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EMERGENCY RELIEF OPERATIONS FOR REFUGEES: AN OVERVIEW

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The purposes of this paper are:

1. to provide an overview of the scope of emergency relief operations for refugees;
2. to divide an emergency into easily-recognized phases and sub-components;
3. to examine how one phase leads into another;
4. to see how actions in one phase can set the stage for subsequent actions or activities in the next;
5. to identify the operational sectors (health, logistics, etc.), professions and occupational specialities that are required to provide adequate assistance;
6. to identify the emergency management skills that need to be developed for effective emergency management; and
7. to identify common gaps in the service coverage and typical problems that must be dealt with in an emergency operation.

INTRODUCTION

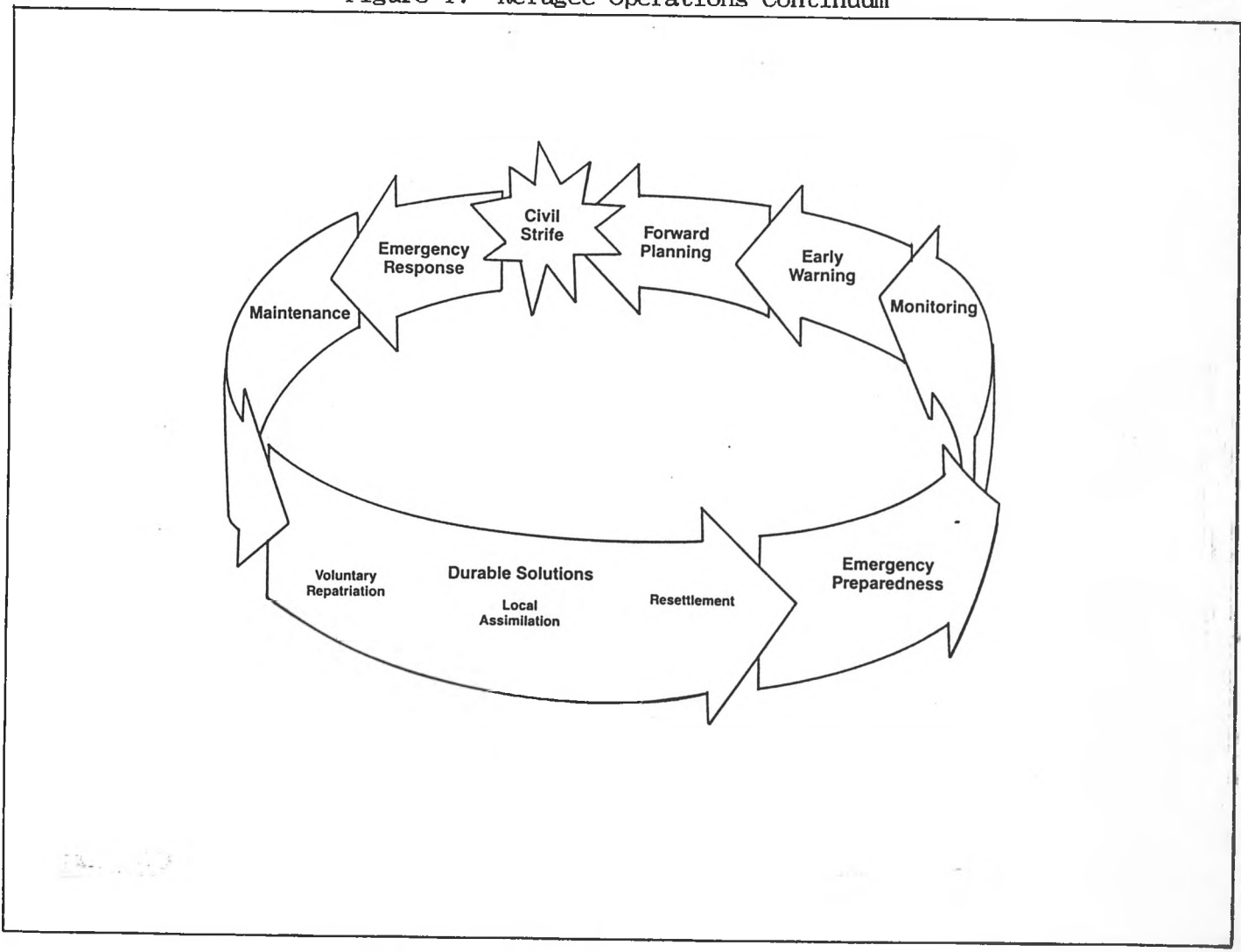
There are differing types of refugee emergencies. While many can be life-threatening, the most important from an operational viewpoint is the mass influx - - the sudden arrival of thousands of people seeking safety by crossing an international border. In these situations, the people have often been under armed attack and may bring their wounded with them. In many cases, the people have been without adequate food and water for some time and are undernourished and dehydrated. Sometimes, the refugees may have been exposed to (or carry) communicable diseases which, without proper immunization, could reach epidemic proportions.

It is here, in the response to a mass influx situation, that the international relief system often fails. In fact, the reasons are systemic, i.e., they are a result of the failure of the system as a whole rather than of the organizations that make up the system. Yet, many improvements are possible. By examining past operations more closely, recurring problems and patterns can be identified and specific approaches for meeting them can be developed.

In studying refugee emergency operations, it is important to consider several factors:

- the relationship of various assistance activities to the appropriate phase of a disaster. All emergencies can be divided into distinct phases. The length of any one phase can vary greatly, depending on the cause of the emergency and other factors. It is important to recognize the different phases and know what activities are appropriate to each. For example, in the initial phase of an emergency, it is usually necessary to distribute free food and other relief supplies. But if this activity is carried out in later phases when self-reliant activities could be promoted, there is a danger that dependencies may be fostered.
- the relationship of various time phases to each other. The phases of a mass influx can be depicted graphically as a continuum, as shown in Figure 1 below. By understanding the sequence of these phases, it is possible to delineate the actions that can be carried out in each.

Figure 1: Refugee Operations Continuum



EMERGENCY MANAGEMENT OBJECTIVES

Emergency management encompasses the entire field of emergency assistance and protection 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.

The objectives of emergency management are:

- to reduce the human, physical and economic losses suffered by individuals and society as a result of armed conflicts or civil strife;
- to provide protection, and to support and facilitate protection activities;
- to reduce human suffering and psychological trauma;
- to lay a groundwork for finding a durable solution to the refugees' plight, and
- to reduce the adverse impact on the host country and especially the nearest communities.

When assisting refugees or displaced persons, the objective of providing protection cannot be divorced from general relief. In this paper, 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 exposure to the environmental elements while they are refugees or displaced persons. (This definition is broader than the usual interpretation by the United Nations and International Committee of the Red Cross.)

PHASES OF AN EMERGENCY

A refugee emergency can be divided into many phases. Generally each phase is distinct and can be recognized from the types of activities that are being carried out at the field level. However, the point at which one phase ends and another begins is often difficult to define; indeed, in most cases there is substantial overlap as one blends into the next. The following is a description of the principal phases according to the types of activities that are carried out in each stage of the emergency management process.

A. Preparedness

"Preparedness" is defined as the actions taken by individuals and organizations to prepare for any emergency situation. Preparedness is the responsibility of everyone in a humanitarian or relief organization. In order for an organization to respond properly, everyone must be prepared, trained and have the tools necessary to carry out the job.

In large organizations, preparedness is usually carried out under the direction of an emergency preparedness unit; in smaller groups, it is usually carried out by a person designated as the "emergency preparedness officer".

The scope of emergency preparedness is fairly broad. It includes developing contingency plans, developing organizational systems, stockpiling supplies, training, and working with staff to monitor and recognize the signs of an impending crisis. Evaluation of emergency programs is also a key activity, for only by documenting the lessons learned can the overall system be improved.

Monitoring is another key preparedness function. "Monitoring" in this instance may be defined as the normal watch over events in countries likely to generate refugees. The primary responsibility for monitoring lies with the field offices in both the country of origin and the possible country of asylum. Organizations should share information about current events and their potential for creating an outflow of asylum-seekers.

B. Early Warning

"Early warning" is the identification, interpretation and recognition of events that would indicate a potential emergency.

Responsibility for establishing an early warning system, monitoring events and reacting again lies with the field offices in both the country of origin and the possible country of asylum. In large organizations, desk officers at headquarters should provide a bridge for sharing information between the two field offices.

The scope of early warning is fairly broad. It is essentially the task of collecting data from many sources, interpreting it, and attempting to identify indicators of problems and patterns that forewarn of developing crises. Based on an interpretation of these events, planners must forecast possible scenarios about the flow of people, where they might go and at what point they might cross a border. As a situation escalates, counterparts and operating partners should be notified and information freely exchanged so that the process of planning for an emergency response can begin.

C. Forward Planning

"Forward planning", sometimes called contingency planning, can be defined as the actions taken to prepare for an impending emergency. When it becomes obvious that an emergency is likely to occur, preliminary steps must be taken to mobilize the organization and its counterparts to react and to take concrete steps in preparation for the emergency.

The field office takes the lead in developing emergency response plans. At the same time, it is necessary for the entire organization to mobilize. Procurement, finance, intergovernmental relations, protection -- everyone should be involved.

The scope of forward planning is fairly broad, for it covers the prime sectors: food, health, water, sanitation, logistics and physical planning.

While a number of sectors and activities are wide-ranging, they should be limited by adherence to an emergency response doctrine which defines what the organization will do in the initial stages of an emergency.

The other primary activity in forward planning is accelerated information gathering, not only about the persons who are likely to come into the relief system but also about the host community and the resources available in-country to support the refugees.

The main actors in forward planning are the host government, the UNHCR, the World Food Program, the ICRC and the NGOs that will provide services to the refugees once they have arrived.

Forward planning begins when certain thresholds have been crossed, for example, when displaced persons moving toward a border move within a certain distance from a likely crossing point. At that point, funds are committed and, in effect, emergency response begins.

D. Emergency Response

An emergency may start with a sudden bang, e.g., several thousand refugees crossing the border with minimal notice. In most cases, however, an emergency builds up over a period of weeks or months and may only become acute as the result of unforeseen factors.

"Emergency response" may be defined as the immediate extraordinary actions taken to aid refugees. Assistance is normally provided under special procedures and guidelines established by the assisting organizations and guided by international practices. There are major weaknesses, however. While international protection is guaranteed under the Geneva Conventions and other international accords, basic standards for services and lifesaving interventions have been neglected and, as a result, most emergency responses begin in rather haphazard and slipshod fashion.

In order to respond with appropriate assistance in a quick and effective manner, two major sets of activities must be carried out: assessment and a "set piece" response.

1. Assessment. The term "emergency assessment" refers to the survey and information-collection activities carried out to determine the status of a refugee emergency, the condition of the refugees, the adequacy of the services being provided and the conditions of the sites where they are being placed.

Emergency assessment takes over where information-gathering during forward planning leaves off. The main difference is that the primary source of information is the refugees themselves.

Emergency assessment is a key function. The techniques used to evaluate operations will be used time and time again to re-evaluate the situation, to monitor various systems and to adjust overall program management.

The most important aspect of the initial assessment is provision of sufficient information for planning and adjusting the emergency response. Research has to be thorough, yet rapid; thus, the assessment team must be knowledgeable and thoroughly prepared to carry out the assessment by identifying indicators and patterns of problems that can lead to conclusions about the overall situation.

An emergency assessment must involve the local government, the UN system and the NGOs operating in the field. By sharing responsibility for the assessment, the inherent need of organizations to do their own assessments can be reduced. If detailed data is developed, the credibility of the assessment will be assured. When only sketchy information is derived, responses may be off-target and urgent actions delayed while further assessments are undertaken.

2. Initial interventions. The initial response to every emergency should follow a set pattern based on the assumption that certain problems will most likely be present. This set response should continue until assessments and other information prove otherwise.

"Initial response" may be defined as the first steps taken to establish an emergency relief program. At the outset, actions are based on an epidemiological understanding of what causes death among refugees: malnutrition, communicable disease, diarrhea and dehydration. The priority activities -- provision of food, immunization, and clean water supply -- are preventive in nature. Most can be carried out without highly-trained technicians and are limited in scope and level of sophistication.

By early establishment of these programs, a base is laid for expanding into other types of activities and broadening the scope of the overall assistance program.

Primary responsibility for initial response lies with the host government. In reality, however, few governments have sufficient capacity to deal with initial needs. Hence, NGOs, the UN and local Red Cross/Red Crescent societies are often encouraged to assist. The normal division of labor is as follows:

- a) local government: coordination, protection, determining refugee status, providing sites and providing water;
- b) UNHCR: overall planning, monitoring, fund-raising and general facilitation of the operation;
- c) WFP: provision of food (basic rations and supplementary foods);
- d) NGOs: provision of specialized services (e.g., health, supplementary feeding, preventative health services, immunizations, etc.).

In an emergency response, key areas such as water and sanitation are often overlooked. In some large-scale situations, NGOs have been asked to take on responsibility for entire refugee camps. It is in these situations where major problems often occur. NGOs consistently fail to recognize their limitations and the comprehensiveness of refugee needs. Sudan in 1985 provides an example of the problems this can create. Many NGOs demanded (and some were granted) permission to operate an entire refugee camp. Most of the agencies were medical agencies and were unprepared for anything beyond provision of medical assistance. The operation of a refugee camp is much like the management of a small city. People require not only food and medical attention but also water, sanitation, housing and shelter, garbage collection, and dozens of other services on a daily basis. Of the thirty relief organizations, only three had qualified engineers, only one had an architect, only three had environmental sanitation specialists, and only one had qualified water specialists. With this complement of technicians, the relief agencies proposed to meet the needs of a population the size of Geneva.

During the initial response, programs in the prime sectors of water, health, transport, shelter, and food and nutrition begin in earnest. Specific projects include:

- a) distribution of the general ration;
- b) supplementary feeding programs;
- c) distribution of water;
- d) sanitation programs;
- e) immunization of vulnerable groups against communicable diseases;
- f) oral rehydration therapy;
- g) establishment of logistics systems;
- h) overall camp planning and construction of shelters.

Until these programs are established and are running well, other activities should generally be postponed. Far too often, inexperienced relief agencies devote valuable time and resources, and tie up logistics systems, trying to respond with curative medical programs before other basic needs have been met. Diseases cannot be controlled unless there is an adequate supply of food. Food itself will have little bearing unless people are free from diarrhea. Diarrhea cannot be prevented unless there is an adequate supply of clean water, and clean water depends on adequate sanitation and good hygiene practice.

TRANSITION INTO BROADER, LONGER-TERM SUPPORT

Once the emergency response has been firmly established and is operating smoothly, the scope of the assistance program can be broadened. During this period, health and nutrition programs are expanded, physical improvements to the camp and its environs are initiated, daily operating systems for the refugee camps are instituted, and social services programs such as family reunification, tracing, etc., may be initiated.

Activities carried out in the transition phase lay the groundwork for developing long-term maintenance and support activities that will provide assistance to the refugees until they can become partially self-sufficient and until a durable solution to their situation can be found.

In most cases the transition period marks the end of the emergency. However, if refugees continue to cross the border, and especially if they are in a poor nutritional or emotional state, certain emergency activities will need to be continued.

SECTORS IN EMERGENCY RELIEF

In relief efforts, program activities typically address a variety of needs. In emergency management, assistance activities are classified by sectors. The most important are health, water and sanitation, food, shelter and logistics. These are known as the prime sectors, because they are of primary concern during the initial stages of an emergency. A second group of sectors includes physical planning of settlements, social services, economic assistance, etc. These are known as secondary sectors (or support sectors) because they have indirect effects on the disaster victims.

Most emergency 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.

SUMMARY

Effective emergency management encompasses the complete realm of emergency-related activities. Traditionally, people tend to view emergency management only in terms of emergency response and the immediate actions taken by relief officials. Yet emergency management covers a much broader scope, and many emergency managers find themselves far more involved in pre-emergency activities (such as preparedness) than in actual response. This trend can only be viewed as a positive development, for with greater attention to preparedness, early warning and forward planning, responses will be facilitated and greater effectiveness will be achieved.

EMERGENCY PREPAREDNESS

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The purposes of this paper are:

1. to introduce the concept of emergency preparedness;
2. to define the scope of preparedness activities;
3. to define responsibilities for carrying out emergency preparedness; and
4. to provide examples of preparedness activities that can be undertaken in the field and at headquarters.

INTRODUCTION

Emergency preparedness activities are extremely important for any organization working with refugees. An organization that is prepared for all contingencies is likely to respond well in the initial stages of an emergency -- a time when those that are unprepared generally make mistakes and ultimately lose many lives.

Emergency preparedness is based on the fundamental assumption that it is better to make decisions at a time when circumstances permit thorough and rational analysis rather than to react when information is minimal, incomplete and confusing. It is said that the objective of preparedness is to move decision-making forward out of the realm of the emergency and into the realm of studied, deliberate analysis.

The most important result of emergency preparedness is that it buys time for an organization to mobilize its resources. It allows an organization to respond quickly, yet with measured steps, escalating involvement and commitment of resources as the situation requires. An organization that is thoroughly prepared will neither under-react nor over-react to an emergency.

A. Definition

Emergency preparedness may be defined as a set of actions taken by organizations and individuals to prepare for all emergencies. In this definition, note that both organizations and individuals are tasked with preparedness responsibility. This is an important point. Emergency preparedness is everyone's responsibility.

Note also that preparedness means preparing for all contingencies. Refugee emergencies can range from a major influx across a border to major human rights violations against refugees in the country of asylum; from refoulement to emergencies within an emergency, such as a bombing or

shelling of a refugee camp, a fire within a camp, or an epidemic among the refugee population. It could also include natural disasters such as floods or administrative failures such as major food shortages. In one three-month period in eastern India in 1971, a refugee camp experienced an outbreak of cholera, an overnight tripling of the population, a fungus in food grains that caused massive diarrhoea, a fire that destroyed almost half the camp, and a flood that forced the entire camp to be evacuated. This camp had a population of over 100,000 people.

Again, preparedness is based on one simple premise: the heat of an emergency is no time to decide what to do. One of the principal characteristics of an emergency is that information is scattered, conflicting, incomplete, and usually confusing; yet most emergencies follow distinctive patterns. The same problems tend to recur time and time again. Furthermore, experience has shown that certain approaches work well while others fail consistently. The process of analyzing past emergencies, determining what the options are, what works best and where an organization should concentrate its resources, is "emergency preparedness".

B. Scope

Emergency preparedness covers a wide range of activities. These include setting emergency policy; establishing emergency systems; assigning emergency responsibilities; developing standard operating procedures; developing contingency plans; training key personnel (both organizational and counterpart staff); identifying sources of supplies; and, where necessary, stockpiling and pre-positioning supplies and equipment.

RESPONSIBILITIES

A. Field Responsibilities

Emergency preparedness begins in the field. In military organizations, while the military commander is responsible for ensuring that his unit is prepared, specific responsibility for preparedness and planning is usually assigned to a key subordinate within the organization. Taking a hint from this structure, it might be wise for organizations such as UNHCR to make emergency preparedness a part of the job description for a key subordinate in each of the Branch Offices. Because emergency preparedness is so important, a position as high as Deputy Representative could be assigned this task.

B. Headquarters Responsibilities

In most of the larger humanitarian organizations, some sort of emergency office exists. The role of such an office or unit is usually seen as support for field operations during a crisis. A far more important role is that of preparing the organization as a whole to meet any contingency. For this reason, in recent years some organizations have changed the title of their units from "Emergency Unit" to "Emergency Preparedness Unit" to reflect the changing role. Not only do preparedness units provide on-site technical support; more importantly, they provide training to key staff who are likely to be confronted with an emergency and to

assist in developing systems, procedures and "tools" for the organization. Nowhere is this better exemplified than in the activities of the UNHCR Emergency Unit and the Training Section since 1985.

PREPAREDNESS ACTIVITIES

A. Establishing an Emergency Doctrine

As mentioned earlier, emergencies tend to develop into set patterns and generally proceed along predictable lines. For example, an epidemic tends to follow a certain course and spread outward along certain epidemiologically-known paths. A massive influx of refugees likewise follows a general track. Clearly-discernible patterns evolve, and the situations and circumstances that lead to high mortality can easily be spotted and tracked by a trained observer.

Because the course of an emergency is predictable, it is possible to develop quick responses with predetermined activities and program strategies. Developing a complete "package" for specific situations, and establishing policies to guide implementation, is known as establishing an emergency response doctrine. Of all preparedness activities, this is the most fundamental for it involves detailed discussion at both headquarters and field level and must be backed up by a thorough analysis of emergencies in general, their impact, and the programs and approaches that can best be carried out in various environments and field conditions.

B. Preparedness Activities at Headquarters

The following are examples of preparedness activities that should be undertaken at headquarters.

1. Establishing a procedure for periodic updating of emergency response policies: An extremely important role at headquarters is deciding when an organization should become involved in an emergency, what actions it should take, and under what circumstances various types of resources should be committed. Much of the confusion in an emergency arises because field staff are unclear about the intentions of headquarters.
2. Establishing, and periodically reviewing, standard operating procedures: SOPs (in UNHCR: letters of instruction, or LOIs) are the means by which an organization sets limits on its initial intervention, i.e., they prevent an organization from over-committing, yet at the same time permit, and structure, an immediate intervention. Thus, it is necessary to review the SOPs in terms of the organization's overall policy and its emergency response doctrine. As much flexibility as possible must be given to the field and to the headquarters support staff.
3. Developing special procedures and systems to reduce bureaucratic delays: In every organization there are standard rules that must be followed in the normal course of work. They control the flow of paperwork, decision-making and planning. In an emergency,

shortcuts simply must be found. Such things as bidding procedures, contract negotiations and even certain types of receipts, must often be waived in order to move quickly. The purpose of intervention is to save lives. Any bureaucratic procedures that delay this function must be either streamlined or temporarily suspended, but the conditions under which these extraordinary procedures go into effect must be clearly defined before an emergency begins.

4. Preparing emergency guidelines and manuals: Once an organization has decided how it wants to respond, its staff must have the information they need to carry out that response. Emergency manuals should be short and consise. The OXFAM Guide to Selective Feeding Procedures is a prime example. Generally, comprehensive manuals should be avoided; short, sturdy, easily-carried guides and pamphlets that can be quickly translated into local languages should be developed.
5. Establishing skeleton task forces to respond to different types of emergencies: Some types of emergencies require additional technical and administrative skills beyond the usual professional input from desk officers and administrative staff. Therefore, a key preparedness activity at headquarters is establishing organigrams of task forces with the required mix of expertise to support the field staff during various types of emergencies.
6. Developing emergency budgetary and finance procedures: Few organizations have realistic policies regarding financial procedures during emergencies. A key headquarters preparedness activity is to review these procedures and establish the necessary shortcuts to speed budgeting and movement of funds while retaining the necessary accountability.
7. Developing emergency systems, and training staff in how to use them: This is a very important headquarters function. Based on research and evaluation of past performance, systems and "tools" should be developed to facilitate emergency response. Once these systems have been developed, they are essentially useless until the people that will use them are given the appropriate training.
8. Developing and improving early warning capabilities: Few emergencies occur without adequate warning. Relief and humanitarian organizations should develop the capability to collect and analyze data that can give early warning of a developing emergency. Define the types of data needed and institute an organization-wide effort to routinely collect and report on developments that might indicate when an emergency is about to occur.
9. Evaluating past operations to establish the lessons: Evaluation and analysis of past operations are key components of emergency preparedness. Only by understanding the successes and failures of previous experience can response doctrine be developed and improved.

10. Establishing procurement arrangements and developing stockpiles of key materials: In almost every operation it is necessary to send certain key relief items from one country to another. Items crucial to implementation of an agency's response doctrine should be identified, procurement arrangements established and plans developed to quickly acquire, transport and deliver these priority items.
11. Recruiting and training emergency response teams: In large-scale emergencies, field personnel are likely to require assistance from experts and technicians experienced in certain responses or emergency programs. Whenever possible, response teams should be formed and trained as a unit before being placed on standby.
12. Establishing standing arrangements with volags/consultants for technical services: Since few organizations can afford to keep large numbers of highly-trained technicians on their staff between emergencies, it is usually necessary to contract for specialized services. A key preparedness activity is to identify organizations and individuals whose services might be needed to complement or extend staff capabilities and to arrange standby agreements in advance so that their services can be obtained quickly. Short-lists of pre-qualified contractors, indefinite quantity contracts, etc., can speed the negotiation process and shorten response time.

