaining the money and materials, then adjusting the budget based on the resources received. There are some general concepts that are helpful in stretching funds:

1. **Linking to other programs:** This is the simplest and most effective way to expand the capabilities of an organization. The methods usually considered are cost-sharing, pooling of resources, or contributing matching funds.

2. **Recoverable funding:** In recoverable funding, all or a portion of the funds distributed are returned to the program (usually for reinvestment). The most common examples are revolving loans and sales or subsidy schemes. Recoverable funding increases the number of people who can be served and extends the "service" of the cash originally allocated.

3. **Maximization of buying power:** This refers to the practice of selectively spending money so that the financial power of either the programs or of the beneficiaries is extended. For example, if loans are determined to be a viable option, an agency can use its money to guarantee loans from usual financial institutions to clients who normally would not be eligible, instead of using its own resources to make the loans. In this manner an amount of $100,000 could be used to guarantee up to $1,000,000 or more in loans, thus increasing ten-fold the buying power of the money the agency has on hand. At the individual level, an example of maximizing expenditures is the use of coupons or redeemable certificates (such as food stamps) to increase the buying power of the people. In this way, the resources of the agency can be "piggy-backed" with the resources of the victims.

4. **Multiple objective planning:** In this approach, expenditures are targeted so that more than one objective is realized with each disbursement. This can be accomplished by injecting money into the community in such a way that most of it will stay in the community or at least pass through several hands before leaving. An example: a work project is established to repair a road damaged by the disaster. People are paid in cash and by coupons redeemable in local markets only; the workers spend the money and thereby help stimulate recovery of the local economy, which in turn provides a market for goods from the farmers affected by the disaster. In this manner, the following objectives are reached: a road is repaired, capital is provided to the victims, the victims' buying power is extended, the market is stimulated, an economic unit (the market) is assisted, and finally, the farmers (victims themeselves) are assisted. The number of contacts handling the money: three.

Methods for Balancing a Program

The following are methods for balancing a program.

1. **Concentration of resources:** To have the maximum effect on a community, a program should concentrate its resources in a specific geographic area. The size of the area should be such that funding activities are complementary and expenditures in one sector can have an effect on other sectors in the same community. For example, if an agency is funding a housing program in one community and an agricultural recovery program in another, the result will be less effective than if they were in the same community, and the overall cost will be higher.

2. **Balance between family and community assistance:** Most international relief agencies, especially the Volags, tend to respond to disasters with programs to assist families. Community assistance is commonly left to the government and its donors. In certain situations, it may seem difficult for an agency to coordinate its activities so that both families and communities receive assistance concurrently and a degree of balance is attained. Yet full recovery is not complete until all sectors are restored to normal, and the government's resources are often very limited. For this reason, it may be necessary to provide assistance to community projects as well as to families, especially following large disasters in remote rural areas where governmental assistance is likely to come slowly, if at all. As a rule, agencies should allocate one-fourth to one-third of the project funds for labor-intensive community projects in these situations.

3. **Balanced financial assistance:** Before deciding how to provide financial assistance to families, the financial capabilities of the average family to be served should be considered. Rather than provide all assistance free, it may be possible to sell some items at full or greatly reduced prices. Some victims of disaster can qualify for loans rather than grants. It should be remembered that grants or donations are nonrecoverable and an assistance program will soon be out of business if this course is followed. Therefore, an agency should develop a balanced portfolio of financial assistance prior to initiating operations. The proper ratio of loans to grants is approximately 80:20. For Integrated Recovery Programs*, a suggested balance is 40 percent subsidies, 30 percent loans, 20 percent community assistance projects, and 10 percent grants.

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*Integrated Recovery Programs are large-scale programs that cover several sectors and integrate relief and development activities.

Estimating Needs and Resources

The first step in resource allocation is estimating both needs and resources. The two basic issues that must be resolved are: (1) what types and levels of needs will be encountered during the planning period and (2) what level of resources will be available to meet the needs. This process is called forecasting and determines the level and timing of financial and material resources required to sustain operations.