C. Preparedness Activities in the Field

The following are examples of field preparedness activities.

1. Developing contingency plans for the most likely emergencies. This is the most important activity that can be carried out at the field level. Contingency planning should be a group exercise of key line and technical staff; plans should be reviewed at least annually in normal times and more frequently when it appears that an emergency is developing.
2. Identifying in-country sources of supplies and equipment: Each field office should develop, and periodically update, lists of local suppliers of food, medicines and other relief items. Where possible, contingency procurement agreements should be arranged. It is often possible to have local suppliers establish and maintain buffer stocks of certain items, especially in countries with a history of emergency needs.
3. Developing general working arrangements with the government and implementing partners. Since emergency response is likely to be an inter-agency effort, one important preparedness activity is to meet with implementing partners, dividing roles and responsibilities and pre-assigning tasks, so that clear lines of authority, responsibility and coordination are established and competition and overlap are substantially reduced from the outset of an emergency situation.

4. Conducting policy reviews of the local government's likely responses to various emergencies: The extent and type of response by a host government to a refugee emergency varies according to political constraints. For example, some refugees may be more welcome than others, and the willingness to accept refugees at all may be shaped by internal considerations such as in-country food shortages, domestic political crises or social and ethnic considerations. Preparedness planners should try to ascertain the likely responses of a government to various emergencies and to design and modify their contingency plans accordingly.
5. Identifying potential geographic operating areas: In most cases, the places where refugees are likely to enter a country can be pre-identified from topographical features, transportation routes and natural barriers such as rivers, mountainous terrain, etc. Based on the development of scenarios that indicate possible border crossing points, potential operational theaters can be defined. Within those theaters, sites for refugee camps, logistics bases, etc., can be identified and, in some cases, surveyed to verify their suitability. It is also important to collect data on roads, railways, airports and possible river transport facilities. (Some organizations prepare profiles that list key operational information for each country. Someone from the field staff should personally inspect the roads, airports and the transportation network periodically and report any significant changes.)
6. Establishing early warning procedures. All field staff, and especially those who work near a border, should be thoroughly briefed on how to recognize early warning indicators. Routine information-gathering activities and reporting procedures should be clearly established and carried out on a routine basis.
7. Determining protection options/requirements. In any emergency, protection of refugees is likely to be a key consideration. It is important that the organization determine the approaches it will use to provide protection and how many personnel will be required.

For preparedness planning to be effective, the activities must be carried out both at the field level and in an organization's headquarters. Again, emergency preparedness is everyone's responsibility.

EXERCISES

1. Make a list of additional preparedness activities that should be undertaken at the headquarter level.
2. Make a list of actions that should be carried out by branch or field offices.
3. Make a list of systems, materials and tools that headquarters should have on hand in order to provide better coordination for emergencies. List these according to the principal sections and divisions of the organization.
4. Make a list of the systems, materials and tools that the field staff should have on hand in order to respond to any emergency. Be as specific as possible and group your suggestions according to the types of emergency likely to be encountered.

FORWARD PLANNING

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The purposes of this paper are:

1. to acquaint the student with the concept of forward planning;
2. to identify the key elements of the forward planning process;
3. to review the scope of activities usually carried out;
4. to identify the information needed; and
5. to explore some techniques used to improve forward planning.

INTRODUCTION

A. Definition

Forward planning is comprised of a series of actions taken to prepare for an impending emergency (especially a mass influx). Forward planning begins when an organization recognizes that all the signs clearly indicate an emergency is about to occur. In other words, forward planning is an organization's first level of response to early warning.

B. Key Concepts

Forward planning is the implementation side of early warning. In effect, it answers the question, "what do you do in response to early warning?" It is the first escalation of intensity and sets the stage for all subsequent emergency response activities.

Forward planning is also an extension of emergency preparedness. Any activities that were not carried out beforehand need to be implemented on a "crash" basis. Like preparedness, forward planning is based on certain key concepts. The most important of these are that early decision-making is both cost-effective and desirable in laying the foundation for emergency response, and that there are patterns, indicators and triggers that can be discerned and analyzed to provide the data needed to initiate forward planning.

Forward planning is another example of moving the decision-making process forward into the pre-emergency period when decisions can be taken rationally and on the basis of more thorough analysis. However, decision-making at this point becomes far more crucial and, in many cases, a factor of risk needs to be incorporated into the decision-making process. Nowhere is this more important than in decisions to order, stockpile and pre-position food and medical supplies.

Decision-making in emergencies should be based on an understanding of the decision chain. In recent years, a new branch of emergency operations theory has evolved: emergency decision-making, or EDM. Scientists have begun to study the cause-and-effect relationships of decisions with regard to certain activities carried out in emergencies and how the decision-making process can be improved. The goal is to identify recognized "scenarios" that repeat themselves in the various types of emergencies, then to help decision-makers recognize an unfolding scenario in order to make decisions at the appropriate point and at a time when the decision can still have an impact on developing events.

Take, for example, decisions regarding food supply. In many developing countries, adequate supplies of food may not be available and food may have to be imported from other countries. In some parts of the world, it may take several months from the time food is ordered until it arrives. Assuming that the lead time could be as long as ninety days, the "window" for decision-making is fairly limited. Food supplies must be ordered as soon as it appears evident that large numbers of people will cross the border. Failure to make an early decision means that one of two things will happen: either the relief agency takes extraordinary measures to get food to the area, or large numbers of people may not receive adequate rations. If the people are malnourished when they enter the country, a high mortality rate can be expected. Failure to make an early decision means that the range of choices is limited. Instead of being able to ship food at a relatively cheap cost by sea or land, the agency will be forced to transport it by air. While the deadline for getting food to the site can still be met, the cost will increase tenfold. In other words, the longer a decision is delayed, the more likely it will become a choice of taking the least worst option. In our example, flying food at tremendous expense is a costly option versus experiencing a high death rate in the camps --- an unacceptable option.

With a little forethought, EDM scenarios can be developed for every country and unfolding emergency. By constructing these scenarios, planners can easily see when it is important to make decisions and they can react accordingly.

In developing scenarios for the most likely emergencies, it is important to establish what constitutes an emergency for each particular country. In a region where agencies are well prepared, where stockpiles of food are available, and where operating agencies are stationed along the border, an influx of several hundred people would hardly be noticeable. In a country with no existing program, even as few as several thousand new arrivals could represent a major crisis.

RESPONSE TO TRIGGERS

Forward planning begins when recognized "triggers" occur. The response should be automatic and should proceed with little debate. Simply because a trigger has occurred does not necessarily mean that an influx will follow; but once the trigger has been recognized, the organization must be prepared to take chances. It is far better to end up with unneeded food supplies (which can later be sold) than to have none on hand when they are needed.

EFFECTIVE RESPONSE CORNERSTONES

Forward planning is based on a clear recognition of the major problem areas in most emergencies and the program approaches that work best to keep people alive. Major threats to refugees' lives are diarrhea and dehydration, malnutrition and communicable diseases, especially measles. All of these are interrelated. A person who is malnourished or dehydrated stands less chance of resisting disease. Food can often not be taken unless there is an adequate supply of clean water, and water alone cannot provide the nutrients needed for survival.

Recognition of these threats as the major killers indicates the responses that should be given priority and the specific areas to which authorities carrying out forward planning should devote the majority of their attention. The top priorities requiring early decisions are: ordering and pre-positioning food, identifying potential disease threats, ordering vaccines for immunization campaigns, establishing a cold chain to ensure the medicines are delivered with full efficacy, and identifying means of supplying clean drinking water and protecting it from contamination by providing decent sanitation.

In order to ensure that all supplies are on site, the other major consideration is logistics. Without adequate transport, warehousing and logistics management, food, medicines, shelter and even water may not be able to reach the refugees at the crucial time.

Another priority during forward planning is protection. For UNHCR, protection activities must include a predetermination of the status of asylum-seekers, establishing a presence at the border or in the settlements, and establishing a monitoring system to report on any human rights violations. For non-governmental relief organizations, protection activities may include establishing a large presence in the area in order to rescue or escort border-crossers to points of safety, and becoming familiar with international rules and procedures for assisting asylum-seekers.

Other important actions which should be taken include:

1. making preparations for receiving and registering incoming refugees.
2. identification of sites for new refugee camps, or determining which existing settlements can be expanded for new settlers.
3. determining shelter options and material needs.
4. making arrangements for supplementary feeding and, if necessary, ordering food.
5. determining fuel requirements.
6. preparing staffing plans and designating field leaders.

7. defining the operating areas and the responsibilities for organizations within those areas.
8. determining storage requirements at key points in the logistics chain.

INFORMATION NEEDS

A major preoccupation during forward planning is information gathering. There is one simple axiom which governs the effectiveness of forward planning: the better the information, the better the plans. It is vital that the following questions be answered or predicted as closely as possible:

1. How many people are likely to seek asylum?

It is important to know how many people are likely to cross a border, how many displaced persons are likely to stop just short of the border, and how many are likely to enter the country temporarily before returning to their country of origin. This information can be developed or estimated on the basis of:

- a. reports from reliable sources on movements of displaced persons;
- b. projections of demographic information;
- c. review of past experience in the same area.

2. At what rate are asylum-seekers likely to cross the border?

The rate of influx is almost as important as estimating how many people are likely to come. If the people come across in manageable numbers, a major emergency might not develop. But if all the people come within a short period, the situation will be more confusing and response will be more difficult.

3. Who is coming?

It is important to know who the asylum-seekers might be. Information can usually be gathered quickly as to ethnic origin, tribal or cultural groups, and religious beliefs. It is also important to know whether the people are from urban or rural areas and what their principal occupations are.

4. In what shape are asylum-seekers likely to be?

Certain precautions will need to be taken if people have been fleeing over long distances; if they are coming from an area of acute food shortage, drought or famine; or if they are fleeing through areas of known disease threats (cholera, malaria, etc.). It is usually possible to gain a fairly clear picture of their status simply by identifying the areas of origin and the distance

that people have to travel. The mode of transport is also a key factor; if people are walking, they will be in worse shape than if they are coming in trucks or boats.

5. Family composition?

It is important to estimate whether families will be arriving intact or certain members are likely to be missing. In many refugee situations, adult males are missing from the initial ranks of asylum-seekers. This may be due to a number of factors. First, they may have decided to remain at home to try to protect their property and belongings as long as possible, sending the family to safety outside the zone of conflict. In other cases, the men may have joined one side or the other of a conflict. And in the worst case, men may have been killed in the fighting. In famine situations, it is not uncommon to find few children under the age of two and a disproportionately low percentage of children under the age of five. These are the children most vulnerable to famine and, if the percentages are askew, it will be important to establish supplementary feeding programs to drastically reduce mortality among the survivors.

6. When can the majority of asylum-seekers be expected to arrive?

Forecasting the time when most people will arrive is an important task, for it establishes points at which decisions about certain things have to be made. The ETA may be available from press reports, reports of military action, and from refugee or insurgent groups. In other cases, it may be necessary to estimate the time it takes for people to walk from a point of conflict to the border.

7. At what points are the refugees likely to cross the border?

By examining topographic maps of the border areas, it is usually possible to determine where refugees are most likely to cross. The most salient features include roads in rebel-held areas, rivers and streams that people can easily follow, established migratory routes of nomadic peoples, and other routes that people could easily follow that offer some protection or concealment from attacks by hostile forces, especially air attacks.

TECHNIQUES TO IMPROVE FORWARD PLANNING

Much of forward planning involves making educated guesses as to what scenarios may develop. There are, however, a number of ways to improve forecasting:

A. Remote detection

It is often possible to determine the health and nutritional status of persons who may seek assistance but are currently outside the reach of

organized or extensive relief programs. These could include refugees living in an area of conflict, people known to be in transit to reception centers, persons trapped by fighting and unable to flee, and small groups of people from remote famine areas. In most cases, only limited information about these groups is available; yet conclusions must be drawn about their health and nutritional status in order to determine whether direct emergency assistance should be provided before they arrive (such as cross-border relief) and what assistance should be ready if and when they arrive. The process of determining health status and people's needs is called "remote detection". It relies on:

1. interviews with recently-arrived refugees;
2. interviews with relief or other personnel operating in or near the population of concern;
3. assessment of the health and nutritional status of the first arrivals. The procedure is to interview a sample of the families among the new arrivals. The arm circumference or weight-for-height ratios of all children under 5 is measured and each family is asked about:
 - age of each person in family,
 - area of the country they are from,
 - length of time in transit and distance traveled,
 - occupation of the head of the household,
 - number of live births in last five years,
 - number of children still living,
 - number who died in last two months (since travel began) and causes,
 - reason for departure.

From the previous information, develop the following data:

1. Age Pyramid. Compare with usual age pyramid of the country of origin. Differences can be noted and reasons can usually be predicted.
2. Place of Origin. If the refugees are from several regions in their homeland, the data on childhood mortality, nutrition, etc., can be broken down by region to give an assessment of conditions each area of the homeland.
3. Reasons for Fleeing. Was this an anticipatory or acute refugee movement? If anticipatory, the next wave of refugees is likely to be in far worse condition.

4. Nutrition Data. Present data about the nutrition level of the refugees can be developed to give a picture of people still inside the country of origin. From this, it should be possible to determine whether a nutritional rehabilitation program will be necessary for refugees yet to arrive.
5. Mortality Data. The procedure can give a picture of recent deaths of children less than five years old.
6. Health Problems. The best example of this is malaria. In many developing countries, malaria is only present in rural areas or below a certain altitude. In assessing the risk for a major malaria problem, it is important to know the origin of the refugees and whether they emigrated through a malaria-endemic area. If they were at least partially immune to malaria because of prior exposure in their homeland, malaria might not be a major problem, even if they are housed in refugee camps in a malaria-endemic area.
7. Length of Time in Transit. The longer the transit time, the more likely the refugees are to be debilitated. If they have been in transit for a very long time, they may be in poor health even though the population left behind in their area may be healthy.

While not completely accurate, remote detection provides very valuable information for forward planning.

B. Standardized Packages of Assistance

Most emergency managers develop assistance packages around units of 5,000 people. 5,000 people require 52.5 tons of food per month, one-half kilometer square of land area for a refugee camp, one supplementary feeding center, 225 latrines, and a water supply of 50,000 liters of water per day. By using this basic planning unit as the building block for the response, planners can easily estimate the amount of supplies, land, etc., that will be required. Any over-supply will be minimal and under-supply can be virtually eliminated.

C. Modeling Aid Needs

As soon as a reliable estimate of the number of refugees is established and the crossing rate is estimated, it is possible to develop a general model of the rate of influx and the amount of supplies that need to be purchased. A number of planning models can be used. The most common is a linear projection. The problem with linear projection is that it does not allow for periodic increases or decreases in the rate of influx. With this model, planners are likely to find shortages in the initial stages and an over-supply in the later stages.

Another model, depicted below, was proposed by the author in 1984. This model, which should be updated on a weekly basis, provides some

flexibility and stimulates larger procurement at the outset of an operation while providing enough time for adjustments at later stages.

Procedure:

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
R₁ = The number of refugees now receiving assistance
R₂ = The number of new arrivals in last week
P = Percentage of the total that new arrivals (last week) represent
T = The time in weeks needed to deliver supplies (e.g., if a two-month lead time, use 8)

Note: Always round contingency planning number 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.

$CN = 10,000 + (1,000 \times 8) + .10 (8,000)$
 $CN = 10,000 + 8,000 + 800$
 $CN = 18,800$
 $CN = 20,000$ (rounded to next 5,000 increment)

With the advent of portable micro-computers and more sophisticated modeling programs, models can be developed which will greatly enhance planners' abilities to forecast refugee requirements as they unfold.

D. Building Redundancy and Margins of Safety

As planners design the emergency response, it is important that redundancy be built into each delivery system. At the outset of an emergency, when things are confusing and systems are not well-established, many breakdowns and delays can be expected. It is vital, therefore, to build into the system large margins of safety and multiple delivery systems. When procuring supplies, dual and even triple sources should be tapped. Transport by a variety of means and contractors should be established. And most important, sufficient reserves and buffer stocks should be stockpiled to meet all contingencies.

SETTING THRESHOLDS

Thresholds are reference points that an organization establishes to determine when it is necessary to take further action or the point at which a decision must be made to escalate the level of activity.

In terms of early warning, a threshold could be the removal of an intervening factor. It could also be a recognition of an event at the end of an early warning "chain", such as the selling of animals during a drought or forced migration. Operationally, the threshold might be an event such as a substantial increase in the refugee population within a short period of time, an indication that a population on the move in a neighboring country has reached a certain geographical point on their way to the border, or any number of other clear signs that refugees are about to leave their country. It is important that thresholds be clearly established as an emergency develops and that everyone in the organization be thoroughly briefed on what to do when a threshold is crossed.

EXERCISES

1. List the specific actions that need to be taken to determine refugee status and to assure protection for incoming asylum-seekers. Identify the constraints that might prevent or hamper protection activities.
2. List and describe specific actions to prepare for receiving and assisting incoming refugees. Identify the constraints to each action and alternate approaches for overcoming these restraints.
3. List and describe specific activities which can be carried out at the headquarters level to support the field in the forward planning process. Describe the constraints within the organization that might inhibit forward planning at the headquarters level.
4. List the main systems, programs or activities that require redundancy and/or built-in safety margins.
5. Develop a contingency planning model that will help you plan and control food requirements for an incoming refugee population. (Remember the long lead times required for international shipment of foods.)
6. Develop a planning model that will enable you to procure and deliver vaccines on a timely basis. (Remember that the shelf life of certain vaccines may be time-limited.)

THE RELIEF SYSTEM

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INTERTECT

1988

The purposes of this paper are:

1. to define the refugee relief system;
2. to explain the relationships among the various organizations within the system; and
3. to identify the primary reasons why problems of inter-organizational coordination develop and how they might be overcome.

INTRODUCTION

What is generally referred to as the refugee "relief system" is not a system at all; it is an ad hoc group of agencies that collectively provide funds or services to assist refugees.

Each of these organizations has competing agendas, different levels of expertise, and different interests with regard to the refugees. As we shall see, amid this confusing array of organizations and interests, it is important that one single entity serve as an anchor for the provision of assistance and as a guarantor of international protection for refugees. For the most part, this responsibility falls on the United Nations High Commissioner for Refugees.*

Within the international system, there are many misconceptions about the roles of different organizations, especially that of the UNHCR and the various non-governmental organizations (NGOs). These misunderstandings lead to major shortcomings and gaps in the provision of assistance. Often donors fail to understand the limitations of the various organizations, and those within the system fail to foresee gaps in the services they provide until they are well into a relief operation.

It should also be recognized that many of the shortcomings are systemic; in other words, they are shortcomings of the international system itself rather than of specific organizations.

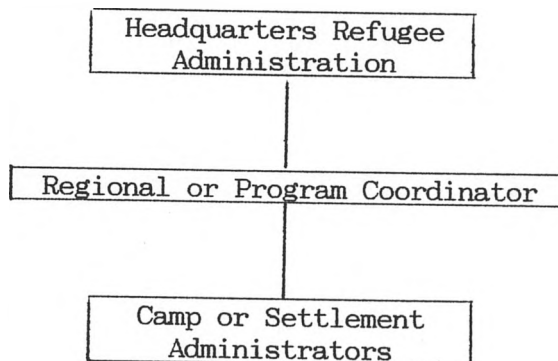
* For Palestinian refugees, the primary agency is the United Nations Relief and Works Agency (UNRWA).

DEFINING THE SYSTEM

Under international law, the entity responsible for refugees is the government of the country of asylum, or "host" country. In most countries, the government will assign operational responsibility to a particular governmental ministry or department. This may be a specialized agency or a branch of an existing ministry.

Typically, a government will structure its refugee agency with the headquarters in the capital, will place a senior official as coordinator close to the area where refugees are entering the country, and will appoint a number of camp or settlement administrators at the locations where refugees are being placed as soon as they arrive. This hierarchical system is depicted below.

Figure 1



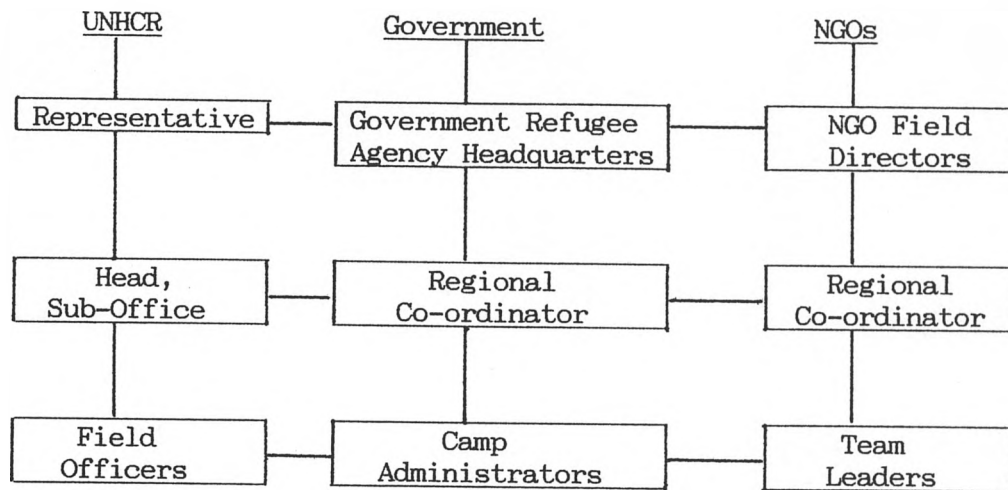
When an emergency occurs, UNHCR will normally develop a "mirror image" of the government's administrative hierarchy. In the capital, there is the Branch Office; in the forward or regional area, a Sub-Office; and at the camp level, Field Officers who are attached to each of the major settlements.

The head of the Branch Office is the UNHCR Representative whose main function is to act as liaison directly with the head of the government's refugee agency. At the Sub-Office level, the Head of the Sub-Office is the liaison with the Regional Coordinator. At the camp level, the Field Officer is the liaison with the Camp Administrator.

Non-governmental organizations will also generally adopt a similar structure (although, depending on the size of the agency, the post of regional coordinator may be omitted). The title of the head of the country office is usually "field director"; the teams in the camps are headed by a "team leader" or a "project director".

The in-country structure of the various organizations is depicted in the following figure.

Figure 2

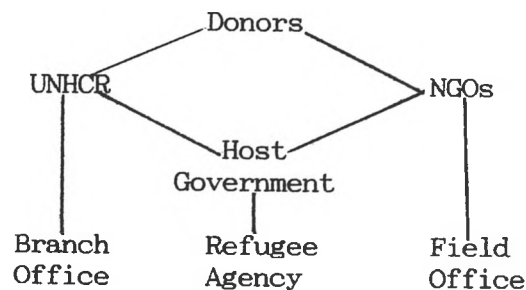


Support for operations is provided by international donors. The main donors are individual countries who may contribute through UNHCR (multilaterally), may provide assistance directly to the host government (bilaterally) or provide support through NGOs. Donations from individuals, corporations or charities are smaller but still can play a significant role.

The UNHCR serves as the primary conduit for international funding, passing the monies on to the host government and serving as the guarantor of accountability on behalf of the international community. NGOs normally finance their own programs in the field, either with their own funds or with assistance from their government. In some cases, NGOs will also fund UNHCR programs, and they often provide funds or services directly to the host government's refugee agency. Assistance can be in the form of cash, in-kind materials, technical assistance or training. Thus, the UNHCR and some international NGOs play a dual role; they are both donors and implementing agencies.

Funding relationships at the international level are depicted below.

Figure 3



ROLES

A. The Host Government

Under international refugee accords, the host government bears ultimate responsibility for protection and care of refugees. When the accords were drawn up in the 1950s, and most refugees were Europeans fleeing to other European countries, the system worked well enough. But since the 1960s, with the vast majority of refugees generated and hosted in the Third World, the system has begun to break down. In impoverished countries, refugees are not only a major economic burden, they can also bring political trouble for the host country. Most governments have a difficult enough time meeting the needs of their own population without having to feed and care for thousands more. Furthermore, few countries can afford to fund and staff large refugee assistance organizations and support them in remote rural areas. Thus, an ever-increasing portion of the burden is being assumed by non-governmental organizations on behalf of the government.

B. NGOs

Non-governmental organizations are essentially service agencies, i.e., they provide distinctive sets of services to specific segments of the society, usually the very poor. The vast majority of these organizations are either general development agencies or medical organizations. Many of the larger international organizations are multi-purpose; in other words, they can provide services for several different sectors. For example, an organization such as Save the Children may support health programs, feeding programs, selective feeding programs (supplementary, therapeutic, etc.), as well as sanitation and water programs.

In a few cases, major international NGOs may serve as foundations, providing funds to local organizations and sometimes to the host government's refugee relief agency. The primary example is OXFAM/UK.

Because NGOs are service agencies, the scope of their activities is fairly limited; they can do a few tasks very well on a large scale but cannot undertake a wide range of activities on a large scale. This is one of the fundamental causes of problems in the relief system, for major donors tend to regard the NGOs as all-encompassing -- capable of providing services in any sector -- when in fact most of the agencies have limited capabilities. When a NGO is given major responsibility for providing assistance to an entire settlement, it is usually able to focus only on the sectors in which it specializes; often, important elements of an assistance package are overlooked and critical needs go unmet.

C. UNHCR

The primary assistance role of UNHCR in an emergency operation is to facilitate the work of the host government by providing funding, technical assistance and, where requested, coordination. Until recently, UNHCR insisted on maintaining that limited focus, arguing that it was the role of the host country and NGOs to provide direct assistance. UNHCR, it was argued, was not an operational agency. But too many gaps existed. Many

host governments simply did not have the capability of providing comprehensive assistance, and NGOs were not effective in filling in these gaps. It could be argued that it was the role of the international community to support the governments and help them expand their capabilities. But in an emergency, when highly-trained and experienced personnel are needed on-site, training programs that take several months to realize are not really feasible.

An example of the gaps that occur can be seen in an examination of the emergency situation in Sudan in 1985. Many NGOs demanded (and some were granted) permission to "operate" a refugee camp entirely by themselves. Most of these agencies were totally unprepared to undertake such a mission. Many were primarily medical agencies, unprepared for anything beyond provision of medical assistance. The operation of a refugee camp is much like the management of a small city: people require not only food and medical attention, but also water, sanitation, housing and shelter, garbage collection and dozens of other services on a daily basis. Of the thirty-plus relief organizations, only three included qualified engineers, only one had an architect, only three had environmental sanitation specialists, and only one had qualified water specialists. With this complement of technicians, the relief agencies proposed to meet the needs of a population the size of Geneva.

Since 1986, UNHCR has begun to undertake a more active role in emergency operations. In particular, the Technical Support unit has been expanded and the number of technicians, as well as technical specialities, has been increased. Nonetheless, it is impossible for any one organization to meet all the needs of various emergencies simultaneously. For this reason, UNHCR must often turn to private consultants or specialist consulting firms who provide technicians to manage key parts of relief operations. The most common areas that are contracted are logistics and operations management.

D. Other UN Agencies

Three other UN agencies have major roles to play in refugee relief operations: WFP, UNICEF and WHO.

The World Food Program is often the major source of basic food supplies for refugee emergencies. In many countries, WFP provides food aid in normal times; when an emergency arises, priority is shifted to meeting emergency needs.

WFP maintains a special emergency office at its headquarters in Rome. These specialists work to procure and ship large quantities of food for emergencies and can provide on-site technical assistance. (In 1986 a Memorandum of Understanding clarifying the roles of WFP and UNHCR in emergency food operations was worked out between the two organizations.)

UNICEF may be involved in any number of ways. At the outset, UNICEF usually assists local health ministries with immunization programs. Other interventions have included family reunification programs, assistance to unaccompanied minors, supplementary feeding programs, special health care programs for women and children, children's educational services, psychological counseling for children and mothers, and special programs for

"children in especially difficult circumstances" (a new UNICEF initiative).

UNICEF has an Emergency Unit located at its headquarters in New York. The unit provides technical assistance and can arrange for teams of UNICEF specialists or consultants to support specific operations.

UNICEF has one advantage over its sister UN organizations: it is mandated to go anywhere necessary to help children. In some cases, this means that it is possible to work in areas where host governments are not represented (i.e., rebel-held territories). In 1979-80 UNICEF was active in cross-border operations into rebel-held areas of Kampuchea and was able to provide much-needed assistance to displaced persons who later became refugees.

The World Health Organization can support refugee emergency operations directly by providing technical assistance through UNHCR or by assisting the health ministry in the host country. The Pan American Health Organization (PAHO), the Latin American regional arm of WHO, has been especially active in training and supporting emergency preparedness activities in the member countries of Latin America and the Caribbean.

E. The International Committee of the Red Cross (ICRC)

The ICRC is a major player in most conflicts that generate refugees. Under the Geneva accords, the ICRC is responsible for assisting civilians in areas of conflict where they are not protected by their own country. In practice, this means that ICRC often deals with people who are displaced and may later become refugees. In most cases, ICRC assistance will end at the border; once they cross into the country of asylum, they become the responsibility of UNHCR. If resources permit, however, ICRC may also lend assistance in refugee settlements during the emergency period. In Thailand in 1979, many ICRC delegates worked in the Kampuchean refugee camps. In such cases, the ICRC teams function much like those of NGOs; they provide specific services under the direction of the host government.

Ideally ICRC could provide much-needed information about developing emergencies and possible refugee flows, the routes people might choose to flee the country, and advance information about the status of potential asylum-seekers. In practice, ICRC delegates tend to be reticent about discussing such matters, fearing that it could compromise their work. Nonetheless, informal coordination can often be very useful.

In terms of services, ICRC tends to concentrate heavily on medical and general health care and food logistics.

F. Intergovernmental Committee for Migration (ICM)

ICM is a Geneva-based organization originally established to assist in resettling refugees to third countries. In recent years it has changed its constitution to enable it to take a much broader role in refugee affairs. As an organization in transition, its new role has not yet been fully defined, but during the next few years it obviously will be taking a broader look at emergency assistance, especially by those that meet wider definitions such as the OAU. It is also likely to look into the problems

of internally-displaced persons and persons fleeing for economic reasons. At the same time, the organization is likely to continue to concentrate on finding permanent solutions to refugee situations and moving to apply these solutions early in an emergency.

THE DONORS

At the international level, donors are: 1) the individual countries; 2) the multilateral organizations, such as the European community, OAU, ASEAN, and the OAS; 3) specialized intergovernmental donor agencies; and, to a much lesser extent, 4) private foundations such as the Ford Foundation and specialized fund-raising groups such as BANDAID, USA for Africa, etc. Finally, there are the private individuals that give money directly to the UNHCR or to various NGOs.

By far the largest amount of funding comes from interested governments. With only a few exceptions, most of the money is channeled through the UNHCR. The permanent donors that support the UNHCR are represented on its governing committee, the Executive Committee or ExCom. In some cases, the larger donors may choose to provide bilateral assistance to the host country or to support NGOs. For example, Britain, often a major contributor to UNHCR, provides additional funding to British NGOs such as OXFAM, War on Want, Christian Aid and Save the Children. Many governments prefer to provide funding through the NGOs, especially if the host government does not have a strong record of supporting refugees or if the government's ability to handle the funds properly and effectively is in question.

THE MAJOR PLAYERS

Within the international system, there are several entities that must be considered the major players. While the entire relief system is composed of hundreds of different organizations, only a relative handful can be considered key. What makes these organizations "key" is a combination of the resources they command; the contributions of money, goods or technology they can provide; and the influence they wield as "pace-setters" relative to the state of the art.

A. US Government

No country responds more fully to refugee emergencies than the United States. It responds with cash, in-kind materials, technical assistance, transport and especially food aid. The US is usually one of the largest annual donors to UNHCR and also provides substantial funding to NGOs and bilateral assistance to host governments.

US assistance is coordinated by the Bureau for Refugee Programs in the US Department of State. In some countries the Bureau (known as "RP") may have a resident Refugee Reporting Officer to coordinate American assistance.

There are, of course, many political ramifications to American aid. The response of the US to any refugee emergency will depend upon its relationship with the country of origin as well as the country of asylum. Not only are strategic interests involved, but also the question of whether the refugees may seek to resettle in the US. The United States is a key actor not only because of the resources it can provide, but also because it has been a major advocate for improving the overall delivery of services to refugees and has supported major training efforts by UNHCR and implementing organizations.

The US PL480 program, also known as Food for Peace, is a major source of food for refugees. The program is administered by the US Agency for International Development (AID) which has Missions in most developing countries. At the request of RP, USAID may also provide technical assistance and, in some cases, funds or other resources to assist in the relief effort.

B. Other Major Donors

Other major donor governments include the United Kingdom, Canada, France, Norway, The Netherlands, Australia, Japan and Saudi Arabia. All have large aid programs and a long history of providing assistance to refugees. Britain and France are often tied to their former colonial territories by a combination of sentiment and economic interests and thus can be counted on to respond in these areas quickly and on a large scale.

In an emergency, all of these countries respond in much the same way as the US, offering a combination of direct and indirect assistance, cash and material aid, and technicians and equipment. Most of these countries also support private development or relief organizations that can be brought into the emergency operation.

There are, of course, many other governments that regularly provide assistance; indeed, virtually every government close to the affected country or with religious or economic ties may make some form of contribution.

C. Multilaterals

Among the multilateral organizations, the European community is the largest donor. In many ways, the organization complements the assistance of its member countries. In recent years, the EEC has also been a major contributor of specialized food aid, such as high protein biscuits, dry skim milk, etc.

D. The League of Red Cross and Red Crescent Societies

The Red Cross movement is represented internationally by the League of Red Cross & Red Crescent Societies headquartered in Geneva. The role of the League is to support the national societies that make up its membership. When a national society commits to an emergency, it normally turns to the League for support. With over 100 member societies, the League can move quickly to mobilize large amounts of cash and materials, and can often field technical teams from member societies.

E. Non-Governmental Organizations

There are several NGOs that stand out as key organizations, including:

- OXFAM, which has made major contributions in developing program approaches, guides and procedural manuals for such programs as supplemental feeding, and has developed highly-specialized water and sanitation systems for refugee emergencies.
- Save the Children (UK), which has pioneered many of the health approaches used in refugee and famine emergencies.
- CARE, which has developed a strong specialization in refugee food logistics.
- CONCERN, which has developed integrated health and feeding programs for refugees, especially supplementary feeding and public health and sanitation.

Other organizations that could be considered major players are SCF (US), Catholic Relief Services, World Vision and the Medecins sans Frontieres (MSF) organizations of France, Belgium and Holland. These are important because of the large amounts of resources they command and because of their ability to react quickly to new emergencies.

Other NGOs that have proven to be reliable and innovative in various emergencies are Lutheran World Federation, Lutheran World Relief and the Mennonite Central Committee.

There are many other organizations involved that provide a wide range of high-quality service. The aforementioned organizations, however, have tended to specialize in emergencies. Many have developed internal procedures that facilitate quick response, and those in the first group have made many technical contributions adopted by other organizations.

F. Research Organizations

No list of key players in refugee emergencies would be complete without mentioning the research and technical assistance groups that have provided much of the impetus for improving emergency operations.

In the health sector, the most important and active groups are:

- The London School of Hygiene and Tropical Medicine (the Ross Institute) which carries out research and offers a wide range of training services;
- The Center for Epidemiological Research in Disasters at Louvain, Belgium; and
- The School of International Public Health, Johns Hopkins University.

In the field of general research on emergencies, an important organization is the Relief & Development Institute (formerly the International Disaster Institute) in London. RDI focuses primarily on famine and food emergencies but also covers the entire spectrum of refugee emergencies as well as natural disasters. Their personnel have contributed much to the field of early warning and have evaluated the effectiveness of relief approaches used by governments and NGOs.

In the field of emergency management and in physical planning of refugee camps and settlements, the most active organization is INTERTECT. Based in Dallas, Texas, INTERTECT maintains one of the world's largest libraries on emergency operations and fields consultants for a wide range of technical and management assistance.

In the field of training, the two most important organizations are the Disaster Management Center at the University of Wisconsin-Madison and the Asian Disaster Preparedness Center at the Asia Institute of Technology in Bangkok, Thailand. The DMC provides a wide range of correspondence courses aimed at emergency managers in governments and NGOs and is the prime contractor for the UNHCR Emergency Management Training Program. The ADPC focuses primarily on natural disasters, not refugees, but many of the general courses they provide are relevant to managing refugee emergencies.

MAJOR PROBLEMS IN THE RELIEF SYSTEM

Many of the problems in refugee assistance reflect a failure of the system as a whole rather than of specific organizations. It is important to understand these systemic problems if the overall delivery of services is to be improved.

A. Coordination

Many problems occur because there is no real system. Each organization has its own agenda, its own clientele and its own motivations for providing assistance. At the donor level, there are also political considerations as well as economic considerations and constraints.

Nowhere are the economic considerations more evident than in a government's decision about the method for providing assistance. There are generally three options: to provide cash, to provide in-kind or commodity assistance, or to provide a line of credit for the relief agency to purchase materials manufactured in the donor's country. When governments choose either the second or third option, problems can occur, especially if the materials or commodities being provided do not meet requested specifications or needs at the field level. If the line-of-credit option is chosen, significant delays can occur between the time materials are ordered and the time they are delivered.

B. Gaps in the System

Significant gaps occur in the provision of relief services simply because the system itself is not comprehensive. As already mentioned, there is an over-concentration of health and feeding agencies while

logistics, water and sanitation, engineering and other key elements required in an emergency are under-represented.

C. Funding

The most important obstacle to improving international relief assistance is the question of funding. The nature of the system is such that an emergency must be in progress before funds can be raised. Few organizations have large cash reserves that will permit them to respond as an emergency is developing or to order and pre-position materials and supplies. It is often noted that agencies must have a picture of a "starving child" before they can raise money. Until funding mechanisms are developed that permit early response, and a general attitude prevails that encourages preparedness and rewards initiatives for taking pre-disaster actions, immediate response will be slowed and lives will continue to be lost.

D. Over-reliance on NGOs

The international system today is similar to that which evolved in the post-World War II period to assist refugees and displaced persons. Primary reliance then, and today, is on NGOs. Most donors prefer to channel their funds through NGOs, especially those headquartered in their countries. As mentioned, NGOs in general have a fairly limited scope and tend to focus on person-to-person activities rather than on comprehensive relief packages. While certainly helpful, NGOs will not close the gaps for they are unlikely to refocus their attention on engineering, physical planning and logistics. Until these areas are addressed, it will be impossible to put together a balanced package of assistance with mutually-supportive programs.

The answer to this problem is to place more emphasis on developing host country emergency management capabilities. In some countries, refugee agencies have become highly proficient and the gaps in service coverage are not as pronounced; in others, there has been scant attention paid to expanding their capabilities. So long as donors continue to focus their attention on NGOs, substantial gaps will remain.

E. Lack of Institutional Memory

One of the major obstacles to improving the performance of the international relief system is the lack of institutional memory either at the level of the individual agencies or collectively throughout the system. The personnel fielded to work an emergency by NGOs have often been diverted from other ongoing activities -- in most cases, development work. They are later supplemented by volunteers from other places. Almost all are on a short-term basis; as soon as the emergency is over, they return to their regular jobs. It is rare for an individual to work in more than one emergency. Few people write about their experiences; even fewer professional analyses or evaluations of relief operations are conducted. Added to the fact that the system itself is a loose association of organizations, this means that it is very difficult for lessons learned to be passed on from one operation to the next.

F. Resentment of NGOs by Host Governments

Also a problem is the growing resentment of many host governments concerning the role of NGOs and the preference of donors to support NGOs over the host country's refugee agency. In some cases, an impasse has been created. Donors are reluctant to give additional funds to governmental refugee organizations until they improve their performance, but the organizations cannot improve so long as most of the funding goes to NGOs.

Heightening the governments' anxiety about NGOs is the fact that many operate independently with little coordination with a government's refugee agency. In cases where governments are repressive or have not demonstrated a high degree of concern about the plight of refugees, it is understandable that the donors would continue to favor NGOs as the executors of their programs. Nonetheless, there has been a general system-wide disregard for developing strong refugee organizations and much of the assistance to NGOs has been at the expense of local governments. If the system is to improve, the capabilities of governments to deal with the problem must be improved.

EXERCISES

1. List the benefits of working through NGOs, noting their strengths and special capabilities.
2. List the disadvantages of working with NGOs, noting their specific weaknesses.
3. Using the needs matrix on the following page, identify the major areas where gaps are likely to occur in the provision of services, and recommend which type of organization should be strengthened in order to provide the services that are lacking.
4. List ways in which UNHCR could strengthen its ability to assist host governments in filling the typical gaps that occur in relief operations.
5. Make a list of those services or programs that are best carried out by NGOs and not by the host government.

GAP IDENTIFICATION

	Services Provided By:				
	U.N.	Host Govt.	Other Govt.	Volags	Other
<u>Immediate Services</u>					
Evacuation					
Protection					
Legal Services					
<u>Camp Planning & Construction</u>					
Camp Design					
Camp Construction (roads, bldgs.)					
Systems Installation (latrines, water system, electricity, etc.)					
<u>Initial Camp Services</u>					
Processing & Registration					
Emergency Medical Care					
Rehabilitative Health Care					
Shelter					
Daily Rations					
Supplemental Feeding					
Water Distribution					
Latrines					
Garbage Disposal					
Tracing					
<u>Long-Term Camp Services</u>					
Economic Opportunities					
Education					
Vector Control					
Security					
Personal Development					
Self-Support (gardening, handicrafts)					
Psychological Services					
Recreation					
Cultural Activities					
Public Health Education					
<u>Long-Term Administrative Services</u>					
Repatriation					
Resettlement					
Assimilation					
Documentation					

INITIAL RESPONSE

Frederick C. Cuny
INTERTECT

1988

The purposes of this paper are:

1. to identify the first steps that need to be taken to gain control of an emergency, especially to reduce deaths;
2. to provide a conceptual framework for determining priorities;
3. to describe the interrelationships among the sets of problems that recur in emergencies;
4. to identify the interrelationships among various emergency responses and how they can be mutually supporting; and
5. to lay the groundwork for establishing response doctrine.

INTRODUCTION

A. Definition

Initial response is the term used to describe the first steps that need to be taken in responding to a developing emergency.

B. Conceptualizing Initial Response

The initial response to an emergency can be likened to the opening moves of a chess game. They are dictated as much by what we don't know about the situation as by what we do know about emergencies in general. In a chess game, no matter what the players' eventual strategy, pawns must be moved in order to create openings and flexibility of movement for the capital pieces. Likewise, in an emergency, certain moves must be made and certain systems must be established before other options can be brought into play. Usually, lives cannot be saved unless certain interrelated sets of activities are established immediately. Diseases cannot be controlled, for example, unless there is an adequate food supply. Food will have little bearing unless people are free from diarrhea. Diarrhea cannot be prevented unless there is an adequate supply of clean water. Clean water depends on adequate sanitation and good hygiene practices.

Emergency response begins as soon as the first refugee crosses the border and should follow the following outline. At the same time, an assessment should take place. The information developed by the assessment is used to modify and adjust the response. Initial response should follow a prescribed pattern and continue until on-site assessments prove beyond a doubt that a specific set of interventions is not required. You always begin with these actions until the situation dictates otherwise.

These opening moves are sets or combinations of complimentary, inter-related, interdependent actions and programs. It is important to remember that one strategy often will not solve a particular problem; usually, the problem requires a concerted attack using several different approaches. Furthermore, one program can rarely accomplish its goals unless it is supported by programs in other sectors. For example, diarrhea cannot be solved solely by providing clean water. Oral Rehydration Therapy (ORT) plus sanitation and the establishment of good personal hygiene practices will also be important.

THE EPIDEMIOLOGY OF EMERGENCIES

Research has shown that the primary killers in an emergency are malnutrition, measles and diarrhea. Each of these is related to the other. A child that is severely malnourished will not be able to survive a case of measles. Severe diarrhea can quickly dehydrate and kill a malnourished person or someone with measles. Therefore, in order to save lives, these three killers must be brought under control.

The three causes of mortality and their interrelationship are depicted theoretically in Figure 1.

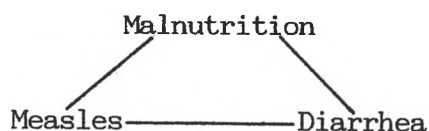


Figure 1

BASIC RESPONSES

The cornerstones of an effective response are food, immunization and diarrhea control which is carried out by providing clean water, oral rehydration and sanitation. The relationship of the responses to the primary causes of mortality are depicted in Figure 2 below.

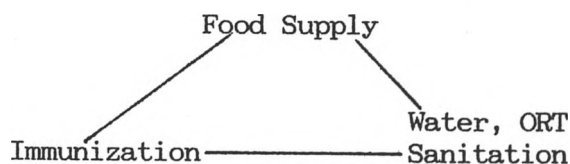


Figure 2

These responses are the beginning of what is known as the initial response doctrine, sometimes more popularly known as a "get-well" program.* Each of these responses -- food, immunization, and diarrhea control -- requires a distinct set of activities.

A. Food Supply

In order to ensure that refugees can recover and maintain nutritional status, a three-pronged approach may be required. This includes provision of a general or basic ration, provision of supplementary food for special groups and, where medically required, therapeutic (or intensive) feeding for severely malnourished people.

1. General Ration. This is a general food distribution designed to give families enough food to regain and maintain normal body weight and nutritional status. Of all the food supplies in emergencies, the general ration is the most important. If it is possible to supply enough food so that the basic ration can be maintained without interruption, the vast majority of families can recover and survive on this food alone.

The general ration is made up of what is known as the "food basket": a mix of foods that is designed to provide a complete diet, a balance of calories, protein, vitamins and minerals. The primary requirements are:

- a basic grain, oil, and a source of protein;
- a minimum caloric content of 1800 kcals per day; and
- a mix of vitamins (especially A), minerals and other nutrients to ensure healthy development of children.

The key to a successful general ration during the initial emergency is to supply enough food for people to survive without relying on supplementary sources. Usually, a general ration is planned on the basis of giving every member of the family the requirements needed for an adult. This permits families to apportion the food according to nutritional needs and provides a small buffer within the family's supply.

The ration should be distributed at regular intervals in order to build confidence and reduce hoarding.

* The term "get-well program" was coined by Arthur E. Dewey, Deputy High Commissioner for Refugees, then serving as Under Secretary of State for Refugee Affairs. The term was applied to the efforts to control high mortality rates in the 1985 Sudanese refugee crisis.

- a) Distribution: Distributions should be made at approximately ten-day intervals throughout the emergency. This reduces the likelihood that malnourished people who over-consume will not have enough food between the time they run out and the next distribution. Longer intervals will result in higher mortality.
- b) Milling: Grains should be milled in the camp. Milling at the camp level reduces losses in transit and often means that a greater portion of the nutrients can be retained (especially in rice). Milling in the camp can also provide work for refugees, and it enables them to store the food longer in the home. If free milling facilities are not provided, the refugees are likely to trade a portion of their grains for milling.
- c) Registration: Unless an adequate registration program is developed and instituted immediately, major disparities in food distribution will occur quickly.

2. Supplementary Feeding. Supplementary feeding is a targeted distribution of food designed to help those who are malnourished or have special nutritional needs to regain their nutritional status. A supplementary feeding program should be carried out:

- anytime malnutrition is high (over 10% of the under 5s), and
- anytime there is evidence that inter-family food distribution problems are occurring that cannot be corrected by other means.

There are two ways to carry out supplementary feeding programs. One is to supply special supplementary foods to the target populations (normally women and children under 5). The other is to conduct special supplementary feeding programs at "sit-down" meals where the target populations come to centers daily to receive specially-prepared meals and consume them on the spot.