Forecasting is the process of using past and current information to predict future events. There are four widely used methods, each of which requires its own type of data. These methods range in degree of sophistication from the hunches of experienced managers to specialized models.

Hunches are estimates of future events based upon past experience. The "hunch" approach is relatively cheap and usually effective if the person making the hunch has a thorough knowledge of the project area, practice in programming, and a background of working in similar projects.

Surveys are research efforts carried out by staff in the field to provide more data (usually to verify other forecasts). By means of statistical sampling techniques, the forecaster can often compile enough information to identify a range of needs.

Time-series analysis is simply the analysis of the relationship between needs and time, as shown in Figures 2-1 and 2-2. (The charts show points corresponding to the supplies requested for each day since the commencement of two relief operations.)

The advantages and disadvantages to using time-series analysis can be seen by looking at the two basic types of disasters. In cataclysmic or rapid onset disasters such as earthquakes or hurricanes, emergency needs occur quickly, rise rapidly and then fall fairly steadily. For long-term, continuing disasters such as civil wars and droughts, needs may rise sporadically and continuously for long periods of time. In Figure 2-1, the question of needs during week 3 onward can be answered for the earthquake; Figure 2-2 illustrates that use of this technique cannot accurately forecast needs for a drought.

FIGURE 2-1

Two examples of Time Series Analysis

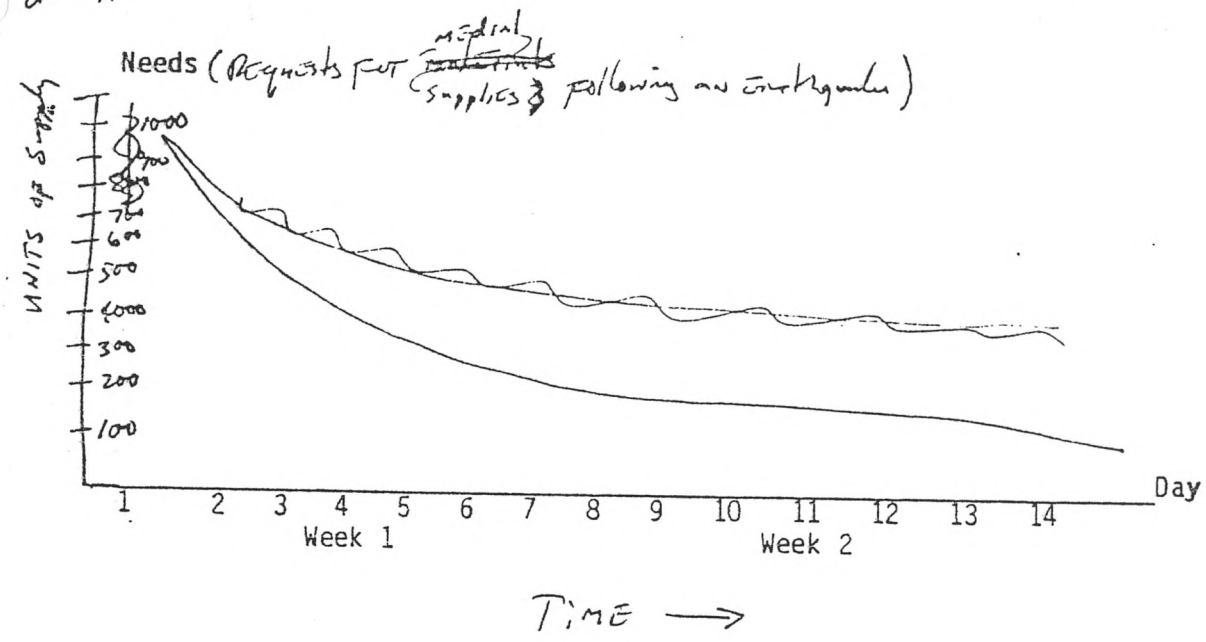
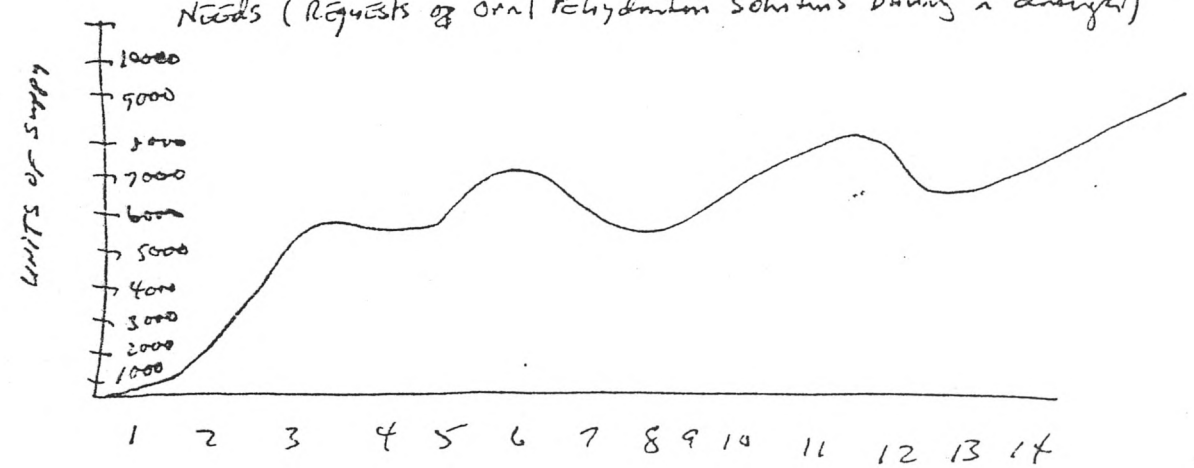