Of the two programs, the latter is usually the most effective in the early stages of an emergency. However, it is only as effective as the outreach efforts made by the staff to identify those most in need and to enroll them in the program.

The components of a supplementary feeding program are:

- a) on-the-spot feeding of prepared foods.
- b) weighing and measuring of children to ensure that they are gaining weight. (Note: middle upper arm circumference (MUAC) measurements are used for rapid in-camp surveys to qualify children for the supplementary feeding program; once they are enrolled at a center, they are measured using weight-for-height standards.)

- c) immunization. All children entering the supplementary feeding program should be immunized against the primary childhood diseases (measles, DPT, etc.).
- d) surveillance. In the initial stages of an emergency, the routine monitoring that is carried out at the supplementary feeding center may be the best means of determining other health and nutritional problems in refugee populations. By monitoring diarrhea in children and noting where the people live in the camp or settlement, it is usually possible to identify impure sources of water. By noting women or children that do not gain weight despite supplementary feeding, problems can often be detected within the general ration or inter-family distribution. The use of supplementary feeding programs to spot other health problems is known as a "nutrition-centered health" approach.

The key to a successful supplementary feeding program is outreach. Health workers must go into the population, identify women and children that require supplementary feeding, and ensure that they are enrolled in (and regularly attend) the supplementary feeding program. Without outreach, supplementary feeding will have only a minimal impact.

- 3. Therapeutic (Intensive) Feeding. In recent years, therapeutic feeding programs have attracted much criticism from epidemiologists who note that few children survive despite the best efforts of medical staff. Therapeutic feeding requires that special facilities be established (normally attached to an outpatient dispensary or hospital). It also requires a special staff to monitor round-the-clock feeding.

As a general rule, therapeutic feeding programs should be given a low priority in relation to other food and nutrition efforts and should only be established after supplementary feeding is underway. Remember, in an emergency the goal is to save as many people as possible, and efforts must be focused on keeping people from deteriorating to a point where only radical interventions such as therapeutic feeding are necessary.

- 4. Indirect Food Supply. In many emergencies, relief agencies propose indirect means of increasing food supplies for refugees. These can include food-for-work, cash-for-work and other indirect approaches. In an emergency, these should receive a low priority and be viewed only as minimal supplements to the families' food supplies. After an emergency has passed and other sources of food are well-established, indirect food approaches may be initiated -- but only after careful planning and targeting.

B. Vaccination Programs

Vaccinations to prevent communicable diseases, especially measles, are the second component of a get-well program. In order to be successful, a

vaccination program requires:

- surveillance and detection of communicable diseases;
- vaccines; and
- a cold chain to ensure efficacy of the vaccine from the point of origin to the time of injection.

In recent years, major efforts have been made to build adequate supplies of vaccines in all Third World countries. The Expanded Program of Immunization (EPI) spearheaded by UNICEF and the World Health Organization has resulted in stockpiles of many of the most important medicines used in emergencies and this has greatly reduced response times. With the establishment of EPI warehouses, there is no reason why effective immunization campaigns cannot be carried out from the very outset of most emergencies.

A vital component is maintaining a cold chain from the EPI warehouse to the refugee camp. Specially-designed and dedicated cold boxes for transferring vaccines, refrigeration equipment, and adequate stores of fuel at the destination are required.

C. Diarrhea Control

Diarrhea control consists of both preventative and curative activities. Preventative actions focus on the relationship between clean water, sanitation and hygiene -- a relationship known as the "hygiene loop", illustrated below in Figure 3. Anywhere contamination occurs within this loop, diarrhea will result.

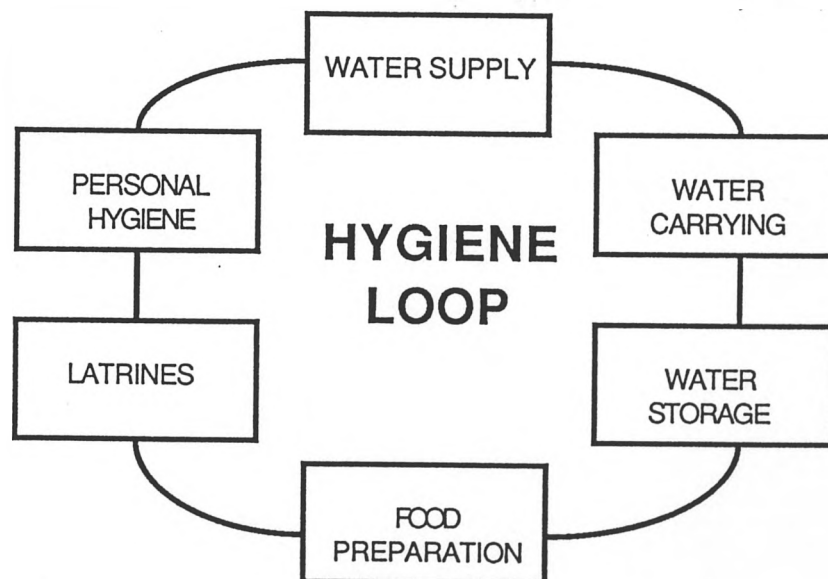


Figure 3

Curative actions focus on oral rehydration therapy (ORT), a simple solution of sugar, salt, bicarbonate of soda and water that helps restore the body's electrolyte balance and effectively reduces dehydration. In the long term, it is more effective than most costly anti-diarrheal medicines.

Use of oral rehydration solution (ORS) is becoming more widespread each year. In some countries, the packets are so commonplace that they are even used for curing hang-overs!

There are numerous sources for ORS packets. They are usually included in the standard medical kits provided by UNHCR, WHO, UNICEF and many private voluntary organizations. Large stores of ORS packets are often on hand at the EPI warehouses, and they are commercially available in a growing number of countries. In a situation where supplies are inadequate, it is possible to make the solution from the basic ingredients. The formula is depicted below.

Oral Rehydration Solution

Sodium Chloride (Table Salt)	3.5 Grams
Sodium Bicarbonate (Baking Soda)	2.5 Grams
Potassium Chloride	1.5 Grams
Glucose	20.0 Grams

To be mixed with one liter of clean water

Figure 4

The relationship between water and sanitation dictates that they must be considered together with the physical site and environment of a refugee camp or settlement. Since water sources can easily be contaminated, especially by poor drainage and the poor siting of sanitary facilities, waste disposal, etc., the physical location, topography and layout are very important factors. The position of roads and drains is important since roads can serve as small levies or dams and the areas alongside a road usually serve as drains. To an extent, shelters -- especially their arrangement, size and spatial relationship to latrines -- must also be considered. Locating latrines far from the shelter areas will reduce the likelihood that they will be used. Latrine design and provision for maintenance and cleaning must also be taken into consideration.

D. Logistics

Now that the three primary sets of interrelated activities have been identified, it is time to link them with one final activity: logistics. The delivery of food, medicines, materials, and even movement of the

refugees themselves, all are dependent upon logistics. Unless an effective logistics system is established from the very outset, it will be impossible to implement the other three sets of activities smoothly.

SUMMARY

In order to successfully control an emergency, the initial response must move forward and in unison along set lines. All the activities mentioned above are interrelated and interdependent. If these programs are implemented swiftly and backed by a sound logistics system, lives can be saved and a base can be laid for a balanced and effective assistance program.

EXERCISES

1. Identify the types of staff that are required to carry out an initial response.
2. Make a preparedness checklist of the activities that need to be carried out in the forward planning phase in order to successfully implement an initial response.
3. Make a list of the types of things that should be carried out in a field office to prepare for an initial response.

EMERGENCY SANITATION

John Cosgrave

The purposes of this paper are to:

- Identify the impact of sanitation on health.
- Discuss the principal technical factors.
- Describe some practical emergency solutions.
- Propose a practical approach to sanitation problems.

INTRODUCTION.

Sanitation is the protection of public health, especially by the removal of wastes. The components of sanitation are the disposal of waste water, faecal matter and household waste. Sanitation also includes personal and communal hygiene.

Sanitation and water supply are complementary activities and are often linked together. Providing good sanitation is more complex and more expensive than supplying water. While two hundred or even five hundred people may be willing to use the same water point they could not use the same latrine.

Defecation and personal hygiene are private matters in many societies. Most societies have special rules for defecation that restrict the potential for rapid change in defecation habits and patterns. The sanitation practices that people normally use may be inappropriate for their circumstances in an emergency.

Sanitation is often put on the long finger in emergencies because of these problems. The results of lacking food or water are soon obvious. The effects of poor sanitation are far less obvious and take longer to appear. Sanitation is, unlike health or water supply, not photogenic. It is often very difficult to find an agency willing to take responsibility for sanitation.

Hygiene education is central to sanitation because it may be necessary to change peoples' attitudes. This paper will discuss the general technical background of sanitation and will not specifically discuss details of hygiene

motivation and education.

SANITATION AND HEALTH

Traditionally, the link between sanitation, water, education and health is shown as a triangle. This triangle shows that all three components are necessary for good health.



This should emphasise that building efficient latrines is not enough to guarantee good health in a camp. Sanitation protects public health through removing waste. Why is this necessary?

Many of important diseases that people have can be spread through their faeces. Many of these diseases spread when people eat or drink something contaminated by faeces. This is known as faecal-oral disease transmission. Diarrhoeas are often the biggest killers of the under-fives in a stable situation. Epidemics of cholera may kill large numbers of people in emergencies. All the diseases on the right cause human suffering and may cause death.

Faecal borne

Cholera
Diarrhoeas
Dysentery
Hepatitis
Hookworm
Polio
Roundworm
Typhoid

It is important to break the faecal-oral transmission chain by which the faeces of one person infects another who may go on in turn to infect others. Clean water and personal hygiene play a part in that chain but

proper faecal disposal plays the greatest part.

Faecal disposal is only aspect of sanitation. It is also necessary to avoid creating breeding sites for rats, flies or mosquitoes. All these pests may carry disease. Flies are a particular nuisance as they often play a part in the faecal-oral transmission of disease. Drainage, fly control and the disposal of solid waste all help to limit pests.

A further aspect of sanitation is ensuring that the conditions under which people live do not themselves create disease risks. Respiratory infections spread quickly in damp overcrowded conditions.

Drainage is the first topic discussed below as it is an aspect of sanitation which is often forgotten. Poor drainage may lead to the flooding of housing or latrines and the creation of breeding sites for mosquitoes.

DRAINAGE

Many refugee emergencies occur in tropical countries with distinct wet and dry seasons. The refugees may arrive at a site during the dry season and it is only with the coming of the rains that drainage problems begin to show up. The refugees' tents may be inundated with water and their food rations and few remaining possessions destroyed.

There is nothing unusual about the above scenario. It is frequently repeated. Rural people use their knowledge of their surroundings to site their buildings and villages. In an emergency, people may either have no information about the site, or have no choice in their location. Problems with drainage are often the result.

Drainage problems can be divided into three types, flooding, rainfall and waste-water. Rainwater flowing from uphill or watercourses overflowing their banks can cause flooding problems on a site. Rainfall problems occur when no thought is given to removing rainwater that falls on the site. Waste-water drainage problems often occur around water points, washing slabs and similar facilities.

Sensible site selection prevents flooding problems. The best sites are those on a slight slope. Always look at any signs of erosion on the site. Signs of soil erosion suggest that diversion ditches are needed to prevent too much

water flowing through the camp. The construction of the camp itself may lead to flooding. This is particularly the case with roads that have neither drains nor culverts to allow water to flow across the road line.

Sites on the banks of rivers or streams face not only the risk of erosion but also risk uncontrolled fouling and use of surface water. It is better to site the camp at a safe distance and place a safe water supply between the camp and the river.

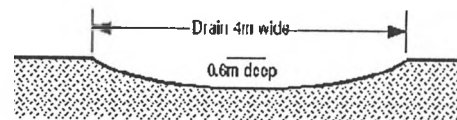
There is a temptation to site camps in natural clearings in uncleared bush. Be aware that these may be at natural low points. These areas are clear of bushes as standing water kills them off in the wet season.

The need for drainage of rain water is not always appreciated. There is usually little vegetation in camps and the ground is often compacted by the constant passage of people. This leads to only a small part of the rain which falls infiltrating into the ground. Most of it runs off leading to drainage problems. If the ground is very sandy and rainfall is light there may be no need for drainage. Even sandy soils contain some clay and tropical rainfall is intense. A rule of thumb is that you will need drainage for any site where crops can be grown.

The design of drains is more complicated than can be adequately dealt with in this paper. Surface drains are the only appropriate ones. Some small culverts and footbridges may be needed for crossing the drains. Drains also need to be cleaned.

The types of drains used for soil conservation projects are very suitable for the main drains. The sketch on the right shows a drain suitable for emergency use when a proper design is not possible. Wide drains like this are best as they need little cleaning and area easy to cross. They can be rapidly constructed by a grader or by labour. The drains can form part of the firebreaks necessary in any camp.

Dimensions for Emergency Drains



Maximum Drain Length: 250m in sandy soils or 400m in clay soils.
Drain slope: 1:250
Drain spacing: Every 60m generally but every 30m on slopes over 2%.
Area drained by each drain: A maximum of 2.5Ha.
Drains should carry water to a natural water course or other waterway.

This drain is for emergency use only. Where possible contact the Soil Conservation officer of the Ministry of Agriculture who will be able to design drains to suit your specific site.

The local ministry of agriculture soil conservation technician should be able to help with the design of a drainage system. Your technical staff or consultants may also be able to help you.

Natural drainage, soakaways, seepage lines, evaporation ponds and evapotranspiration beds can dispose of waste water. With natural drainage waste water flows through a pipe or channel to a natural water course. This is the best option if the water is not polluted.

If the water contains grease a grease trap should be used. This is a simple baffle immersed in the water that holds back the floating grease while the water flows underneath. Kitchen waste water always needs a grease-trap to avoid clogging soakaways. Grease clogs the side of soakaways and seepage drains and prevents evaporation from ponds.

Soakaways are holes in the ground filled with rubble or large stones. The holes are normally about 1.2m square by 1.2m deep. Water soaks away through the side of the pit. The stones and rubble are there to keep the pit in shape.

Seepage drains are an alternative to soakaways. Trenches are dug about 2m apart and up to 1m deep. Agricultural drains are laid, surrounded by sand or gravel towards the top of the trenches. A trench of this depth will, in average conditions, dispose of 20 litres per metre of trench per day. In good conditions the system will work without a deep trench. Twenty metres of seepage system will replace one large soakage pit.

Evaporation ponds can be used in very warm conditions in heavy clay soils with very poor drainage. The waste water ponded on the surface of the ground and it evaporates. The pond should be open to the sun and the wind. The ponds typically lose 6 to 8 litres per square of pond per day. Evaporation ponds may become insect breeding sites. Putting oil on the pond to control mosquitoes will reduce evaporation to one or two l/m²/day.

Evapotranspiration beds are areas supplied by surface or subsurface irrigation with plants growing overhead. Water flows on the surface or through a drain in a buried bed of gravel or sand. The buried bed may be sealed on top with a plastic membrane overlain by 300mm of soil. The crops growing on top of the beds use the water for their growth. Bananas, Eucalyptus and grasses grow well in these conditions. Plants growing in surface beds must be water tolerant.

Evapotranspiration beds can dispose of 7 to 10 l/m²/day. Percolation losses into the ground may be more than evaporation or transpiration losses. Percolation can be improved marginally by placing gravel filled seepage trenches under the beds.

LATRINES

Latrines are often the largest single problem in the management of camps. It is common to find refugee camps littered with human faeces, especially those of children and to find latrines dirty, smelly, and overflowing. Clouds of flies are everywhere to be seen and diarrhoeal diseases are common. Why are failures in this area of camp management so common?

The chief reason probably lies in the differences between peoples' normal environment and their environment in a refugee camp. In many countries most people in rural areas may not have latrines. People may defecate in areas of shelter such as wood lots instead of using latrines. Such practices, although not ideal, probably pose no major problems in well dispersed rural settlements. In a crowded camp such practices can, literally, be deadly.

Beliefs and conventions about defecation are part of all societies. Defecation is generally a private matter and it made be rude to discuss defecation practices. Any sanitation solution adopted must be culturally appropriate to the people. It is very foolish to embark on any sanitation program without extensive consultation with the users.

Latrines can be divided into wet, chemical and dry systems. Wet systems use water to transport sewerage away from the latrine. The Water Closets with which we are all familiar is an example of the wet system. Chemical latrines break down the sewage with strong chemicals. Dry toilets are systems that use no water or chemicals for their operation.

Wet latrines can be connected to a sewerage system or to a septic tank. They are unsuitable for emergency use because of the time taken to install these systems and the huge costs involved. Wet systems use large amounts of water for flushing. Pour-flush latrines are a cross between wet and dry systems. Flushing these latrines uses small amounts of water that the users pour by hand from a small container. Otherwise they are exactly the same as a dry system and will be treated below as a dry system variant.

Chemical systems use buckets that need to be emptied every few days. They should not be confused with the dry night soil system where buckets of untreated waste are removed daily. The chemicals used are both toxic and expensive. Chemical systems are unsuitable for emergency use because of the costs and of the difficulty of disposing of the toxic waste.

Dry systems are commonly used in emergencies. They cost less to build than wet or chemical systems and their operating cost is lower. Dry systems provide adequate protection for health and are used throughout the developing world.

The type of latrine most suitable for emergencies is the pit latrine in its various forms. It is easy and relatively quick to construct and needs no water for its operation. The basic pit latrine may be replaced by a pour flush latrine, which uses small amounts of water, where this is the cultural norm. A variant of the pit latrine is the Ventilated Improved Pit Latrine (VIP latrine).

Latrines are expensive. In development programs it is common to estimate the cost of providing latrines to be ten times the cost of water supply. This figure may seem excessive until one considers the amount of material needed for the latrine shelter. Each latrine can only serve a small number of people. A water point may serve 200 people, whereas a latrine cannot serve more than 50.

The time taken to build latrines is a bigger constraint than their cost. A team of 4 skilled latrine builders may only produce two basic latrines of a basic type per week. Latrines may take a long time to build because of the many resources that they consume.

The cost of latrines and the time they take to build have led to the development of many expedient options. These range from the defecation field, through to the borehole latrine. All these options are temporary solutions only. In the longer term only VIP or pour-flush latrines are likely to prove suitable. The figures given alongside each latrine are estimates and the actual values will vary both with soil conditions and the customs of the people concerned.

In the initial phases of an emergency in a hot dry climate defecation fields may be used. Defecation fields are open areas close to the camp reserved for defecation. The theory is that the high temperatures in a dry climate rapidly

dry the faeces and kill any eggs or pathogenic bacteria in it. Defecation fields have performed very poorly and may help to spread disease rather than control it.

In practice defecation fields are filthy foul smelling areas littered with human faeces. The area reserved for defecation grows quickly as people attempt to avoid the faeces of others. The faeces remain moist for some time at their centre and both eggs and pathogens survive. People do not use the field at night because of the risk of stepping on something unpleasant. The first rain that comes reaps a huge cargo of parasites and pathogens that can be carried to parts of the camp. Defecation fields should not be used for emergencies. A Defecation furrows can be used instead in the first stages of an emergency.

A defecation furrow is simply a furrow reserved for defecation. Each day workers dig a new furrow and cover over and compress the old one. This can be done by labour or by a tractor fitted with a mould board plough and a tamping roller. The furrows must be well compacted to prevent fly maggots from burrowing to the surface. Some defecation often take place in front of the furrow and this must be swept into the furrow before closing the furrow. The furrows should be placed so that they advance towards the camp as they are filled in.

<u>Defecation Furrow</u>	
Width:	0.5m
Depth:	0.2m
Trench length:	200m
Life:	1 day ¹
Per 1000 persons:	
Length needed:	100m
Daily land take:	60m ²
Daily length:	100m

Shallow trench latrines are the next simplest option. These may be simple trenches or may be fitted with boards on each side. The users may throw some soil to cover their faeces and a layer of soil is placed on the trenches at night. The shallow trench latrines have a life of 3 days. Screens supported on poles surround groups of 5 parallel trenches to give some measure of privacy.

<u>Shallow Trench Latrine</u>	
Width:	0.3m
Depth:	0.6m
Trench length:	1.0m
Life:	3 days
Per 1000 persons:	
Length needed:	40.0m
Daily land take:	19.0m ²
Daily length:	13.3m

Both the defecation furrow and the shallow trench latrine have odour and fly control problems. Flies are a bigger problem with the shallow trench latrine. These facilities must be located downwind of the camp. Defecation furrows offer no privacy while shallow trenches offer some limited privacy. They are both reasonable emergency measures but must be replaced by durable

solutions as quickly as possible.

Deep trench latrines have a row of seats or squatting plates placed over the trench. Each trench has five seats or squat plates. The latrines offer a reasonable degree of privacy in that plastic sheet or other washable screening material separate the individual positions. The compartments are open to an alleyway at the front. A partition screens this alley from the rest of the camp, providing privacy. Accidents must be cleaned quickly to avoid excessive smells. Covers may be placed on the squat holes or seats to minimise smells.

<u>Deep Trench Latrine</u>	
Width:	0.6m
Depth:	1.8m
Trench Length:	4.0m
Life:	100 days
Per 1000 persons:	
Length needed:	32.0m
Daily land take:	2.4m ²
Daily length:	0.3m

Deep trench latrines consume a good deal of resources and skilled time. Roofs stop rain filling the latrines prematurely or weakening the trench sides. The top 0.6m of the sides of the trench needs to be supported in most ground conditions. In very poor ground the whole depth of the trench may need to be supported.

The pit latrine is similar to a trench latrine except that it has just a single position. The hole in a pit latrine can be any depth but is usually between 0.8 and 1.2m square. As the total volume of excavation per person for a pit latrine is larger the life of pit latrines is far greater than for a trench latrine. The pit latrine can also be fitted with a squatting plate with a water seal. Water, poured by hand, flushes the waste material from the plate. The pit latrine is then a pour flush latrine.

<u>Pit Latrines</u>	
Width and length:	1.0m
Depth:	3.0m
Life:	3 years
Per 1000 persons:	
Number needed:	40
Daily land take:	0.2m ²
Yearly number:	14

The life of a pour flush latrine is probably two thirds that of an equivalent dry pit latrine. Pour flush latrines can also be built with the pit offset from the squatting plate. In this way one pit can serve 4 latrines. This type often has more maintenance problems than the simple type.

Borehole latrines are simply holes bored into the ground fitted with a seat or squatting cover. The holes are dug by hand auger or by a truck mounted auger. A can with ends cut off or a pipe supports the top 0.6m of the borehole. Holes are normally augered in sets of five and fitted with screens similar to a deep trench latrine. Roofs are not needed but are often fitted.

<u>Borehole Latrines</u>	
Width:	0.4m
Depth:	6.0m
Life:	100 days
	Per 1000 persons:
Number needed:	40
Daily land take:	2.0m ²
Daily number:	0.4

Deep trench, pit and borehole latrines all have fly and odour problems. Odours are less noticeable than with furrows or shallow trenches, especially when seats and squat plates are provided with covers. Fly control of deep trench and pit latrines can be improved by hanging hessian soaked in sump oil or insecticide in the trenches. These latrines offer a reasonable degree of privacy. Doors can be fitted but this is not recommended as they can lead to the build up of odour inside the structure driving away users.

The life of a latrine depends on the soil conditions, the size of the latrine hole and the number of people using it. Human beings produce about 0.1 litres of dry solid waste per day. Human waste contains a lot of water, making the total initial volume of the waste much higher. In a pit latrine the water gradually evaporates and seeps into the ground leaving only the solid material in its place.

The calculations above assume that seepage is slow and that 0.3 litres of latrine volume is needed per person per day. A figure of 0.1 litres per person per day is appropriate for a latrine life of over one year. The bacteria in the latrine help to separate water from the solids. If chlorine or other chemicals are used to kill microorganisms in latrines they will shorten the useful life of the latrine. Lime and ashes or ground charcoal can be used to reduce odours from pit latrines.

If a latrine fills quickly there is not enough time for the water to evaporate or to seep into the soil. This can happen when a lot of people use the latrine or chemicals are used in it. The latrine may only hold one sixth of its total potential capacity in these circumstances.

The above calculations were based on 25 persons per latrine. This is a reasonable level of provision considering the prevalence of diarrhoeas in warm climates. Providing latrines at this level leads to higher standards of

cleanliness and a higher level of utilisation. If latrines are provided on the basis of one per 50 persons the latrine lifetimes above given should be divided by three.

Ventilated improved pit latrines are pit latrines that are fitted with a vent pipe. The sun heats up the vent pipe. The air in the vent pipe rises up and is replaced by air flowing from the pit. If there is wind, the wind blowing across the top of the vent pipe also draws the air from the pit. This air carries the latrine odours with it leaving the inside of the latrine fresh.

The inside of the latrine is dark. Flies go towards the light from the vent and fly up it. The fly screen stops them for leaving until they tire and fall back into the pit. Other flies attracted by the odour of the latrine vent cannot get in.

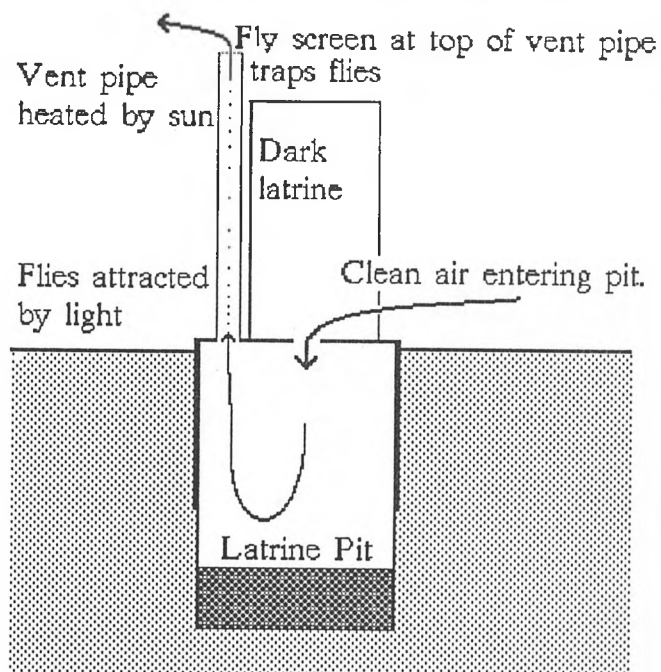
Ventilated improved pit latrines are not suitable for use on trenches unless the trench is divided into a series of separate pits. In unidivided trenches air enters one hole and leaves by another, bringing all the odour with it. Plastic sheet can be used to separate the pits.

Urinals for men can decrease the demand on latrines. The urinals can be built on the same principle as a ventilated improved pit latrine or can be built using one of the many patterns used by the military.

There are many other types of latrine but the above types describe those likely to be used in an emergency. Ventilated improved pit latrines and pour-flush latrines are suitable for general use in long term settlements.

Ventilated Improved Pit Latrine

Odour laden air leaving pipe
(heated in vent pipe and drawn by wind)



The water table and the location of housing and other facilities controls latrine location. Of these constraints the water table constraint is the more serious. Latrines must not pollute ground water sources. Latrine pits must not extend into the water table. The bottom of a pit should be at least 2m above the top of the water table. Latrines should not be within 100m of a well, spring, borehole or surface water source. The direction in which latrines face may be sensitive in muslim countries.

In areas with a high water table, latrines may be built in raised mounds. A better solution is to use the OXFAM sanitation unit. Each unit will serve a population of one thousand people. The sanitation pack has 20 squatting plates and a treatment unit. The effluent from the treatment unit presents little or no biological hazard.

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The sanitation unit is particularly suitable for use in emergencies for the treatment of the wastes of patients with faecal-oral epidemic diseases. The purchase of a sanitation unit is recommended where outbreaks of cholera or other faecal-oral epidemics are expected.

As noted above, defecation fields and other latrine expedients must be located downwind of all accommodation. Ventilated improved pit latrines and pour flush latrines can be placed throughout the accommodation blocks. Ventilated pit latrines remove the smell from the latrine locality, but may shift a reduced smell to another point. The higher the vent pipe the further the smell moves and the more it dilutes. Pour-flush latrines sometimes smell because the gasses formed in the pit push their way past the water seal.

The great advantage that ventilated, and pour flush latrines have is odour control. When properly maintained, the smell from them is low enough to allow them to be located near housing. Any type of latrine will smell if it is not properly maintained and kept clean.

As a rule every house should be within 100m of a latrine. If houses are further away then there will be some uncontrolled defecation, particularly by small children.

MANAGING A LATRINE PROGRAM

The best resource available to anyone responsible for sanitation is the people themselves. People will take any hygienic measure if they are consulted and are themselves convinced of the need to do so. Sanitarians need to know how the community perceives its sanitation problems before they can offer appropriate advice. This is one reason why community participation is vital in latrine programs.

The most important principle with latrine programs is that the practices they promote must be culturally appropriate and acceptable to the users. Sanitation may not be seen as a problem by the community in the same way that outsiders see it. The communities' experience may reinforce their current practices.

Different cultures use different methods of anal cleansing. Cleansing materials appropriate to the population should be provided at latrine sites. This can take the form of small water tins and a water drum for some cultures. Water for hand-washing should be provided always.

Emergencies are associated with overcrowding and poor physical condition. People may not realise that these factors place them at special risk and make their hygiene habits inappropriate to their new condition. Sometimes the people at risk may be very aware that they are at risk but may not have the resources to reduce the risks.

While constructing latrines is not particularly difficult, maintaining them is. Latrine systems only work if they are used. They will only be used if they are accepted by the community and are convenient.

If latrines are dirty or far from accommodation, they will soon fall into disuse. Latrine cleaning is always difficult. Latrine cleaning is not a prestigious job in any culture. Communal latrines need paid cleaners of some sort or they soon become dirty.

While using paid cleaners is acceptable in the initial stages of an emergency it is generally not a viable practice in the long term. For long term settlements it is better to move to family latrines. Family latrines are the only ones that will be kept clean without outside inducements.

Latrine guards may be used during an emergency. These ensure that people do not defecate outside the latrines and that the latrines are clean. Guards can also supervise hand washing by latrine users. Several latrines can be placed

in a fenced compound with a guard and hand washing facilities near the entrance. The guard obliges everyone to wash their hands after using the latrine. Making cleaning the latrines a small part of a responsible task often makes the task more acceptable.

WASTE DISPOSAL

Every group of people, no matter how poor, will generate solid waste. In the initial stages of an emergency the amount of solid waste generated can be very small as people have literally nothing to throw away. After a short time the amount of discarded material begins to build up. If such material is not collected flies and rats will live on it and breed in it.

Making allowance for waste disposal must part of all programs in the camp. If new clothing is issued allowance must be made for the collection of discarded clothing.

The amount of waste generated depends on the type of rations people receive and on how they are packaged. If a camp is supplied by a central kitchen most of the waste will be uneaten food and kitchen waste. If dry rations are issued there will be more packaging waste and less food waste. With long term settlements there will be more waste and it will be very varied.

In emergencies the proper disposal may not be a priority for the community. Refuse collection must be simple and straight-forward. Oil drums (200l size) fitted with handles and lids can be sited around the camp for refuse collection. Placing the drums on a gravel bed with a small surround prevents dirt from building up around the drum site. In countries with a plastics industry refuse bins to a municipal standard can be half the price of empty oil drums.

The drum sites should be next to roads in the camp. A tractor and trailer can collect the drums daily and take them to a dump site. It may be possible to find a contractor to remove the refuse from the site. Otherwise the rubbish can be buried in a pit, with layers of rubbish covered with top soil each day. Using plastic sacks to line the drums or bins makes the whole operation much cleaner.

In a settled site the amount of refuse can be between 0.3kg and 1.0 kg/person per day with a volume between 0.8 and 2.5 litres. In emergencies the levels of refuse will be less than this. Bins should be provided to cope with between

1 and 2 litres per person per day. One 200 litre refuse drum will cater for between 100 and 200 people.

Incinerators can burn combustible rubbish. Incinerators can be built to a wide range of patterns. Incinerators consist of a fire box, grate and vent. Incinerators are often used for burning waste from hospitals and health centres.

Waste from hospitals and health centres is particularly dangerous and should be dealt with separately from the household refuse. It should be incinerated or buried on site in plastic sites. Burial pits for hospital waste should be protected from flooding.

As mentioned above, the OXFAM sanitation unit is particularly suitable for dealing with waste from patients during epidemics of faecal oral diseases. Pit latrines can also be used for this material but additional measures should be taken for fly control. It is particularly important to protect these latrines from flooding.

FLY CONTROL

If a camp is not clean flies will very quickly become a major problem. Flies can be controlled by insecticidal application, trapping, exclusion or by denying them breeding and feeding sites.

All the flies in the camp can be knocked-down by an insecticidal fog. This technique should only be used in expert hands. Checks should be made to establish resistance to the insecticide used. A fogging machine is used to apply a blanket of insecticidal fog about 2m deep across the camp. The fogging needs to be repeated every 10 days to control flies.

Some areas need special fly protection. Kitchens, health centres and feeding centres need special protection. Persistent insecticides can be sprayed on vertical surfaces to limit the spread of infection by flies. Expert advice should be sought on resistance and to avoid any risk to health. The now unfashionable sticky fly paper traps are very effective. The ultra violet fly electrocutors popular in developed countries only work where there is little daylight. Flies are just as happy with the ultra violet component of daylight.

Better control of flies can be obtained by denying them feeding and breeding

sites. A single unventilated pit latrine can produce over 100,000 flies a year. The use of ventilated improved pit latrines can reduce these numbers by more than 98%. Efficient garbage disposal also helps to control flies. Using plastic refuse sacks also helps control flies. Buried refuse should be covered with compacted layers of earth. The top layer of earth on a pit should be at least 0.6m thick.

Kitchens should be fly-screened and staff trained to reduce opportunities for flies. Used utensils should be quickly cleaned. Food and utensils should be stored in screened stores. A mesh size of 2.2mm will exclude flies.

MOSQUITO CONTROL AND MALARIA

Malaria is often a major problem in camps. It is particularly dangerous when a population that is not resistant to malaria is exposed to it in their area of refuge. Malaria can be combatted by chemical prophylaxis, insecticidal spraying, avoiding contact with the mosquitoes spreading it or by destroying their breeding sites. A mixture of techniques will give the best result.

Chemical prophylaxis may be appropriate for population with no resistance to malaria. This is a matter for medical staff to decide on and will not be discussed further.

Mosquitoes rest on walls of houses and these walls can be sprayed with a long lasting insecticide to kill the mosquitoes. Mosquitoes are now resistant to many insecticides and expert advice is needed before embarking on a general spraying program. Remember that most of the negative environmental impact of insecticides has come from their agricultural use. Public health use represents only a tiny fraction of the total quantity of insecticides used.

The use of screens and bed nets to prevent mosquitoes biting is very effective, especially if the nets contain a long lasting insecticide. Many species that carry malaria are most active at dawn and at dusk. Some species may prefer cattle or other animals. Cattle do not get malaria and may be used to offer alternative targets for the mosquitoes. The widespread introduction of cattle may have lead to the southward retreat of malaria in europe in the last few hundred years.

Mosquitoes hatch their eggs in water. Different species prefer different types of sites. Sanitation measures are normally carried out within a 2km radius of

the camp. All standing water within the camp should either be screened or treated by pouring oil or kerosene on it. This forms a thin layer on the surface preventing mosquito larvae from breathing air. Any pools of water in the camp area should be filled in or drained.

Every mosquito strain had different environmental preferences. Only a few strains carry malaria. Sanitation measures are most effective if they target these strains, but public support may be greatest if all strains are attacked. It may be appropriate to seek the advice of an entomologist before embarking on a large scale program.

PERSONAL HYGIENE

The perceptions of what is clean vary from culture to culture. Cleanliness comes naturally to people and when they have the opportunity to wash, they do so within the constraints of their culture. Cleanliness may play a large part in morale. If people cannot wash themselves this may damage their sense of their own worth and lead to other problems.

If there is surface water within walking distance many people may go there to wash. It is important that this happens downstream of any water-abstraction points. Where pollution is not acceptable it may be necessary to build showers for the community.

Showers may also be needed for urban refugees or where there is no access to safe surface water. These can be either individual or communal depending on cultural acceptance. Showers can use large amounts of water. The number of showers to be provided depends on the background of the people but a figure of between 2 and 10 per thousand people may be appropriate.

If water is limited and living conditions are crowded it may be appropriate to provide washing booths where people can bring a small amount of water and wash themselves in private. All washing booths and showers should be fitted with concrete floors and drains. In cold climates some form of water heating may be needed.

Hand washing can play a large part in breaking the faecal-oral contamination chain. All those leaving latrines or entering kitchens or feeding centres should wash their hands. Oil drums fitted with taps and mounted on stands and with a piece of soap on a rope are best as this discourages the waste of

water. The hygiene guard can control the tap. Small gravel soakaways should be provided for the waste water.

Soap is a vital part of personal hygiene. Soap helps to break down dirt and remove it from the skin. Even if the general distribution includes soap it should still be provided at hand-washing points. The soap at hand-washing points may be a different colour to discourage theft where this is a problem. When there is no soap in the general distribution it is common to find people exchanging food or other relief goods to obtain it.

LAUNDRY AND DELOUSING

People need to wash their bodies as well as their clothes. If there are no laundry slabs every flat clean surface in the camp will be pressed into service. This may lead to congestion at water points and at other facilities. Clean clothes are important to morale. Performing such routine acts as clothes washing may aid recovery after an emergency.

Areas for drying clothes must be provided near laundry areas. Laundry lines are the cheapest way of doing this. It may help to fence off the whole of the laundry area to prevent the theft of drying clothes. Barbed wire should not be used as the fence itself will also be used for drying.

People arriving at a camp may need delousing and their clothes disinfecting. This is essential if there is a threat of typhus or other louse borne disease. The normal pattern is for new arrivals to wash before being issued with new clothes. The old clothes should be disinfected and returned. The old clothes that people arrive in may be their only possessions and losing them may be painful.

Personal possessions may be fumigated, washed or steamed. Washing or steaming are safer than fumigation. Body lice live in clothing and only go onto the body to feed. Stray lice on the body may be removed by shaving body hair and washing.

Chemical Louse Control.
Head and Pubic Lice.
1% permethrin creme rinse.

Clothes.
Washing for 20 minutes in water at 55°C or steaming for 5 minutes.

1% Malathion or lindane. Pyrethrins with piperonal baptized or carbaryl can also be used. 2% temephos dusting powder can be used with resistant strains.

Fumigation with 2ppm of ethyl formate for 1 hour.

Shaving heads for the control of head lice can have a dehumanising effect and should not be used. Head lice and pubic lice are not serious disease vectors and are easily controlled with chemicals. Widespread outbreaks of lousiness in an existing population can be treated by insecticidal dusting of people and their possessions.

ACTION IN EMERGENCIES

Visit the site and hold discussions with community leaders. These initial discussions may help to identify how the community perceives sanitation problems. Any sanitation program will rely heavily on the co-operation of the community.

Locate implementing partners. It is often very difficult to locate an implementing partner for a sanitation project. Sanitation is not photogenic, unlike curative health or water supply. Members of the community may have the skills to manage the program.

Clean site. If a site is already in use the priority should be to clean it and remove any faecal contamination on site. If flies are already a nuisance it may be necessary to spray the site. Road construction equipment may be needed to clean large areas. The community may be able to help.

Construct defecation furrows. These are probably the best option for immediate emergency latrines. This should only be done with the agreement of the community.

Establish Sanitation Committee if it is not already in place. The first concrete actions in the program may increase willingness to participate.

Begin pit latrine construction. It will take a long time to build latrines for the whole population and construction should start as soon as possible to minimise the need for emergency latrines.

Begin latrine slab construction. This is often the most difficult logistic component of a sanitation program and the latrine slabs may take several weeks to cure before they are ready.

Install drainage. The urgency with which this needs to be done depends on the time of year. If it is not done quickly it may not be possible to build drains without destroying shelters. The soil conservation section of the Ministry of Agriculture can give advice on this.

Institute proper disposal of waste water. Install soakaways around drainage points. Local builders or road construction companies can usually help with the necessary works.

Set up a waste collection system. Ordering plastic rubbish sacks will be one of the first activities here. Local contractors may be available to deal with general rubbish. Contractors may not be reliable enough to be trusted with hospital wastes.

Make a long term plan with the sanitation committee. This should include details of how the community will assume complete responsibility for sanitation.

If flies or mosquitoes are a nuisance get specialist advice. A campaign with both chemical and environmental sanitation components may give the best results. The ministry of health and the ministry of agriculture can often give useful advice.

Diarrhoeal disease emergencies. If there is a risk of epidemics of diarrhoeal disease the pre-positioning of an Oxfam sanitation kit for the isolation hospital could be a good move.

Other measures. The other measures to be taken will depend on the needs of the community and how they perceive their situation. Community assistance should be a prerequisite for solving any problem identified by the community for which they propose a solution.

This area might include laundry slabs, showers and washing areas. Some other facilities, such as delousing facilities, might be needed for medical reasons.

FURTHER READING.

There is a wide literature on sanitation. Most of this concentrates on development projects. Latrines are the main emphasis of most publications. As with water supplies the texts concentrate on the construction details. There is very little written on their successful long term operation and maintenance. The following are among some of the most useful publications. This following references are suitable for the general reader more than for the specialist.

Cairncross, S & Feachem R. **Small Excreta Disposal Systems.** Ross Bulletin 8. Ross Institute, London, 1988. 54pp, ill. This good short guide to sanitation options has recently been revised. A comprehensive and authoritative review of sanitation options but not specifically aimed at emergencies. It is highly recommended. It may encourage you to consider other approaches to your project.

Cairncross, S. and Feachem R.G. **Environmental Health Engineering in the tropics.** Wiley, Chichester: 1983. 283pp. ill. app. glos. This clearly written text is the best primer on the health impact of water supply, sanitation and waste disposal from an engineering viewpoint. Of particular interest is the comprehensive approach which the authors adopt towards their subject.

Benenson, A.S. (Ed). **Control of Communicable Diseases in Man.** Fifteenth edition. American Public Health Association, Washington: 1990. 532 pp. The definitive guide to communicable diseases. Although somewhat technical it included clear advice on the sanitation measures to be taken for the control of different diseases.

Morgan, P. **Rural Water Supplies and Sanitation.** Macmillan, London: 1990. 358pp. ill. A practical well illustrated text dealing mainly with water supply. The book has a very useful section on sanitation concentrating on the ventilated improved pit latrine developed by the Blair Laboratory in Zimbabwe.

Busvine, J.R. **Insects and Hygiene.** Chapman and Hall, London: 1980. 568pp. ill. app. A thorough and scholarly review of the biology and control of insect pests of medical and domestic importance. More suitable for a reader from a life sciences background.

Youdeowei, A and Service M.W. **Pest and Vector Management in the Tropics.** Longman, London. 400pp, ill. A thorough and readable review of both insect pests of agriculture and insect vectors of disease. Both insecticidal and environments sanitation measures are described. Does not specifically deal with emergencies but still contains some very useful material.

Busvine, J.R. **Arthropod Vectors of Disease.** The Institute of Biology's Studies in Biology N° 55. Edward Arnold, London. 68pp. ill. A Brief introduction to the insect pests of main medical importance. Describes treatment and control measures in general rather than specific terms.

RESOURCES

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The leading non governmental agency involved with sanitation in emergencies. Suppliers of prepackaged sanitation units. Very broad emergency water supply experience but emphasis is on water rather than sanitation.

INTERTECT
PO Box 10502
Dallas
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UNITED STATES
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Fax: + 1 214 5229332

The leading consultancy for emergency and disaster management. Very broad experience of all aspects of disaster management, including water supply.

The Ross Institute
London School of Hygiene and
Tropical Medicine.
Keppel Street, Gower St.
London WC1E 7HT
ENGLAND
Tel: + 44 71 636 8636

University institute specialising in tropical medicine. Particular interest in the link between sanitation, water and health. Mainly development projects.

WHO-IRC
PO Box 5500
2280 HM Rijswijk
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The World Health Organisation's International Reference Centre for Community Water Supply. Also deal with sanitation.

WEDC
Loughborough University
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Water Engineering for Developing Countries. A self-funding component of the University of Loughborough. Mainly dealing with development water and sanitation.

EMERGENCY LOGISTICS

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1988

The purposes of this paper are:

1. to describe the conceptual framework;
2. to identify principles of organization;
3. to describe general aspects of a logistics system; and
4. to provide some operational hints and suggestions.

INTRODUCTION

Logistics is not a highly-complicated activity, yet few organizations properly implement logistics operations. There are too few experienced or trained logisticians working in the field of emergency operations and, as a result, a key component of emergency operations often becomes fraught with problems and costly delays.

Logistics for emergency relief operations is different from most other types of logistics systems. The need for speedy delivery of supplies, coupled with non-standard customs procedures, serves to complicate the system and create logjams from the initial stages of an operation. Unless an organization is properly prepared to address the problems at the outset, they can quickly multiply and further delay deliveries. This paper will give a general overview of emergency logistics, identify common problems, and offer some suggestions on how to overcome the most common obstacles.

A. Definition

A good working definition of emergency logistics is:

"The practical art of establishing lines of supply, providing the commodities, and the transport to move them."

The term "lines of supply" is a key concept; logistics should be thought of as a linear system -- a flow of supplies from point to point. Another way to view logistics is as a system of supply, where items (or commodities) flow through the system in one direction and the system of controls sends documents flowing back in the other direction. For example, supplies such as food move down the system while requisitions and reports flow back in the other direction.

B. The Importance of Logistics

Logistics is the lifeline of a relief operation. People depend upon food and other supplies in the system.

Logistics is also usually the most expensive part of an operation. For example, a truck that can move across unpaved roads costs approximately \$50,000 U.S. dollars; its trailer may cost \$10,000 - 15,000 or more. Therefore, a 100-truck fleet with spares costs approximately \$10 million (not including fuel, maintenance or insurance).

Because it is so expensive, logistics is the most problematic aspect of a relief operation. In part, this is because it is the activity most subject to corruption, especially when the goods involved are in short supply in the host community. Whenever there are competing demands for food, fuel and other relief supplies, then thefts, pilferage and diversions can be expected.

The costs of logistics operations are often increased because the agencies are inexperienced in handling commodities or are not familiar with the limitations of transport or the complexities of the various stages of a logistics system. In logistics, time equals money -- when a procured commodity sits in a warehouse or on a ship, it costs the agency even while it is not in motion. During the Ethiopian famine of 1985, the final cost of food doubled due to the long delays encountered in the ports and in trying to transport the food inland.

As vital as logistics activities are in an emergency relief operation, there are few trained emergency logisticians; most of the people handling logistics have gained their knowledge by trial-and-error, and many consistently make the same mistakes. At the international level, there is no central coordinating body to try to relieve competition in procurement or transport and, at the country level, there is rarely a group set up to schedule arrivals of ships or planes to relieve port congestion. Thus, it is no wonder that logistics delays and costs mount so quickly.

C. The Scope of Logistics

Logistics covers the movement of many different items but, in emergency logistics, movement of food is its primary and most important function. The movement of medical supplies, especially vaccines, is also important but is usually much smaller in scale and requires specialized equipment and arrangements. Additional activities include movement of non-food items such as tents, household supplies, fuel and equipment; and movement of people from one site to another.

D. The Element of Time

An important objective of a logistics operation is to reduce transit time, especially in the earliest stages of an emergency. Often, decisions are made more on the basis of time than on cost. Time becomes the criterion against which all initial decisions are measured. In this sense, the time element is unique to emergency relief logistics and makes it distinct from other forms of logistics operations.

CONCEPTUALIZING LOGISTICS

A. Components of a Logistics System

Logistics is a set of interrelated components. The primary components are the physical elements of the system or the hardware; the secondary components are the various controls, sometimes called the software.