Figure 2-2



Comparative Modeling permits the forecaster to analyze the relationship between needs and a number of independent variables, and to predict needs based on similar patterns of need from past disasters.

One method which can be used for modeling assistance needs following a rapid onset disaster begins with identification of the variables which are normally encountered in a particular type of disaster. Among the obvious variables are locale, season, setting (urban or rural), availability of local resources, and people's preferences. For example, shelter demands will be greater and more immediate in a cold, wet climate than in a dry, mild climate.

Trends regarding needs and demands from previous operations are identified and charted on a time-series graph and compared with the demands and needs of the present operation (see Figure 2-3). By comparing present needs with the curve representing past experience, the manager can forecast future needs. In the example shown in Figure 2-3, the needs in the current operation are approximately fifty percent greater than the trend from past operations. Thus, a manager could reasonably predict that needs in three weeks would be approximately fifty percent greater than the needs for the same time period from previous disasters.

In order for an organization to operate, it must have the necessary resources. Accordingly, it is necessary to forecast the future availability of personnel, materials and capital. The techniques of forecasting resources are virtually the same as those employed to forecast operations -- that is, hunches, surveys, time-series analysis, and modeling.

Forecasting Needs

Forecasting needs in long-term, slow onset disasters such as droughts or refugee crises is a problem often faced by emergency managers. Situations where refugees are continuing to arrive, and the conditions that are displacing them are not predicted to change in the immediate future, demand that effective contingency planning, especially for food supplies, receive a high priority. Contingency planning consists of estimating the number of new arrivals and ordering and pre-positioning supplies.

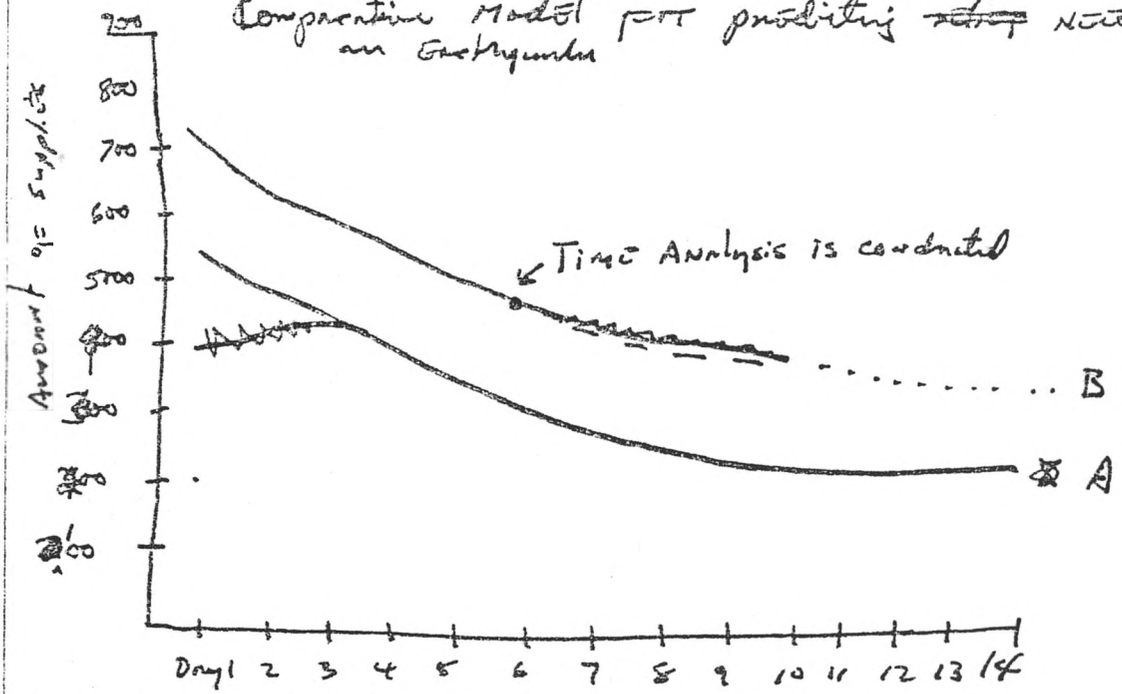
Because refugee situations are fluid, it is often difficult to estimate the number of people that may require help. Among the factors that must be considered are:

1. Enough supplies must be ordered to meet the needs of new arrivals without:
   a. overordering;
   b. drawing on supplies for refugees already under care;
   c. overloading storage and transport capacity (thus resulting in spoilage and increased chance of pilferage).

~~Graph Ed Style~~

Figure 2-3

Comparative Model for predicting emergency medical needs after an Earthquake



A = Trend from similar past operations

B = Current trend

Comparative Model for Predicting Emergency Medical Needs After an Earthquake

2. Sufficient lead time must be factored into any purchases that require shipment from abroad, to allow for transit time.

3. Local purchases must be handled in such a way that they do not cause price increases or shortages for local people.

A formula that may be used for estimating the potential number of new arrivals is described below. This formula provides planners with:

--- an estimate of how many people may be in need of assistance during a specified, limited period;

--- a number that can be used to determine if the supplies they have on hand or in the pipeline could meet the needs of new arrivals;

--- a number that will permit an agency to order the necessary supplies without overordering or overloading the logistics system.

In most droughts and refugee situations, new arrivals appear over a period of time; i.e., after the initial influx, the percentage of new arrivals rarely doubles instantaneously. The new arrivals rarely come in a steady flow; rather they usually come in waves triggered by specific events. Thus, contingency plans must be constantly updated, and agencies should adopt a flexible basis for determining numbers rather than trying to guess the total and stockpiling for that number. The formula below should therefore be updated on a weekly basis throughout the emergency.

To determine the number of refugees for contingency planning, use the following formula:

$$cn = R_1 + (R_2 \times T) + P(R_2 \times T)$$

Where:

cn	=	contingency planning number
R_1	=	the number of persons now receiving assistance
R_2	=	the number of new arrivals in last week
P	=	the percentage of the total that the new arrivals (last week) represent
T	=	the time in weeks needed to deliver supplies (e.g., if a two-month lead time is necessary, use "8")

Note: always round "cn" to next 5,000 increment

Example: Assume there are 10,000 refugees now and last week 1,000 more arrived. Also assume an 8-week lead time for shipping supplies:

cn = 10,000 + (1,000 x 8) + .10(8,000)
cn = 10,000 + 8,000 + 800
cn = 18,800
cn = 20,000 (rounded)

Budgeting

The next step in resource allocation is the development of budgets for each important element of the program. Money is the oil that keeps the relief machine running smoothly; thus simple, accurate systems that improve budgeting and cost control are crucial. Budgeting for post-disaster programs is usually a trial-and-error process, especially for Volags. Because Volags usually raise their relief money through appeals to the public or by submitting proposals to government or inter-governmental organizations, they rarely know precisely how much money they will have for the operation when they start out; this, coupled with the uncertainties that exist until the disaster assessment is completed, makes it difficult to prepare a budget.