Primary components include warehouses and other storage facilities; transport such as trucks, planes, ships and/or other carriers; and special facilities such as fuel depots, garages, milling facilities, cold storage for perishables, and cold storage facilities for medicines.

Secondary components include:

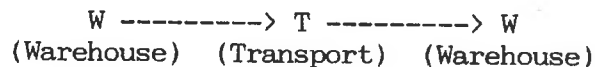
1. a control system consisting of:
 - a. procurement;
 - b. a monitoring system (waybills, call forwards, requisitions, etc., which are used to track the operation); and
 - c. the persons who coordinate the shipments and carry out checks and audits of the supplies in the system.
2. a distribution system which controls distribution of the commodities in the refugee camps or settlements.

B. Model of a Typical Logistics System

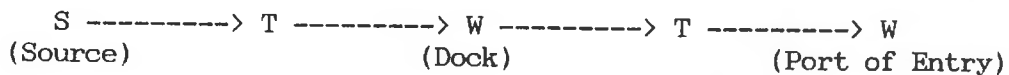
The following is a conceptual model of a typical logistics system. The objective is to move supplies from their source (the supplier) to their destination (the refugees):



The movement of supplies is carried out through a series of movements (transport) and intermediate stops at warehouses, represented diagrammatically in the drawing below:



Supplies are shipped from the supplier by truck or rail to a warehouse on the dock at the port of shipment, then transported by ship (or in some cases by plane) to another warehouse at the port of entry in the country of asylum:



At the port of entry, the commodities are cleared and then transported again to another (regional) warehouse and from there to a warehouse in the refugee camp:

S---> T---> W---> T---> W---> T---> W---> T---> W
 (Port of (Regional (Regional (Camp)
 Entry) Warehouse) Warehouse)

From the warehouse in the refugee camp, the commodities enter the distribution system and move directly to the refugees:

S---> T---> W---> T---> W---> T---> W---> T---> W---> DS---> R
 (Regional (Camp) (Refugees)
 Warehouse)

Conceptually, the overall system can be divided into three stages. The first stage is from supplier to port of entry; the second stage is from the port (after clearance) to the refugee camp or settlement (in most cases, through an intermediate warehouse in the vicinity or region of the refugee camps); the third stage is from the camp warehouse through the distribution system to the refugees.

S---> T---> W---> T---> W---> T---> W---> T---> W---> DS---> R
 [-----First Stage-----][-----Second Stage-----][--Third Stage--]

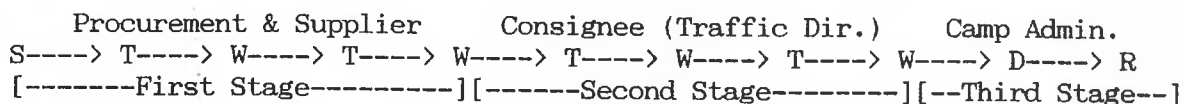
C. Control Responsibilities

Responsibility for controlling logistics in the first stage lies with the purchasing agent (in UNHCR, the procurement section). Control begins with the specifications of the order. The supplier is responsible for meeting the specifications, shipping the commodity, and delivering it in good shape to the port of entry. (Note: insurance does not extend beyond the port of entry. For this reason, in most cases the supplier will not accept responsibility beyond the acceptance of the commodity in the port of entry.)

Once the shipment has been cleared, a relief agency is usually the consignee and takes responsibility for onward shipment to the refugee camp; thus, the agency is responsible for control in the second stage. Most of the effort (and problems) occurs during the second stage, primarily because agencies are not adequately prepared for this task. Ideally, responsibility for control is vested in a person known as the "traffic director". The traffic director controls delivery schedules, assignment of supplies, and decisions regarding when to ship from the port of entry to intermediate warehouses and/or the refugee camps. The traffic director is usually the chief logistician and, in some situations, may be the local procurement officer.

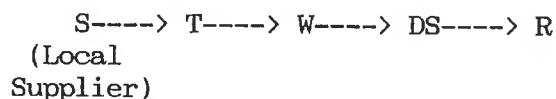
In the third stage -- distribution in the refugee camp -- the camp administrator (or, in the case of scattered sites, the agency in charge of distribution) is responsible for control.

Conceptually, the control system looks like this:



D. Local Procurement

So far, we have described a full-scale international logistics system. There is, however, a way to significantly reduce and simplify logistics, by local procurement. With local procurement, it is possible to eliminate all of the first stage and most of the second as shown in the diagram below:



It is usually possible to contract with local suppliers to deliver needed commodities directly to the refugee camps.

E. Logistics Coordination

The most important person in a logistics operation is the traffic director, whose responsibilities include:

1. controlling procurement and distribution;
2. controlling transport, i.e., controlling allocation of trucks or other vehicles and where they go;
3. monitoring the warehouses;
4. directing allocations of supplies to the intermediate warehouses and from there on to the camps; and
5. planning the overall distribution system in cooperation with the camp administrators.

The traffic director must be based in the field, have adequate transport to be able to move up and down the system from the refugee camp to the port of entry, and be able to control the fuel allocation for the vehicles in the logistics system. Ideally, the traffic director is an experienced logistician from an agency that has extensive experience in moving large quantities of supplies and is thoroughly familiar with priorities in a relief operation. In summary, the traffic director should be the focal point for all coordination in a logistics system.

F. Decision-making

The need to make early logistics decisions in an emergency cannot be overemphasized. Early decisions save money and lives. This is especially true regarding food and medical supplies. The longer basic decisions are delayed, the greater the cost will be. For instance, if it takes two months from the time food is ordered to the time it arrives in a refugee camp, delaying a decision to procure and ship the food by even a week means that a portion of the food will probably have to be expedited by air, increasing the cost perhaps ten-fold. If the decision is delayed even longer, it simply may not be possible to meet all the needs; as a result, lives may be put in jeopardy unless alternate sources of food can be found.

G. System Planning

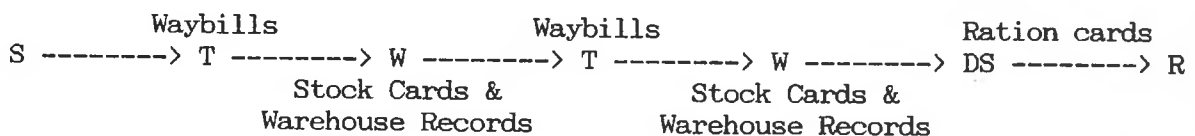
At the very outset of an emergency, planners should conceptualize and plan the entire logistics system. It is important to define the key roles and responsibilities of all personnel at each stage and to set up the records and controls required to monitor the flow of supplies through the system. Too often, organizations attempt to set up the system in a piecemeal fashion, resulting in confusion, delays and higher costs.

LOGISTICS CONTROLS

Control over commodities in the logistics system is carried out with the use of various types of documents. As supplies go down the system from supplier to destination, the documents include:

- waybills or bills of lading. These shipping documents are used to control the shipment during transport.
- stock control cards and warehouse records. These documents control the supplies while they are in a warehouse.
- ration cards. These provide the primary commodity control within the distribution system.

This system can be diagrammed as follows:



The paperwork which controls the flow or rate of movement of supplies while they are in the system consists of:

- call forwards. These documents are issued to summon supplies already in the system.

- requisitions. These issue a call for supplies that need to be ordered or sent from a buffer stock further up the system.
- purchase orders or contracts. These are issued to suppliers by procurement officers to initiate the purchase of supplies not already in the system.

A. The Primary Documents

The two documents that control Stage I and II logistics are the waybill and the stock card.

Waybills are used to record the cargos being shipped and to certify that they have been received by the transporter in good shape and are being delivered in the same shape and quantity as received.

Normally a waybill will have an original plus three or four copies. When a transporter delivers the supplies to a warehouse, the waybill is signed and the transporter uses a copy as his invoice for payment. Other copies are maintained by the shipper at the point of origin and the warehouseman at the destination. Additional copies are used to notify the traffic director that the goods have arrived at the specified location.

Stock cards are the primary means of controlling supplies in the warehouse. They provide not only a storage record but also a record of the in-and-out balance of the commodities within the warehouse. One card is generally kept for each type of item in the warehouse.

B. Accountability

It is important that the chain of accountability in a logistics system be clearly understood by all parties. In the warehouse, the accountable person is the storekeeper. During transport, accountability lies with the driver or person conveying the commodity.

Responsibility during shipment is transferred from storekeeper to driver by means of a waybill and from driver to next storekeeper at the point of off-loading with a receipted waybill.

Checkers should be employed at each transfer point to check the goods loaded or off-loaded and certify that all are accounted for. Damages or losses should be recorded on the receipted waybill, indicating overage, shortage or damage. Again, the driver is responsible for shortages or damages in transit.

C. Distribution Systems and Controls

In an emergency, refugees will usually congregate at a relief center or in refugee camps. It is important to establish a distribution system that ensures the timely and equitable distribution of food and other critical supplies.

There are generally two ways to distribute food in an emergency: by individual or by group.

An individual distribution system is generally utilized when people arriving in a camp come as individuals or as single families rather than as a larger social group such as a clan or village. Group distribution is used when the basic social structure of a community is intact and village or community leaders can be easily identified (and when they still have authority among the refugees).

Individual distributions are dependent on a registration system and use of registration or ration cards to identify people and record when they have received their food allotment.

Group distribution also requires a registration system but individual ration cards are not required so long as the community leaders keep lists of those who should receive food based on family units and age distribution.

As a general rule, group distribution is preferable because it is quicker and easier to administer, and because it offers refugees a role in food decisions and helps to re-establish traditional community structures.

However, in some cases group distribution should be avoided, at least in the initial stages of an emergency. These situations include:

- severe food shortages. If the people entering the camp are severely malnourished, and if food supplies are irregular, group distribution programs may inadvertently lead to food discrimination, resulting in higher mortality rates among the vulnerable groups.
- when indentured or "captive" servants/workers are among the population. If food shortages exist, the heads of the groups may not allocate sufficient food to the workers despite their needs, and mortality could be high.
- when armed insurgents are suspected of using food to control a refugee population. In 1979, Khmer Rouge cadres hiding among the refugees in Thailand tried to maintain control over the people by gaining control over food distribution. While an individual distribution system did not completely eliminate their attempts to enforce discipline, it did significantly erode their authority.

D. Problems of Control in Distribution

One of the major problems encountered in distribution control is multiple registration. A registration system with ration cards works well only if people are assigned to a specific spot or shelter within the camp or settlement and periodic cross-checks are made to match the numbers against the locations.

E. Role of Procurement in Logistics Control

The role of procurement in logistics control is often not clearly understood, even by procurement officers. Control in the system begins with the setting of technical specifications for the items being purchased. These specifications establish the quality of the commodity.

Other decisions made at the time of procurement also affect quality and the likely condition of the supplies when they arrive at their destination. For example, specifications regarding packaging of foods can determine how well they travel, the percentage of loss that can be expected en route, and how long the commodity can be maintained in a destination warehouse. What may appear to be a minor decision about the type of bag to use for food -- cloth or polypropylene -- can have a major effect on shelf-life and transportation requirements.

In most international relief organizations, procurement offices are located in the headquarters of the organization and procurement officers are often far removed and sometimes unacquainted with conditions in the field. Unless the field staff provides thorough and clear specifications, complications are likely to develop. Therefore, it is extremely important that the procurement process begin with requests from the field. Ideally, procurement officers or personnel thoroughly briefed in procurement procedures should be assigned to the logistics team in the field and given responsibility for preparing the procurement specifications; then the primary role of a procurement officer at headquarters should be to facilitate and support requests from the field. While this is undoubtedly difficult, given donor pressures and the reality of donor constraints, it is important that organizations strive to focus their procurement activities at the field level, not at headquarters.

STORAGE FACILITIES AND EQUIPMENT

A. Warehousing

Selection of warehousing is important since relief supplies are likely to spend a good deal of time in these facilities.

1. Size. The warehouse must be large enough to store the types and quantities of supplies that are being stockpiled. If a variety of goods are being stored in one place, then the warehouse plan should be based on the most bulky commodity.

Food grains usually require more space than other relief commodities. As a rule of thumb, one ton of grain normally occupies a floor space of one square meter and a volumetric space of one cubic meter. Therefore, calculating the amount of storage space needed is fairly easy; if 500 tons of grain must be stored, for example, a warehouse of approximately 500 cubic meters of storage space is required. (For more details on storage requirements, see UNHCR Handbook for Emergencies, p. 42.)

2. Permanent buildings. When storing grain, it is usually best to select permanent buildings with hard-surfaced (preferably concrete) floors. Almost any type of building can be used for storage, but those with minimal windows and large access doors are generally best since the likelihood of pilferage and theft is reduced with fewer windows. Storage of grains on the second floor should be avoided as the structure is unlikely to have been designed to withstand the heavy weight.

In remote locations, or in refugee camps or settlements; it may be necessary to construct temporary warehouses. In some situations, adequate supplies of local materials may be available. Wherever time and weather conditions permit, small-scale warehouses can be built using local resources and employing refugee and/or local labor.

3. Prefab structures. Use of prefabricated flexible, plastic warehouses is increasing in emergencies, and many models are now available. A primary criterion for selection should be its demonstrated wind resistance and climatic suitability. Before procuring a prefabricated warehouse, the method of anchoring the warehouse to the ground should be ascertained. In 1985, one-third of the warehouses procured for emergency relief operations in eastern Sudan were destroyed within a two-week period because they were insufficiently anchored to the ground and were unable to withstand high winds.
4. Selection criteria. Other than space, the main overall consideration for warehouses is the amount of protection provided for the items stored. Within the storage enclosure, commodities must be protected from:
 - the climatic environment;
 - theft;
 - rodents and other pests.
5. Organization. Warehouses must be well-organized. Different commodities must be clearly identifiable and all supplies must be within easy reach. Warehouses should be organized on a first-in, first-out (FIFO) basis so that food and medicines can be kept as fresh as possible.
6. Controls. Access to warehouses must be controlled. Ideally, controls begin outside the building with a fence, good lighting and a controlled gate. Within the warehouse, controls include limited access to the building, interior lighting and limited access to the supplies by persons entering the building. At a minimum, workers who are authorized to enter should have some means of identification.

From the very outset, it is important that stock controls, stock cards and other key paperwork be available and that warehouse operators be thoroughly familiar with proper use of the control documents.

B. Storage Equipment

The most common means of providing additional protection to goods in storage is use of plastic sheeting and canvas tarpaulins. Both have only a moderate ability to provide protection against moisture and no ability to protect against insects or rodents.

Recently, two new items have been developed to help store food grains in temperate or dry climates: bulk-grain silos and storage cubes. These containers are ideal for relief operations; they are light and easy to transport and move on site. The containers are gas-tight and are made of a PVC sheet 0.83mm in thickness with long durability under conditions of solar ultraviolet (UV) irradiation. The primary advantage of this system over conventional plastic silos or other grain storage systems is that the storage containers are hermetically-sealed. The effect of hermetic storage is that, while the container is sealed, the oxygen concentration drops to between 6%-8% and carbon dioxide concentrations rise to approximately 11%. Thus, insects cannot survive in the bag, and costly and potentially hazardous fumigation is unnecessary.

As with most synthetic materials, rodents can gnaw through PVC liners. However, the design of the containers and the way the material lies over the grain provide slippery surfaces that make it extremely difficult for rodents to make an incision with their teeth.

Two basic designs are available: a circular silo for bulk storage of unbagged grains, and a cubical container for storage of bagged grains. The silos are made in sizes from 50 to 1,000 metric tons, while the storage cubes are normally produced in sizes corresponding to truckbed cargo loads (10 to 50 tons).

The designs enable the containers to be used in various ways throughout the logistics system. Some common uses of the silos include:

- auxiliary dockside storage. Large 500-1,000 ton silos can be used to provide temporary bulk storage at ports when inland transport cannot clear the food from the wharves promptly. With these units, costly port congestion can be relieved and spoilage of food on the wharves can be prevented.
- overflow storage at regional logistics bases. Silos can be used to provide additional storage for unbagged grains at regional food storage depots or distribution centers. In order to relieve port congestion and bagging delays, bulk grains can be moved inland on lorries, transferred to storage silos, and then bagged at a regional depot or distribution center.
- storage of locally-procured grains. In camps or settlements where local procurement of supplies is undertaken or where the refugees produce a portion of their food needs, the silos can be used to store and protect the grain. (They were originally designed to improve village grain storage and to reduce losses.) Since the silos are hermetically-sealed, losses from moisture, insects and rodents are minimized.

Storage cubes may be used for:

- temporary dockside storage of bagged grains. Cubes can provide temporary safe, weatherproof storage space for bagged grains at overcrowded wharves until the food can be transported inland. They can be obtained in sizes corresponding to the loads carried by lorries, to facilitate logistical scheduling and loading.

--- temporary storage at forward warehouses or in refugee camps. The cubes can provide additional safe storage for bagged grains until they can be distributed or placed in conventional warehouses.

--- point storage for cross-line or cross-border logistics. Cubes can be used for staging food into remote areas where conventional storage facilities are not available. Food can be off-loaded directly into the cubes which remain sealed until it is needed.

C. Grain-Milling

In most cases, grains should be transported in an unmilled state, as milling greatly decreases its shelf-life (by as much as 90% for some grains). Thus, it is important to decide at what point in the system grains will be milled. The two most common places are the port of entry and the refugee camps. As a general rule, it is best to mill grains in the camps or settlements, or to provide the equipment needed for the refugees to mill grains themselves. This reduces losses, speeds delivery and, for some grains, ensures that a greater portion of the nutrients is available for use.

It is important that some milling facilities be provided; if they are not, refugees will almost certainly trade a portion of their food to local entrepreneurs in order to obtain that service. This can result in substantial food losses. Mozambican refugees in Zimbabwe once surrendered 25% of their grains to local millers. Such a loss can drastically affect nutritional status in an emergency situation.

D. Cold Storage and Cold Chain Facilities

If vaccines are required for an immunization program, it is necessary to establish a "cold chain". Cold chain logistics is a special branch of emergency logistics and one that is almost always problematic. Some vaccines must be maintained within a specific temperature range from the time they are produced until the time they are injected into a patient. Anytime the temperature goes above or below that range, the vaccines can be damaged and lose their effectiveness. In order to establish a cold chain, certain types of equipment and facilities are required. These include:

- cold storage rooms at national or regional warehouses;
- sealed cold boxes for transporting the vaccines; and
- self-powered refrigerators or vaccine bins to store vaccines in the camps.

The most common "break" in a cold chain occurs when vaccines are shipped or stored in containers used also for food and beverages for relief workers. As people open and close the containers to retrieve refreshments, temperatures inside drop below the critical levels and the vaccines are damaged. It is important that all facilities used to store vaccines be totally dedicated to that purpose. The World Health Organization (WHO)

provides current lists of suppliers of cold chain equipment and approved cold boxes for use in emergencies. These can be obtained from:

World Health Organization
20 Avenue Appia
1211 Geneva 27, Switzerland

E. Forward Logistics Bases

In an emergency operation, it is often necessary to set up new logistics bases in order to simplify supply operations in the forward areas. These bases can usually be established quickly, especially if existing buildings are available for use as warehouses. If suitable buildings cannot be found, storage cubes may be used until prefab warehouses are erected.

The minimal requirements for a forward base are:

1. adequate warehouses;
2. storage cubes or tarpaulins to protect stockpiles;
3. fuel depot;
4. vehicle workshop;
5. radio, telephone or telex communications.

The site for the base is chosen according to the type(s) of transport delivering and forwarding supplies. Usually a railhead or major road junction is a good location. The most important factor, however, is the amount of time required to deliver goods to the principal places of need in the forward area. In other words, the decision should be made not according to distance alone (the site physically closest to the areas to be served) but rather according to the actual amount of time it takes to travel that distance (the site with the best access to those areas).

A checklist of equipment and facilities for a forward logistics base is found in the Appendix to this paper.

TRANSPORT

As mentioned earlier, transport is the most expensive part of a relief operation. Thus, it is important to select the most appropriate form of transport for specific commodities.

A. Cargo Factors

The first consideration about a cargo is its weight. Weight is the primary limiting factor in all forms of transport. The heavier a commodity, the more expensive it is to transport and the more rugged (and generally, slower) the form of transport.

The second consideration is volume. Items that are low in weight but large in volume should usually receive a lower priority for transport. For example, plastic jerrycans are often in great demand in a relief operation. They are very lightweight -- a thousand weigh only one ton -- yet the volume of a jerrycan is such that about thirty take up one cubic meter of space. Therefore, in a transport plane the size of a C-130, it is only possible to bring approximately 1,000 jerrycans cans per flight. Since the jerrycans only cost about \$5.00 each, shipping them by air (which could cost up to \$100,000 for an international flight) does not make much sense.

Most logistics planners use a rule of thumb known as "cubing-out" to determine the most appropriate type of transport, i.e., striking the right balance between the volume and the weight of an item. Nowhere is this more important than in choosing cargoes to transport by air.

B. Transport Efficiencies

Ships/barges are the most cost-efficient means of transport but are usually the slowest. Aircraft are the least cost-efficient.

Shipping by rail over long distances is usually more cost-efficient than using lorries; the longer the distance, the more efficient.

While railways are more cost-efficient than lorries, and can sometimes reach areas in the rainy season that lorries cannot, railways are also more problematic in most Third World countries. In an emergency when timeliness is crucial, it may be more advantageous to ship by lorry than by rail. If one truck breaks down, there are still others that are likely to get through; but if one locomotive breaks down, 20 railway carriages can be stopped indefinitely.

In very remote (especially mountainous) areas, pack animals may often be more practical than trucks and other forms of transport.

C. Criteria for Selecting Vehicles

Important considerations when selecting vehicles include:

- the distance to be traveled;
- the terrain;
- road conditions;
- whether or not streams must be forded;
- load-carrying capacity of bridges en route;
- fuel efficiency; and
- compatibility of the vehicle with in-country maintenance and parts availability.

D. Determining Fleet Size

In determining the number of vehicles that must be employed for a particular mission, it is important to consider:

- time en route, and turn-around times;
- load-carrying capacity of the vehicles being used; and
- total tonnage needed to serve the target population.

E. Logistics staff

Successful implementation depends on a good logistics staff. Most logistics operations are understaffed. A good system requires many people including a traffic director, procurement coordinator, transport coordinator, fuel coordinator, forward logistics officer, inventory control officers, accountants, warehouse staff, procurement officer, and maintenance officers. If not enough qualified people are used, control will be lost (and so will some of the commodities).

F. Equipment

Equipment that is critical for a relief logistics operation includes telecommunications, control forms (these should be ready before an operation starts), forklifts (special forklifts are necessary to unload planes), pallets to store and stack supplies, and spare parts for vehicles.

G. Air Transport

With the advent of large military cargo aircraft and large wide-body "jumbo jets", it has become commonplace for relief organizations to ship cargoes by air in the early stages of an emergency. For the most part, this does not make much sense since many of these shipments consist of items available locally or for which local substitutes could be found. With basic health programs, such as UNICEF's Expanded Program of Immunization (EPI), even the necessity of sending vaccines is greatly diminished since adequate stockpiles have been developed in most countries.

Air transport is both costly and, ultimately, of little sustainable impact. Even the largest jet transports, such as the Boeing 747 and Lockheed C-5 Galaxy, have negligible cargo-carrying capacity when compared to other forms of transport. The C-130 Hercules and the Antonov An-28, the most popular transports used in relief operations, can only carry a maximum of about twenty tons of food; that is equivalent to the capacity of one medium-sized lorry without a trailer. Over a typical flight of 1000 kilometers, the C-130 will burn approximately ten tons of fuel. At an average cost of \$1,000 per ton, it will cost about \$10,000 in fuel alone to deliver the supplies. Compare this to a shipping cost of \$50 per ton by sea, or \$25 per ton by lorry, and it is clear that air shipments make little sense unless the cargo is truly needed for immediate life-saving.