The popular preconception is that budgets are overestimated in the early stages when finanical resources are plentiful, or that an agency expands its activities beyond the resources available. In practice, this is usually not the case. Some disasters attract an outpouring of aid and, if the major donor governments become involved, substantial resources will be available. More often, the problem is trying to allocate resources wisely or to establish programs that match the capabilities of an organization, rather than not having sufficient resources.

Many agencies tend to develop fixed, inflexible budgets early in a program. In agencies where rigid financial policies exist, a quickly prepared budget may inadvertently become an instrument that controls the program, rather than vice versa.

The most realistic way to overcome budgeting problems is for an agency to establish a policy on how and when it will commit its funds in each phase of the disaster. For example, some agencies place a significant portion (up to 75 percent) of all funds received from initial appeals into a contingency fund for use in longer-term programs during reconstruction. This allows the field staff to develop more realistic budgets in the later stages of recovery.

Whatever approach is used, a budget must be flexible and especially anticipate inflation of costs in the disaster area. If it is formulated during the initial stages of a disaster, a large portion of the total budget should be left in uncommitted contingency reserve so that the field staff can adapt to the changing situation and respond to unmet needs.

Many agencies experience difficulty with monetary control and have trouble accounting for funds. Usually this is because they do not use accounting systems that are adapted to a disaster situation. Good field accounting requires a simple system that is easy to use, easy to carry, and places the emphasis of trust on the user; and it requires training in how to use the system before disaster strikes. Field representatives, especially in the emergency, must have an accounting system that recognizes the need for flexibility and simplicity. Several agencies have recently begun to use simplified

field-account books that have built-in impression pads, so that duplicate or triplicate records can be prepared and maintained. This innovation reflects the agencies' awareness that a disaster creates special accounting needs.

There is a close relationship between budgeting as a planning technique and budgeting as a control technique. In this section we are concerned only with the preparation of budgets prior to operations. From this perspective, budgeting is a part of planning. However, with the passage of time and as the organization engages in its activities, the actual results are compared with the budgeted (planned) results. This analysis may lead to corrective action. Thus, budgeting can be viewed as a method for evaluating and coordinating the efforts of the organization.

Budgeting Approaches

The value of budgets as a planning tool depends on how flexible they are to changing conditions. The forecasted data are based upon certain assumptions about the future. If these assumptions prove wrong, the budgets are inadequate. (Unfortunately, contracting procedures of many major donor organizations do not take disaster conditions into consideration and continue to rely on fixed budgets.)

In disasters, a fixed budget is difficult to use because situations, especially in an emergency, change rapidly. Thus a more flexible type of budget is needed. This is particularly important in refugee emergency operations when neither the total number of refugees nor the length of the operation is known. Two ways to provide flexibility in budgeting are variable budgeting and moving budgeting.

Variable budgeting provides for the possibility that actual costs deviate from planned costs. It recognizes that certain costs are variable while others are fixed.

Table 2-A shows a variable budget which allows a relief agency to anticipate what the costs of sheltering refugees in a camp might be for different numbers of refugees. In this case, the cost of the land needed to situate the refugees is fixed, i.e., it is the same no matter how many people are placed on the site. The cost of shelters, however, is variable. The initial costs (for equipment, tools, etc.) are higher on a per-shelter basis but can be pro-rated for later shelters, thereby reducing the per-unit shelter cost.

TABLE 2-A

A hypothetical variable budget for shelter in a refugee camp

Number of Refugee Families	1,000	1,200	1,400	1,600
Fixed costs (land)	$ 10,000	$ 10,000	$ 10,000	$ 10,000
Variable costs (equipment, material, etc.)	$300,000	$330,000	$350,000	$360,000
TOTAL COST	$310,000	$340,000	$360,000	$370,000

This is a simplified version to illustrate the reduction of cost per family shelter as the number of refugees increases, based on variables such as pro-rated cost of tools and equipment, price reductions on bulk purchase of materials, etc.

Another variable is transportation. If advance planning can give a close estimate of the number of families to be sheltered during initial ordering of materials, only one shipment may be required and that cost can be pro-rated for the total shelters built. However, if initial estimates are far below the actual number of shelters required, additional orders of materials will necessitate additional shipping/transport costs.

This example shows costs per family shelter, beginning at $300 and reduced by increments of $25. At some point the cost will become relatively stable; for example, there is a point beyond which no reductions are available for bulk purchase of materials.

Moving budgeting is the preparation of a budget for a fixed period, say, one year, with periodic updating at fixed intervals, say, one month. For example, a budget is prepared in December for the next year, January through December. At the end of January, the budget is revised and projected for the next 12 months, February through January. In this manner, the most recent information is included in the budgeting process. Premises and assumptions are constantly revised as management monitors the program.

Moving budgets have the advantage of systematic re-examination, but the disadvantage of being time-consuming to maintain.

COMMON PROBLEMS IN PROGRAM PLANNING

An analysis of program planning in a number of recent relief operations reveals common errors.

1. Poor definition of the project: Not enough can be said about this topic. The vast majority of relief and reconstruction programs are conducted without the establishment of formal goals or objectives. Often there are vague statements such as "to help the victim" or "to reconstruct houses". Until the staff has defined where a project is going, it will be difficult to determine how to get there.

2. Failure to establish policies to shape program planning: Policies provide the framework within which the staff makes choices throughout the program planning process. Failure to establish policies early leaves a program without any guiding principles and with no firm basis upon which to make decisions.

3. Failure to involve the local people fully in the planning process.

4. Failure to examine the complete range of options: Too often, an agency selects the first approach to solving a particular problem that is proposed. Usually this is a matter of not taking enough time to explore the choices, or of not being familiar with the possible alternatives.

5. Selection of only one strategy or approach to problem-solving: Often an organization will "fixate" on a particular methodology and will develop a whole program around one standard approach. If anything goes wrong, or if the approach meets with only limited success, the entire program may have to be restructured. Furthermore, the selection of only one approach does not easily accommodate variances within the affected area.

6. Failure to balance the program: A balanced program meets a variety of related needs. For example, a housing reconstruction program that provides training in improved construction techniques, job opportunities for local builders and craftsmen, employment opportunities so that local people can gain the funds necessary to participate in the program, and supplementary projects designed to improve the sites and services (such as

sanitation) would be considered a balanced program. A program that simply provides a replacement for a damaged house would not.

7. Over-extension: Programs become over-extended by (1) trying to meet too many needs, (2) trying to meet the needs of too many people, or (3) trying to meet the needs in too broad an area. A good example of over-extension occurred in Guatemala after the 1976 earthquake when a small relief agency with a very small staff offered to provide housing reconstruction services to a geographic area of over 1500 square kilometers that had not only a rural popluation, but also a number of large towns. The total number of people in the area approached 75,000. When the program made a commitment to the government to provide services in this area, it had only received a total of $25,000 for reconstruction. During the course of the agency's efforts, it received an additional $25,000 and some roofing material as an in-kind contribution from a foreign government, bringing the total monetary resources of the agency to approximately $80,000. Had the agency been able to use the entire amount, the total contribution to the area would have been only slightly more than $1 per person; and from this, they subtracted the cost of the staff, transportation and vehicles, and other overhead items. Even if the funds could have been used creatively, the number of people effectively served could not have been more than approximately 10 percent of those in the project area.

8. Failure to examine cause-and-effect relationships. Failure to look ahead is often a result of inexperience. Yet by thinking through many of the program options and trying to estimate the outcome, agencies could avoid many mistakes. As a part of the planning process, agencies should consider preparing a program impact assessment similar to the environmental impact statements that are required of many construction projects.