Despite the costs, there are often tremendous pressures on relief agencies to fly in supplies for an emergency. Donor governments often make military transport available to humanitarian organizations at little or no cost. In these circumstances, the following principles may be followed:

1. Use of Aircraft. In first-stage logistics:

- use the largest plane available. Ideal civilian aircraft are the Boeing 747, DC-10, L-1011, DC-8F or Boeing 707; military aircraft include the C-5 and C-141 transports. Avoid the smaller tactical transports like the C-130 or C-160 Transall for long international flights.
- land as close as possible to the theater of operations.
- ship only items of verified high priority (such as measles vaccines, etc.) or equipment that will facilitate operations (radios, light vehicles, prefabricated warehouses, etc.).
- if foods must be shipped, choose those that will provide the highest amount of calories and energy per weight. Avoid sending basic grains.

In second-stage logistics, use aircraft only when all other means have failed. If planes must be used, the following principles may apply:

- generally, the shorter the distance, the more practical the airlift (the aircraft will need to carry less fuel and therefore can carry a greater cargo load).
- avoid the use of helicopters. They are very costly to operate and have a very low carrying-capacity. Helicopters should only be used to stage supplies over very short areas and into remote or isolated sites.
- in second-stage logistics, the C-130, the French-German C-160 Transall, and smaller aircraft are more practical since the flights are over shorter distances, less fuel is required and more cargo can be carried. Planes like the C-130 were originally designed as tactical transports and to land on relatively short, unimproved strips.

In summary, if someone else is paying for the aircraft, go ahead and use them; but remember that it will still be necessary to use trucks at both ends of the flight!

2. Ground support for forward air operations. If it becomes necessary to use small or medium-sized planes to deliver priority supplies to remote sites, the following factors must be considered:

- fuel. If the flights are over a range of 500 kilometers, it will probably be necessary to provide fuel at the landing

strip in order to permit the transports to carry a full load on every trip. The type of fuel required depends on the type of plane used. Turbo-prop aircraft use jet fuel (Jet A-1 is the standard), while piston-driven aircraft use 100 octane avgas.

Turbine engines burn more fuel per hour than piston engines. Although turbine fuel is cheaper than avgas, it is necessary to have a larger stockpile of fuel available when aircraft with turbine engines are engaged.

--- fueling systems. In remote areas, fuel is normally stored either in barrels or rubberized fuel bladders. A pump and hose must be available for fueling the aircraft and must meet certain specifications. The normal rotary pumps used for pumping diesel or petrol into automobiles cannot be used for aircraft since they leave small metal shavings that can damage aircraft engines. Aircraft pumps and hoses have in-line filters. The nozzles have different sizes, depending on the type of fuel being dispensed. Under no circumstances should a pump that has been used for jet fuel then be used for dispensing avgas; even a small residue of jet fuel can contaminate avgas and cause a piston engine to miss.

--- defueling and fuel transfers. An expedient way of fueling when using both large transports and smaller utility aircraft is to either transfer fuel directly from the transport to the utility aircraft or defuel the transport into barrels or bladders at the intermediate strip. A recent example from Sudan illustrates how this works. In order to deliver relief supplies to Abeyi, a small town on the edge of the conflict zone in southern Sudan, relief supplies were ferried from Khartoum to an intermediate strip in Kadugli by C-130. They were then transferred to two smaller Twin Otters and flown to Abeyi which only had a short 2,000-foot strip. To provide fuel for the two smaller airplanes, each time the C-130 landed, it de-fueled approximately one and a half tons of fuel into portable bladders which were then used to fuel the Twin Otters between their trips. Each day the C-130, carrying 20 tons of supplies, made one trip while the Twin Otters, which carried 2 tons each, made five trips per day. The same type of staging and de-fueling can be used to fuel remote helicopter operations.

If all the aircraft in the operation use the same type of fuel, tankering and de-fueling operations are usually more practical than staging fuel in barrels or bladders since the containers take up space in the cargo bay that could be used for supplies while de-fueling uses the aircraft's internal fuel tanks.

OPERATIONAL LESSONS AND SUGGESTIONS

A. Problems to Expect

Certain problems tend to occur frequently in a logistics operation. The most common are listed below.

1. Problems in Stage 1:
 - a. procurement delays. These delays are usually a result of bidding procedures, confusion about specifications, or lack of clarity in field requests.
 - b. donor pressures to accept substitutes.
 - c. acquisition of materials that were not requested and are unsuitable for the local situation, climate or terrain.

2. Problems in Stage 2:
 - a. customs delays (paperwork, clearances, etc.).
 - b. congestion at the port of arrival.
 - c. inland transport delays.
 - d. theft and pilferage.
 - e. losses due to improper storage or inadequate protection of the commodities while in storage. (The rations for a quarter of a million people were destroyed by one rainstorm in Ethiopia in 1985.)
 - f. materials handling delays (e.g. off-loading of bulk grains, bagging operations at the port. etc.).
 - g. losses from lack of insurance coverage.

3. Problems in Stage 3:
 - a. inadequate storage facilities at the destination.
 - b. inadequate means of protecting supplies while in storage.
 - c. lack of suitable milling equipment.
 - d. theft and pilferage.
 - e. problems with registration/disbursement procedures.

B. Selecting a Logistics Agency

Often, the greatest problem in emergency logistics is selection of a suitable agency to operate the system. There are several options that can be taken:

- hiring a private firm;
- designating an NGO;
- selecting a specialized U.N. agency (e.g., the ILO).

As a general rule, the agencies best suited for the role are those NGOs with experience in managing large-scale food aid programs, especially the US PL-480 Title I and II programs. These agencies already have expertise and personnel familiar with food logistics systems, and in many countries they already have a logistics system set up. Smaller development agencies usually do a marginal job in managing logistics programs.

C. Operational Hints

1. Always have adequate buffer stocks of supplies on hand to cover the times when logistics operations are not able to keep up with demand and unanticipated emergencies. Plan for an oversupply of 20-50% in an emergency.
2. Buy locally. Local purchase is an important and under-used resource. Wherever available, locally-purchased supplies can provide significant advantages including:
 - saving time;
 - saving money;
 - bridging gaps until other supplies arrive;
 - providing a buffer against supply irregularities;
 - stimulating the local economy.
3. Simplify the system. The objective is to reduce the number of stops and transfers in the system. This speeds up the operation and reduces theft. Even if simplification increases operational costs, it will eventually reduce total costs.
4. Consolidate facilities to avoid unnecessary loading and unloading or extra staffing.
5. Unify the logistics system. For example, where there are several organizations simultaneously ordering and distributing food in a large operation, unify purchasing and shipping procedures.
6. Create redundancy in transport. If the operation depends on a railway system, for example, the loss of one bridge can halt an

entire operation. It is necessary to have alternate methods to deliver supplies, i.e., a back-up system.

7. Define the area of operation. The UNHCR Branch Office is likely to be in the capital, but the operation is likely to be in a remote area. The traffic director should be located in the area of operation, i.e., where the key commodities are located. The area of operation generally extends from the port of entry to the refugee camps and includes all the communications and transport facilities inside that area.
8. Standardize equipment, especially trucks. This is difficult when a donor wants to provide trucks from its own country, but it is extremely important to standardize vehicles.
9. Make small, manageable shipments to the camps. Shipments should be of a size that can be controlled and not consumed by the refugees too rapidly.
10. Standardize and minimize supplies. A key concept in logistics management is to standardize the types of supplies and equipment being used and to keep the number of articles used in a system to an absolute minimum. Usually, the first thing a logistics consultant will do is reduce the number of supplies in the system until the logistics management controls are in place.

D. Captive Contractors

One of the major problems is keeping the cost of transport at acceptable levels. Often, local contractors raise prices to unacceptable levels when they know that an emergency is in progress and that a relief organization has few other options for delivering commodities.

To control transport prices, the relief agency has two options:

1. purchasing a fleet of vehicles and setting up an independent transport operation. This is usually a costly choice and requires that the agency manage and maintain the trucking fleet.
2. purchasing trucks and then re-selling them to local operators on a work-equity basis. This approach, known as "captive contracting", still requires an investment in the vehicles but places the burden of maintenance on the purchaser/operator. These programs are usually quite popular, and the trucks can be amortized over a period of several years. In return for work-equity agreements, the purchaser agrees to provide transport services at fixed prices for a specified period of time. An added benefit to captive contracting is that the vehicles are usually maintained better than if they are operated by the relief agency, since the prospective owners have a vested interest in ensuring that the vehicles are properly maintained.

E. Rules of Thumb for Logistics Operations

1. Use trucks for distances under 500 km., rail for longer distances.
2. Don't build roads for food supplies; instead build up buffer stocks. The only time to build roads for a transport system is when you are moving water.
3. Mill grains in the camps or settlements. This will prolong the life of the grain and will eliminate the need for a complex unloading, bagging and reloading operation farther up the logistics chain.
4. The need to transport supplies by air will be in the early stages of an operation, not later on.
5. If a portion of the food supplies must be purchased overseas, buy food for the general ration from overseas and supplemental food from internal sources (if fresh foods of good quality are available).
6. In Africa, it is generally necessary to import foods for a large-scale operation. In the rest of the world, food can generally be purchased locally.

APPENDIX: CHECKLIST OF EQUIPMENT & FACILITIES
FOR FORWARD LOGISTICS BASE

- | | |
|---|--|
| <p>1. <u>Site Preparation</u></p> <p style="padding-left: 20px;">Grading and Leveling
Road Improvements
 Surfacing
 Culverts
 Drainage</p> | <p>6. <u>Radio Room</u></p> <p style="padding-left: 20px;">Permanent
Prefab, Metal
Tent</p> |
| <p>2. <u>Office Buildings</u></p> <p style="padding-left: 20px;">Permanent
Prefab, Metal
Tent</p> | <p>7. <u>Communications Equipment</u></p> <p style="padding-left: 20px;">Radio (SSB)
Telephone
Intercom
Telex
FAX
Walkie-Talkies</p> |
| <p>3. <u>Office Equipment</u></p> <p style="padding-left: 20px;">Desks
Chairs
Photocopier
File Cabinet
Bookshelves
Expendable Equipment
Office Supplies</p> | <p>8. <u>Workshop</u></p> <p style="padding-left: 20px;">Permanent
Prefab, Metal
Prefab, Plastic</p> |
| <p>4. <u>Warehousing</u></p> <p style="padding-left: 20px;">Permanent
Prefab, Metal 1000 MT
Prefab, Metal 500 MT
Prefab, Metal ?
Prefab, Plastic 1000 MT
Prefab, Plastic 500 MT
Prefab, Plastic ?</p> | <p>9. <u>Workshop Equipment</u></p> <p style="padding-left: 20px;">_____</p> <p style="padding-left: 20px;">_____</p> <p style="padding-left: 20px;">_____</p> |
| <p>5. <u>Storage Equipment</u></p> <p style="padding-left: 20px;">Silos 1000 MT
Silos 250 MT
Silos 100 MT
Storage Cubes 100 MT
Storage Cubes 50 MT
Storage Cubes 20 MT
Storage Cubes 5 MT
Carts/trolleys
Forklift
Storage Shelves
Plastic Sheeting
Other _____</p> | <p>10. <u>Other Work Buildings</u></p> <p style="padding-left: 20px;">Permanent
Prefab, Metal
Plastic</p> |
| <p>_____</p> | <p>11. <u>Other Work Equipment</u></p> <p style="padding-left: 20px;">_____</p> <p style="padding-left: 20px;">_____</p> <p style="padding-left: 20px;">_____</p> |
| <p>_____</p> | <p>12. <u>Fuel Depot</u></p> <p style="padding-left: 20px;">Storage Tank(s)
Pumps, Hoses, Fittings
Defueling Stand
Barrel Storage Area
Fire-fighting Equipment</p> |

13. Airfield/Helipad

Strip Grading/Leveling
Fueling Station
 Bladders
 Storage Tank
 Pump (hand)
 Pump (motorized)
Radio Beacon
Landing Lights
VHF Radio

14. Security Facilities

Guardhouse
Fencing
Gates

15. Electrical System

Generator
Wiring
Poles
Light Standards
Fuel for Generator

16. Water System

Deep Well (Borehole)
Submersible Pump
Storage Tank
Shallow Well
Handpump
Pipes
Outlets
Taps

17. Sanitation System

Toilets
Showers
Incinerator

18. Housing

Permanent
Prefab
Tent

19. Residential Furnishings

Beds
Tables
Chairs
Personal Storage
Other

20. Mess Hall/Kitchen

Refrigerator
Stove
Wash Rack
Gas
Utensils
Pots and Pans
Tables
Chairs
Other _____

21. Misc. Facilities

REFUGEE PARTICIPATION IN EMERGENCY RELIEF OPERATIONS

By Frederick C. Cuny, INTERTECT

INTRODUCTION

This paper explores refugee participation in emergency relief operations. It reviews current practices regarding the involvement of refugees in day-to-day projects and activities in a refugee emergency. It describes the ways that refugees usually participate, the reasons why refugee involvement is not greater than it currently is, and some cases where refugee participation has achieved a higher than normal degree of involvement. The importance of refugee participation is discussed, and opportunities for increasing refugee participation in all phases of an emergency operation are described.

I. THE CURRENT STATE OF THE ART

Full, meaningful participation of refugees in every facet of emergency operations is at present a long way from being realized. While there is general agreement among international relief agencies that refugee participation is "good" and should be encouraged, in reality real participation is lacking and refugee involvement in projects is usually little more than people working as laborers, attendants, physician's assistants...a whole range of "non-thinking" jobs in refugee camps and settlements.

Among relief agencies, refugee participation is an "approved" concept. One would be hard-pressed to find any international agency advocating openly that refugees be denied an opportunity to participate in the programs designed to sustain them. Many relief and development organizations claim to be advocates; many advertise that their programs are designed to promote self-sufficiency and self-reliance by transferring the burden of decision-making to the refugees themselves.

A review of existing refugee emergency programs will show, however, that real participation is lacking. In many countries, refugee participation is limited to menial jobs and tasks concerned with the operation of the refugee camp. In some countries, even the amount of labor that is permitted is circumscribed by local government policy.

In order to increase the amount of meaningful participation, it is important to understand the

underlying assumptions of "participation", the various schools of thought regarding participation, and the subtle and not-so-subtle reasons why participation often encounters resistance.

A. The Concept

There are two predominant perspectives on refugee participation. The first view is that espoused by most humanitarian organizations; that is, a democratic process of refugees coming together to select their leaders, developing institutions to assist in everyday life, and ultimately achieving full participation in the decisions relating to their situation. This style of participation is uniquely a western liberal concept -- a belief that democratic processes are inherently good and will benefit the people.

To a large degree, extending to refugees the right to participate in decision-making relating to their situation can be seen as an offspring of the general social movements of the '60s and '70s which advocated increased citizen participation in all aspects of governmental operations. Prior to that time, there was little talk or even concern about involving refugees in meaningful participation; but as more culturally-conscious relief workers moved into the international relief system, there were mounting calls to increase participatory opportunities.

The second view can be described as "guided" participation. In other words, participation is seen as a means to an end on the part of certain groups, most often political groups within the refugee community and/or the host government. In this view, refugees are to be organized for every possible activity and assigned leaders who will not only train the people for specific activities, but will also use the organizing activities as a means of providing indoctrination, and ultimately control, over the community. Refugee organization and participation are seen as an opportunity to further longer-term goals.

It is the latter view of participation that worries host governments, and there is little support among them for increasing meaningful participation. They view organized refugees as a threat: a direct threat to their control of the community and an indirect threat because, with foreign political groups in control of the refugees, the refugee settlements might become a base for guerrillas and a potential point of conflict in relations with their neighbors.

B. Prattle vs. Practice

While voluntary agencies and the UN system publicly advocate refugee participation as a "desirable goal",

in practice they rarely achieve any degree of meaningful refugee participation and in some cases do not even encourage it. In a study of U.S. voluntary agencies carried out by the Bureau For Private Voluntary Assistance of the Agency For International Development (AID) entitled "Making Voluntary Agencies Development Agencies, Questions For Evaluation", the researchers found that while most PVO's claim to promote participation few have actually developed meaningful models of participatory management that involve the people.

In summary, most agencies overlook or neglect to include participation as a goal. Some passively avoid the matter; others actively avoid it; and most simply don't recognize the opportunities that are available nor how to exploit them.

In the AID study cited above, the authors found that many voluntary agencies were "paternalistic, condescending and insensitive" to the plight of disaster victims. Other observers have referred to the relationship between helpers and victims as the "we know best" syndrome. To a large extent, this has been caused by our perception of disaster victims as being helpless, emotionally distraught and generally unable to cope with events -- people who must somehow be cared for as opposed to given an opportunity help themselves. Many aid personnel feel that only they have the complete picture of needs and are therefore in a better position to decide the people's fate than the refugees themselves. This leads to a vicious circle whereby people are denied the opportunity to participate, lose the sense that they have any control over their lives, and eventually become more lethargic, reinforcing the view that they are incapable of taking part in the decision-making process.

A failure to involve refugees in meaningful participation will ultimately lead to several negative consequences. These include:

1. Increasing lethargy on the part of refugees. As refugees feel that they have less and less control over their lives, they become more lethargic and withdraw into themselves. This, in turn, can create a variety of serious psychological and social problems which, in the end, will make assistance programs more difficult to execute. In the worst case, this can lead to extreme social problems which not only increase not only the costs of providing assistance, but also increase protection problems.

2. An increase in costs. If refugees are denied full participation, costs increase. Not only will certain activities have to be carried out by paid workers from outside the camp, which will ultimately be more expensive than hiring refugees, but many programs or forms of assistance may be inappropriate or ill-suited for the situation and costly to adjust. With participation, these adjustment costs can often be avoided or substantially reduced.
3. A decrease in the avenues of communication. Communications between the assisting agencies and the refugee community are vital if programs are to have a beneficial social impact and if protection problems are to be avoided. By reducing refugee participation to non-meaningful activities, avenues of communication are lessened and the likelihood that protection problems will increase is greater.

Advocates of increased participation should recognize that there is a "down side" to refugee involvement. Refugee participation does have its limits, especially in regard to decision-making. Participation in, and advice about, a particular aspect of a program is always important, but to give the ultimate decision-making authority to refugees can often be counter-productive.

Well-meaning advocates of participation have been known to go overboard and ask refugees to make technical decisions that they are not qualified to make. For example, in 1979 in the preparation of the Khao-I-Dang refugee camp in Thailand, the camp planners asked the refugees to select the shelter systems and design the layout of the shelters. Most of the refugees were people from rural areas who had no previous experience living in high density situations (over 100,000 people destined to live in the camp) and never before had they been faced with the need to put so many people in such a small area. Therefore, the housing style that they chose was to build long, multifamily buildings and to place them in straight, narrow lines in a grid fashion. Since most of the people had never encountered sewage disposal in such an environment, there were no plans to integrate sanitation within the overall camp layout. As a result, the social and environmental conditions quickly deteriorated. Had professional planners been involved in the camp development, a more creative layout would likely have evolved, incorporating more open space, near-in sanitation and smaller, less hard-to-manage, shelter units.

Clearly, some technical questions lie outside the purview of competency for refugee decision-making. Participation in decision-making, but not necessarily the ultimate control over the final decision, is still a very desirable objective. The trick for the refugee assistance agencies then, is to find a balance between participation in decision-making and technical requirements.

II. ISSUES

There are several issues involved in the concept of refugee participation. These include:

A. Accountability

The principal reason why refugees are not more involved in meaningful participatory activities is that relief agencies and the international organizations do not view themselves as being accountable to the refugees but rather to their donors and to the host country. Because the agencies do not feel themselves accountable, there are no effective corrective mechanisms through which refugees can attain meaningful participation, nor councils wherein they can demand a greater say in their own affairs. In short, refugees are left at the mercy and whims of the assisting agencies.

B. Determining Appropriate Leaders

A key issue in refugee involvement is defining who should provide leadership for the refugee community. In most cases, relief agencies find that it is easiest to work with people with whom they can communicate. Therefore, younger bilingual and educated persons within the refugee community are usually selected for leadership roles. Most often these people are not the traditional leaders and may find themselves in conflict with the usual community leaders. In this case, effective communication and participation is often obstructed. An important principle for relief agencies is that traditional leaders should be involved in advisory and decision-making roles while younger, educated or "westernized" refugees can be involved in managing day-to-day operations (but their appointment and authority should always be subordinate to the traditional leadership).

Program planners can create an atmosphere wherein the natural coping mechanisms of a society can operate, generating leaders who are respected by the refugee community. To do this, the relief agencies should develop specialists in informal organization who can

work within a group of people to identify the coping mechanisms, learn how leaders are designated, identify the traits that are respected, and advise the agencies on structuring their programs to allow for the emergence of natural leaders. This is especially important in those societies where disruption has been so great that natural leaders may be absent or reluctant to come forward.

C. Stacking

A common problem in refugee involvement is that the first people who arrive become the leaders. Relief agencies rarely make allowances for the fact that the true leaders of the community may not be the first arrivals, and they may too quickly institutionalize a structure that places non-traditional leaders in leadership roles. This can cause a great deal of confusion (and problems) when the more traditional leaders arrive and demand to be recognized.

D. Volunteer vs. Salaried Workers

Another question to be addressed is the issue of whether people in leadership roles and, more particularly, in camp jobs should be paid or should do the work on a voluntary basis. Most relief agencies cling to the dogma that work in camps should be voluntary, despite the evidence that very few people are willing to work for long periods of time without pay. Food-for-work programs have been tried but without long-term success. People need to be able to accumulate local currency in order to purchase necessities that are not provided in the relief program and to have some cash reserves for emergencies. As a general rule, participation in operational activities (water supply, sanitation, garbage collection, food service, etc.) can only be guaranteed by paying workers on a long-term basis.

E. Changes in Leadership

One constraint on refugee participation is the fact that refugee leaders often undergo a high rate of turnover. Because the leaders are in contact with expatriate workers, they may be eligible sooner than others for resettlement. They are also more likely to leave the camp early to assimilate into the local community or to repatriate. For this reason, it is important in planning participatory activities that leadership positions always have two or three backup people available so that a program will not be brought to a halt by the sudden exodus of a key leader.

III. CONSTRAINTS TO REFUGEE PARTICIPATION

To understand why fuller refugee participation is not often achieved, it is important to understand the constraints that exist. These can be classified as official constraints, economic constraints, ideological constraints, social constraints/ cross-cultural barriers and managerial constraints.

A. Official Constraints

The most important barriers, and the ones most difficult to overcome, are those limitations placed on participation by the host country. These constraints may be in the form of written instructions (to the United Nations or to other assisting agencies) circumscribing the limits on participation, statements specifying what types of jobs or positions must be filled by host country or expatriate workers, and/or case-by-case limitations placed on specific sectors of camps or communities within the refugee population. In other cases, official constraints may be more subtle but nonetheless restrictive. For example, a refugee administrator may simply delay making decisions regarding certain programs until "adjustments" have been made by the assisting agency limiting or removing refugee participation in the project's execution. In some cases, a refugee administrator may hold up other projects until the assisting agencies recognize the reason for the delay and quietly withdraw, phase out or cancel another activity which has a high degree of participation.

In extreme cases, refugee administrators have been known to "punish" a certain refugee community or assisting agency where participation has gone beyond the perceived or proscribed limits set out by the host country. An example of the latter occurred in India in 1971. A Bengali refugee camp operated by Oxfam was punished when the people became too vocal and demanded improvements in flood protection for the camp. The small 3,500 person camp was built between Calcutta's Dum Dum Airport and the town of Banipur. The camp had been established on a low-lying, abandoned field in the dry season. When the rainy season began, the field flooded and became an uninhabitable swamp. Water supplies became contaminated, latrines overflowed into living areas and cooking fires were almost impossible.

The refugees, prompted by social workers from Oxfam, organized a community group to approach the government and petition for a new site. When the government rejected their plea, the refugees organized a demonstration along the main highway between Calcutta

and the border. The refugees sat in the road and blocked traffic for several hours. Government soldiers disbanded the demonstration and returned the refugees to the camp. In retaliation for the refugee's activities, food supplies were reduced to the bare minimum level and Oxfam found that its requests for permission to conduct programs in other camps were consistently rejected.

Official constraints are usually a result of one of the following three concerns:

1. Governmental fear of losing control. A case in the recent relief operations in eastern Sudan illustrates this concern and shows how a government may adopt different positions for different groups.