9. Failure to budget properly: Estimating budgets for disaster operations is difficult. Not only must a budget be prepared in an inflationary environment, but the amount of funds and their date of transfer to the program are often unknown. Thus incremental budget planning is required, and a certain amount of flexibility must be built in.

10. Failure to obtain proper technical inputs: This is often a result of failure by the agencies to expand their horizons, and an attempt to oversimplify their humanitarian work. In most cases, agencies are usually not aware of all the related issues or of the technical expertise that is available.

    Another aspect of this problem is the use of inappropriate technical inputs. For example, following many disasters, agencies send medical teams with the latest technical equipment and medicines. In most cases, however, what is needed is not high-tech curative medicine, but low-technology, community-based preventive health measures, such as sanitation and hygiene.

The use of technology, and selection of the appropriate technology, is always a problem for agencies with no prior experience in the affected community and scant knowledge of the society.

11. Lack of coordination with other relief agencies and government programs: Agencies often fail to consider the activities being planned or conducted in their project area by other organizations. This oversight may occur through simple lack of contact and/or communication, or through a political refusal to recognize the efforts of any other organization. In either case, the end result is inappropriate program planning, which in turn often leads to duplication of effort, projects which work at cross-purposes, and a general waste of resources. A far more effective approach is to establish a good working relationship with other agencies and, if possible, establish a planning council to minimize these problems. At the very least, a project manager should keep well-informed of the activities of other agencies operating within the same region as his program.

TABLE 2-B

Key managerial planning issues

Planning Phase	Key Managerial Decisions
Policy-making	1. What policies are necessary to implement the overall plan? 2. Are policies comprehensive, flexible, coordinative, and clearly stated? 3. Who or what organizational units should authorize and prepare policy? 4. Who or what organizational units are affected by the policies?
Objective-setting	1. What are the objectives? 2. What is the relative importance of each objective? 3. How are the objectives related? 4. When should each objective be achieved? 5. How can each objective be measured? 6. What person or organizational unit should be accountable for achieving the objective?
Resource allocation	1. What are the important resources needed to achieve the objectives? 2. What are the possible variables relating to resource need? 3. What is the appropriate technique for forecasting changes in each variable? 4. What person or organizational unit should be responsible for the forecasts?
Budgeting	1. What resource components should be included in the budget? 2. What are the interrelationships among the various budgeted components? 3. What budgeting technique should be used? 4. Who or what organizational unit should be responsible for the preparation of the budget?

INTERTECT

Appendix II-A

GAP IDENTIFICATION (PRE-DISASTER)

ACTIONS	PLAN	AGENCY RESPONSIBLE	AUTHORITY TO ACTIVATE PLAN GIVEN BY	PERSON RESPONSIBLE	ALTERNATE	CHECKED BY
I. Coordination						
A. National Government Coordination						
B. Local Coordination						
C. Press Coordination						
D. International Coordination						
E. Volag Coordination						
II. Communications						
A. Telegram						
B. Radio (in- country)						
C. Radio (ex-country)						
D. Telex						
II. Warnings and Evacuations						
A. Authority						
B. Warning Dissemination Coordination						
C. Warning Dissemination Local Level						
D. Support for Evacuations (trucks, buses, etc.)						
E. Shelter for Evacuees						
F. Supplies for Evacuees						

GAP IDENTIFICATION (PRE DISASTER)

ACTIONS	PLAN	AGENCY RESPONSIBLE	AUTHORITY TO ACTIVATE PLAN GIVEN BY	PERSON RESPONSIBLE	ALTERNATE	CHECKED BY
IV. Critical Facilities Protection						
A. Communications						
1. Key Installations						
2. Equipment						
3. Supplies for Repairs						
B. Electric Power						
1. Key Installations						
2. Equipment						
3. Supplies for Repairs						
C. Security						
1. Installations						
2. Equipment and Vehicles						
D. Public Works Department						
1. Installations						
2. Equipment and Vehicles						
3. Materials and Supplies for Repairs						
E. Vital Government Offices						
1. Buildings						
2. Communications						

GAP IDENTIFICATION (PRE DISASTER)

ACTIONS	PLAN	AGENCY RESPONSIBLE	AUTHORITY TO ACTIVATE PLAN GIVEN BY	PERSON RESPONSIBLE	ALTERNATE	CHECKED BY
3. Security						
4. Supplies						
5. Records and Valuable documents						
F. Search and Rescue Participants						
1. Vehicles						
2. Routes						
3. Equipment and Supplies						
G. Medical Facilities						
1. Installations						
2. Power and Light						
3. Supplies and Equipment						
4. Emergency Support Staff						
H. Water System						
1. Installations						
2. Equipment and Vehicles						
3. Supplies for Repairs						
4. Emergency Supply Containers						
I. Sanitation System						
1. Installation						
2. Equipment and Vehicles						

GAP IDENTIFICATION (PRE DISASTER)

ACTIONS	PLAN	AGENCY RESPONSIBLE	AUTHORITY TO ACTIVATE PLAN GIVEN BY	PERSON RESPONSIBLE	ALTERNATE	CHECKED BY
3. Supplies for Repair						
J. Airports						
1. Installations						
2. Communications/NAVAIDS						
3. Fueling						
4. Aircraft Protection						
K. Port Facilities						
1. Wharves and Warehouses						
2. Equipment						
3. Tugs						
4. Customs Materials						
L. Other Critical Facilities						

GAP IDENTIFICATION (PRE DISASTER)

ACTIONS	PLAN	AGENCY RESPONSIBLE	AUTHORITY TO ACTIVATE PLAN GIVEN BY	PERSON RESPONSIBLE	ALTERNATE	CHECKED BY
V. Special Problem Facilities Groups						
A. Dams						
B. Refineries						
C. Irrigation Installations						
D. Areas Where Warnings Must Be Hand Carried						
E. Fishermen						
F. Key Industries						
G. Areas, Industries Likely To Experience Secondary Affects						

Appendix II A (Cont'd)

GAP IDENTIFICATION (EMERGENCY OPS.)

ACTIONS	PLAN	AGENCY	PERSON RESPONSIBLE	ALTERNATE	COMMENTS
Phase I (1st 24-48 hours)					
A. Coordination					
B. Disaster Assessment					
1. Initial Emergency Needs (Victims)					
2. Damage Assessment and Blockage ID					
3. Survey of Available Facilities					
4. Epidemiological Surveillance					
C. Search and Rescue					
1. Coordination					
2. Assignments					
3. Supplies					
4. Records					
D. Security					
1. Police					
2. Military					
E. Emergency Operations					
1. Lifelines					
a. Hospitals					
B. Electricity					
c. Transport					

GAP IDENTIFICATION (EMERGENCY OPS.)

ACTIONS	PLAN	AGENCY	PERSON RESPONSIBLE	ALTERNATE	COMMENTS
d. Roads					
e. Water					
f. Sanitation					
g. Sanitation					
h. Others					
2. Emergency Relief					
a. First Aid					
b. Food for Relief Workers					
c. Food for Victims					
d. Material Aid					
e. Fuel					
f. Shelter Operations					
F. Information Dissemination					
1. Coordination					
2. Verification					
Phase II					
A. Coordination					
B. Detailed Assessment					
1. Interim Victim Needs					

GAP IDENTIFICATION (EMERGENCY OPS.)

ACTIONS	PLAN	AGENCY	PERSON RESPONSIBLE	ALTERNATE	COMMENTS
2. Detailed Damage Survey					
3. Priority Repairs I.D.					
4. Epidemiological Reports					
5. Vital Statistics					
6. Estimate of Economic Loss/Damages					
7. Inventory of Resources					
C. Relief Program					
1. Interum Aid					
a. Food					
b. Materials					
c. Shelter					
d. Tools					
e. Economic Assistance					
f. Jobs Programmes/Work Schemes					
D. Salvage Ops					
1. Equipment Recovery					
2. Materials Recovery					
E. Other Ops.					

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