In 1985, a visitor to the region's refugee camps would be struck by the differences between the degree of organization in the Tigrayan and Eritrean camps. The Tigrayans organized their camps according to the villages from which the people had come. The traditional leaders in the villages, the elders, maintained their positions in the camp and the camp was divided into geographic areas representing the different villages and regions of Tigray. Almost every aspect of camp operations was turned over to the Tigrayans, and community leaders had a great deal of say.

In the Eritrean camps, especially those around Kassala, all forms of community organization were forbidden and people were assigned to specific locations in the camp according to a "space available" allocation system. There were no attempts to group families, clans or villages together. Sudanese authorities appointed the persons who would be the spokesmen for the refugees.

The difference between the two was a result of a struggle between the EPLF and the ELF which culminated in a shootout near the camp of Wad Sharife in 1984. The Sudanese government had generally been supportive of the ELF, the loser in the struggle, and feared that with the EPLF the dominant force, the camps could soon be turned into guerrilla bases. Thus, in order to maintain control, all forms of participatory activity were closed down.

2. Reservation of benefits for host country nationals. A major reason why participation is often restricted is that the host government insists that the economic benefits of assistance

programs go to their own citizens rather than to the refugees. The United Nations and other relief organizations are often placed in a difficult position regarding this matter. Since many governments are openly hostile to even having the refugees in their country, it is often felt that a concession to the government to hire only host country nationals to work in the camps (especially if unemployment is high in the regions where the refugees are residing) will give the U.N. a better position in gaining admittance and asylum for the refugees. The result is that hundreds of jobs that could be filled by refugees and would increase their participation in camp operations are effectively denied them.

This issue also complicates the question of paying refugees for work in camps. Many relief agencies insist that refugees work for free or for additional food. In practice, however, people are only willing to do this for a short period of time. The one commodity they need most is money; usually voluntary work or food-for-work will only last for several weeks. (It's even doubtful whether food-for-work programs can be initiated unless there is a market within the camp or the likelihood that people can leave the camp to sell extra food on a parallel market in a nearby town.)

When a government issues instructions that only host country nationals can be paid for work in the camps, the chances that the camp will operate with full efficiency are minimal. Often, the next step is for the relief agencies and the government to agree that leadership positions will be held by host country nationals but the laborers will be refugees. While on the surface this appears to be a workable agreement, the fact that leadership positions and decision-making are denied the refugees limits their participation.

Cases where these issues have been a problem include India (1971 Bengali refugee crisis), eastern Sudan (1984-85), Mexico (current).

3. Governmental fear that participation and full employment may create permanency, thereby obstructing repatriation. This sentiment is often expressed by countries such as Thailand which severely restrict activities designed to promote self-sufficiency among the refugees.

B. Economic Constraints

Some relief organizations cite economic reasons for not emphasizing early involvement of refugees in project planning and execution. Among the reasons they give are:

1. That participation, especially refugee involvement in paid labor activities, competes for scarce funds during the emergency period.
2. That costs will increase due to delays resulting from organizing and training refugees.
3. That refugees should provide voluntary labor rather than being compensated with cash. Since this dogma prevails, many agencies initially promote voluntary work or food-for-work with the result that fewer and fewer people continue to work in the programs. While many agencies recognize that pay is a better incentive, they cite the lack of funds as the primary reason why voluntary or food-for-work schemes are promoted.*

C. Managerial Constraints

In practice, there are several major managerial obstacles to full participation by refugees. In cases where host governments operate the camps, there are few qualified community organizers who can develop participatory programs. While many governments have social workers, few have the necessary language capabilities or community organization experience. More often than not, the military will be in charge of the camp and participatory activities run counter to their training and ideas about how a camp should be operated.

Managers often see community organization, especially during the emergency period, as an obstacle. In this case, they will often justify not organizing as an expediency, claiming that they should first build the camps and get them operating, then involve the refugees once things have simmered down.

D. Administration & Management

It is important that the relief agency in charge of an emergency operation establish refugee participation as part of administration and management (A&M) systems. In large-scale emergency operations, is that agencies

*Most food for food-for-work is provided free to the relief agencies by AID or WFP.

often set up effective command and control systems based solely on electronic communications and standardized reporting procedures. These systems are designed to give administrators ability to communicate and respond quickly to unforeseen contingencies but effectively eliminate refugee input into the decision-making and information-gathering process. To correct this, refugee administrators must establish effective A&M systems that assure meaningful refugee participation in the command and control network.

E. Social Constraints/Cross-Cultural Barriers

Since refugee camps will almost always be operated by host country nationals or expatriates, a number of social and cross-cultural barriers exist that are difficult to overcome. These barriers include the more obvious language and cultural barriers that lead to misunderstandings and miscommunications, but also problems of racism, ethno-centrism and all forms and degrees of discrimination. The host country may also harbour xenophobic fears about the refugees. In that environment, the government is not likely to encourage participatory activities.

Racism and its more subtle relation, paternalism, are often present in the international relief agencies working with refugees. Religious organizations, especially the evangelical groups, as well as the United Nations and many of the specialized disaster teams that work under the UNHCR, have been privately criticized for the poor quality of staff that they field in emergencies. One particular Scandinavian unit operating in eastern Sudan in 1985 was continually ostracized by other agencies for the overt racial slurs made by their staff about the refugees whom they were supporting. As one observer pointed out, "It's difficult to organize the people when you keep calling them niggers."

Subtle paternalism is perhaps the worst obstacle to overcome. Many western relief workers -- living in decent housing, eating three square meals a day; driving fancy late-model four-wheel-drive vehicles, with dollars to convert on the black market -- fall into an easy feeling of superiority and regard their "charges" with a benign and superior air. This environment breeds the "we know best" syndrome which militates against the development of meaningful participation.

F. Ideological Constraints

Unfortunately, there is often a "stiff" view of participation. In other words, many relief agencies

believe that participation is not a natural activity; rather it is something that has to be taught to the refugees or developed through special programs. There is little recognition within the relief community that participation is, in fact, a normal activity, something that people will do on their own if left alone. In probably one of the most absurd things to come out of recent relief operations, a major U.S. foundation gave a grant to a refugee group to study ways to increase its own participation in day-to-day refugee camp activities.

Only a few relief organizations truly understand refugees' need to participate. There have been few comparative studies on participation and the benefits derived from full involvement. Therefore, there are few strong advocates within the relief community for meaningful participation and certainly no major initiatives, guidelines or standard procedures have been developed by the U.N. system to encourage, promote or guarantee refugee involvement in emergencies. In the UNHCR Emergency Management Training Program carried out by the Disaster Management Center at the University of Wisconsin, it has been consistently noted that social services receives the least attention in training and it is the least focused objective. In other words, there is not a great deal of information about how to integrate refugees into the overall process; there is only a vague concept that it should be done.

The very nature of the relief system is a structural barrier to refugee participation. With only a very few exceptions, most agencies do not have full-time emergency operations specialists. When a disaster strikes, temporary workers are recruited for specific tasks and rotated at fairly frequent intervals. Few performance evaluations are carried out and there is little record of the social programs and programmatic approaches that have been tried. Since few evaluations are conducted out, there is little record of success or failure and, due to the high turnover of staff, there is little internal memory of success. It has been pointed out by UNHCR social service officers, John Williamson and Anne Dawson-Shepard that, of all the facets of emergency operation that are studied, social services and community organization receive the least attention. Without institutional memory, newcomers in the next disaster have only a limited view of the possibilities of refugee involvement and are generally unaware of the benefits that full participation can bring. By the time that the more creative staff begin to advocate fuller involvement, the operation is usually well into the second or third month (or even later).

IV. IMPORTANCE OF PARTICIPATION

Refugee participation is important for a number of reasons. These include:

A. Participation Enhances Normal Coping Process

Psychological studies of disaster victims have shown that it is important that they be involved in meaningful activities as soon after they have experienced trauma as possible, since participation aids in the psychological coping process.

Psychologists have pointed out that participation:

1. builds self-esteem;
2. rebuilds self-confidence;
3. reduces feelings of isolation;
4. reduces lethargy, depression and despondency.

A comparative study of Bengali refugee camps in West Bengal was carried out in 1971. Two camps were compared: Salt Lake Camp in Calcutta and Dum Dum Camp at the edge of the Calcutta airport. At the Dum Dum Camp all major activities, including camp construction, were carried out by paid Indian laborers. At the Salt Lake Camp, all activities were carried out by the refugees under supervision of Indian administrative personnel. All healthy refugees entering the camp were immediately assigned to construction details, work brigades, food service or other activities which were supervised by refugee group leaders who received their instructions from the camp administrators.

The Indian social workers carrying out the study reported to the Indian refugee administration that the refugees' ability to cope with their situation was significantly increased by the participatory activities in Salt Lake Camp. They also reported a significant difference in the level of psychological problems and anti-social behavior on the part of the refugees. It should be noted that Salt Lake Camp held approximately 250,000 at the time of the survey, while Dum Dum Camp held only 75,000, and environmental conditions were considered far worse in Salt Lake Camp than in Dum Dum.

(It should also be noted that despite this finding, the government of India continued its policy of refusing to allow refugees in other camps to participate in construction or other work activities,

decreeing instead that all work would be carried out by Indian contract laborers.)

B. Participation Is Cost-Effective

Contrary to the belief of many in the relief community, participation is cost-effective. It is obvious that refugee workers will almost always be cheaper than hiring outside contract laborers. And relief agencies have no trouble justifying a lower wage scale since food, shelter and other services are being provided free of cost.

More important, full refugee participation in all activities leads to avoidance of expensive mistakes. While it would be hard to document the specific cost savings of having refugees involved in assessment and project planning, it should be intuitively understood that if refugees help with program design the programs' will usually be more effective than if they were designed by persons unfamiliar with the society and culture.

Claims that refugees will attempt to "pad" the payroll and create bogus positions for family and friends are usually exaggerated. While this may occur in the implementation stage, it is rare in the assessment or planning phases.

C. Participation Promotes Protection

Internal protection problems are usually due as much to people's feelings of isolation, frustration and lack of belonging to a structured society as they are to any other form of social problem. Refugee participation helps build the values and sense of community that reduce protection problems. By giving people a sense of worth, a sense of control over their own lives, and by building a community to which people feel responsible about community affairs, the groundwork is laid for a bonding of the community which will reduce protection incidents. Furthermore, if relief agencies have encouraged participation, more avenues of communication exist between the refugees and the assisting agencies; thus, protection problems or incidents will usually be easier to detect and control.

D. Participation Leads To Self-Sufficiency

Self-sufficiency, or at least partial self-sufficiency, is a long-term goal of every relief program. To hasten self-sufficiency, it is important that refugees be involved in planning and decision-making as soon as possible. Participation is the

basis of all programs leading to self-sufficiency and is especially important where integration into the host country is one of the durable solutions to be promoted.

V. OPPORTUNITIES FOR REFUGEE PARTICIPATION

Refugee participation can and should be promoted in all phases of a relief operation. In addition to the normal project activities of needs assessment, project planning, project execution, and monitoring and evaluation, there are certain types of special projects that can enhance and promote participation of specific refugee groups.

A. Needs Assessment

During the needs assessment process, refugee participation should begin at the earliest possible stage. Most agencies would consider that participation should begin as the first groups arrive and should try to involve the refugees in defining the needs of the people that are coming in. However, if an agency is on the ball and has anticipated the influx by observing the early warning signs, it may be possible to find people in the host country of the same ethnic and cultural groups as the entering refugees who can identify some of the needs the people will have and recommend appropriate measures to ensure early involvement of the incoming refugees.

As the refugees begin to come into the country, relief agencies should look for the "natural" leaders of the refugee community: the elders, minor elected political leaders (such as mayors or other local officials), village chiefs, heads of clans, etc. Where possible, put these leaders on a temporary advisory council to help define the refugees' needs. (Caution should be exercised when selecting elected leaders, those from political parties or military leaders from insurgent or liberation forces. Such leaders may be unacceptable to the host country and could be problematic. Therefore, it is more important to look for traditional leaders and lower-level elected officials.)

Once the leaders have been identified, they can be organized into several working committees. One committee can be used to develop information about the refugees that will be helpful to the relief agencies: information on cultural traits, eating habits, religious or social taboos, sanitation habits, traditional make-up of the community (tribes, clans, etc.), skills, professions and other aspects of work.

A specific task of this group would be to identify the people, as they come in, who have particular skills that would be useful in the relief program (doctors, nurses, paramedical personnel, traditional healers, dressers, traditional birth attendants, etc., as well as drivers, radio technicians, accountants, etc.) A master list of people should be prepared and maintained according to previous jobs and experience.

An "origins" committee would also be helpful in needs assessment. This group would help identify the areas or regions of origin and would interview the refugees to determine how many more people might be coming out. The group would also help determine whether or not people could be placed in sectors of the camp according to the village or neighborhood of origin. Using the projected number of new arrivals, camp planners would have a good idea about how much space to allocate for each camp. This group is very important and forms the basis of establishing a remote detection system.

A third group that should be involved at the needs assessment stage is a committee to work with relief officials to define personal and family needs. This group should work with the refugees during the initial registration process to determine what belongings they have been able to bring with them and develop lists of the types of equipment or personal supplies they will require. After only a few days of these interviews, the group should be able to define the total package of assistance needed by the refugees. This group would also advise the camp administrators on special needs such as family reunification, etc. The overall criteria for the relief program, especially such aspects as the food basket, etc., can be defined by this group. It would be the responsibility of the committee to point out specific regional or ethnic variations among the refugee population that should be recognized when determining the overall assistance package.

The committees can provide a bridge of two-way communication between relief officials and the refugee community. Communication is an important aspect of the assessment process. Relief officials should use these committees as channels to communicate to the refugees the need to keep expectations within realistic limits.

During the needs assessment phase, any committee or organizational structures that are developed for

involving the refugees should be kept as flexible as possible, and participants in the process should be reminded constantly that entire organization is subject to change. It is important that the relief agencies not allow themselves to establish a permanent or inflexible structure since new arrivals may substantially change the social equation and other, more important leaders may arrive who should be involved in the participatory process. Also, once the project implementation phase is begun, other mechanisms for involving a wider variety of people must be developed.

B. Project Planning

During the project planning phase, refugee participation is especially important. Refugees should not only be involved in planning overall project activities (such as camp planning, developing the comprehensive assistance package, etc.), but also in planning the more specific operational projects or activities that will be carried out as part normal community activities (such as sanitation programs, water supply activities, etc.).

The most important reason for involving refugees at this stage is that it helps to avoid mistakes at the macro programmatic level as well as in the small, day-to-day details of project implementation. Had refugees been involved in project planning, for example, planners of the camps in West Bengal, India, would have known not to put Hindu and Moslem refugees in the same communities and thus could have saved lives that were lost when ethnic clashes flared into violence in the camps. In Thailand in 1979, had refugees been involved at an early stage, program planners would have recognized the need to separate Chinese and Vietnamese ethnics in the Sakeo Camp from the majority Khmer population before lives had been lost in the settling of scores between the two groups.

Smaller mistakes can also be avoided with refugee participation. In 1971, foreign engineers set up several refugee camps in the Calcutta area and installed hundreds of brick-enclosed latrines with pour-flush toilets that emptied into septic tanks. Despite the fact that the latrines were kept very clean, they were rarely used. Only after consultation with the refugees was it learned that the latrines were built facing a sacred Banyan tree and therefore Hindus were prohibited by custom from using them.

A similar incident occurred in Pakistani camps for Afghan refugees in the early 1980s. Several banks of latrines were built facing the southwest; Moslems refused to use them because they faced Mecca.

In both cases, had refugees been involved in the site selection, these mistakes and the cost of correcting them could have been avoided.

In the project planning phase, it is important to begin laying the groundwork for an overall refugee participation scheme. At this point, traditional leaders and community-level elected leaders should have been identified; from these groups, central leadership figures should begin to emerge. A committee can then be developed to work with the relief agencies, planning each major element of the assistance program, the overall assistance package, and camp-level activities.

In day-to-day operations, such as water and sanitation, technicians or skilled refugees with previous or similar experience in these fields can usually be identified and assigned leadership positions in planning and execution of these projects. Educated persons, bilingual refugees and others who do not hold traditional leadership positions can be integrated into the overall project structure and given important responsibilities. An important principle to remember is that non-traditional leaders, no matter how good they are, should always be subordinate to traditional or elected leaders in order to prevent a breakdown in traditional authority.

During the planning phase, refugees should be given as much real responsibility as possible, but should not be expected to make technical decisions that are beyond their level of competence. During this phase, refugees should usually be working in an advisory capacity and be full participants in the planning process, although ultimate decisions, especially for technical matters, should remain in the hands of technicians and the overall refugee program authorities. Again, relief agencies should be careful not to raise refugees' expectations to unrealistic levels.

Examples of specific activities that can be carried out by refugees participating in the planning phase are:

1. planning the makeup of labor forces for specific camp operations;
2. advising on the design and layout of refugee camps;
3. advising on the design and controls of the food distribution systems;
4. advising on the development of special programs for certain groups (elderly, unaccompanied, etc.);
5. identification and planning of special projects aimed at promoting self-sufficiency (gardening, fish ponds, etc.).

C. Project Execution

During the project implementation phase, participation should reach its maximum. At this point, almost everyone in a community should be involved in some form of participatory activity. To an extent, the degree of participation by each individual depends on the social structure of the refugees and the degree to which the traditional structure has been retained in the new refugee community.

In circumstances where a new structure has developed (due to the fact that the traditional structure did not survive intact during flight), it is especially important to organize people down to the lowest possible social unit. Refugee camps in Honduras for Nicaraguan refugees during the Sandinista revolution managed to attain a very high degree of social organization. One camp was subdivided into blocks and sections and had committees at each of these levels. Each shelter had a representative on the block committee. Each head of household participated in a shelter committee and elected a shelter leader. With this degree of organization, it was possible to mobilize large work forces for temporary activities and to rotate responsibility for day-to-day camp operations. Administrators of these camps report a high level of self-confidence attained by the people in their own ability to run the camps.

If traditional societal structures have been reestablished in the refugee community, participation (especially in relation to decisions that affect the whole community), should usually follow along traditional lines. It is important that good, cooperative working relationships be established and that adversarial relationships be avoided. Recently in a camp for southern Sudanese refugees in Uganda, the author witnessed an initial contact between a

UNHCR field officer and a group of refugee community leaders. The leaders immediately began listing problems in the camp and demanding closer attention on the part of UNHCR. The field officer responded in a haughty manner, said that this was not the time to discuss such things, and notified the elders that he would appoint a committee to work with him to plan specific projects. Since that time, relations between UNHCR and the refugees can best be described as a running battle.

In some cases, it is impossible to utilize traditional structures. This is especially the case where the society has undergone massive disruptions, large numbers of urban people are mixed with rural people, and there have been catastrophic losses to the familial structures. In cases like this (such as the case of the Kampuchean refugees in Thailand), it may be important to build a new structure that enables the refugees to participate in overall community activities. Experience has shown that the best way to organize the people is according to the layout of the camp. Recent camps have been designed with social organization in mind.* Especially important is the grouping of shelters at the lowest planning level. Inward-facing community units like that depicted in Figure 1 encourage "bonding" and participation, while rigid grids such that depicted in Figure 2 discourage participation. Using the inward-facing community unit as a basis, innovative camp plans can be designed incorporating the units into blocks, blocks into sectors, and sectors into the overall camp.

It should be noted that, anytime traditional structures are left behind and a new artificial structure is developed, planners must be certain that the leaders who evolve are not obtaining power or their position by taking advantage of the refugees or relief programs. It is also important to make sure that armed elements within the camp do not suborn the camp organization to their own ends. In 1979 and 1980 the Khmer Rouge continuously tried to use camp structure as a means of enforcing cadre discipline in the Sakeo Camp.

During project implementation, an important objective of increasing community participation should be to phase out expatriates and host country nationals as much as is practically and politically feasible. Once a camp is operating, there is no reason why the vast majority of activities in the camp cannot be put in

*Refugee Camps and Camp Planning, Univ. of Wisconsin, 1986.

FIGURE 1

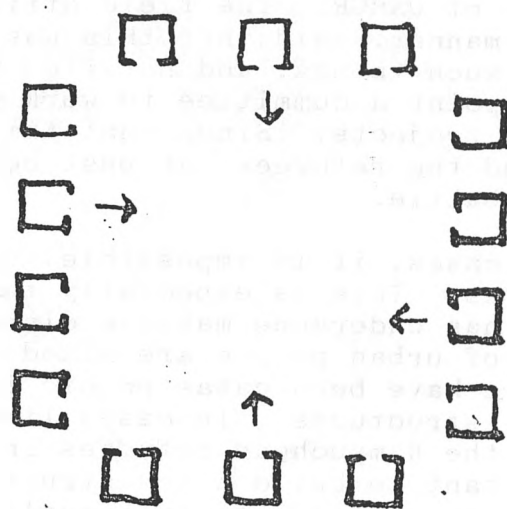
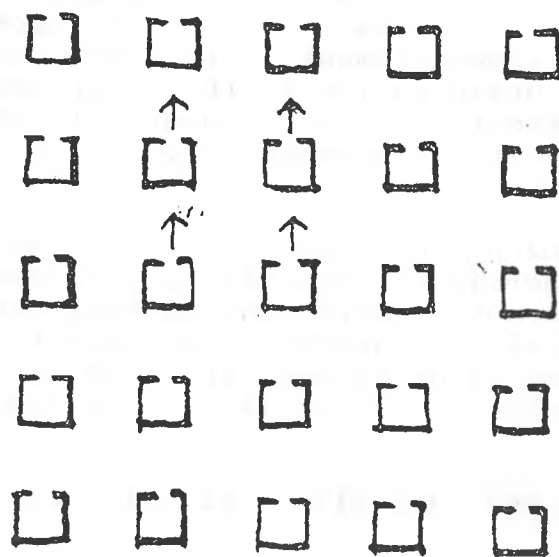


FIGURE 2



th hands of the refugees themselves. In one of the East Timor refugee camps in 1980, a group of refugees successfully established a complete refugee camp, laid out the camp, built their own shelters, established their own water systems and sanitation programs, and carried out a food distribution program that would be considered a model by any western standard. The camp was in operation a full three months before any outside help arrived.

It has been noted many times that the more refugees participate in a program, the more diverse will be the range of activities that are developed for their participation. In the Mesa Grande camp for Salvadoran refugees in Honduras, a high level of participation was achieved during the first year of the camp's existence. Not only did people participate in a wide range of handicrafts, gardening, farming and other traditional activities; a massive poultry scheme was introduced along with furniture-making and other light manufacturing schemes.

Examples of some of the ways refugees can be involved in project execution include:

1. participation as both leaders and laborers in day-to-day camp operations and maintenance;
2. participation as planners in schemes for camp upgrading and improvement;
3. participation in the development and execution of exile programs such as schools, adult education and cultural activities;
4. participation in the development and execution of self-help programs;
5. participation in the development and execution of programs designed to help make the camp more self-sufficient in both food and cash income;
6. participating on the planning and execution of special programs for target groups within the community (such as women, children, the elderly, handicapped, etc.).

D. Project Monitoring and Evaluation

During project monitoring and evaluation, the question of accountability comes fully into play. In the past, there has been little monitoring and very few evaluations; the few evaluations that have taken place have generally disregarded major refugee input. More often than not, evaluations have tended to focus on

cost-efficiency questions rather than refugee satisfaction or ways in which refugees' status could be improved. Meaningful evaluations, however, must consider the refugees' point of view and whether or not their needs are being met.

Project evaluations are normally carried out by the international organizations or voluntary agencies working in the refugee communities. An increase in refugee participation is simply a matter of seeking input from the refugees and developing appropriate mechanisms to promote participation in the monitoring and evaluation activities.

Refugees can assist in monitoring camp operations. A committee can be asked to participate in developing the overall structure for monitoring, identify indicators to determine the relative success or failure of a particular program approach, determine user satisfaction of a particular project, and develop recommendations from the refugees on ways to modify or adjust a program to increase its workability.

This committee can also help in the ongoing monitoring process and participate in the development of any reporting formats that will be required.

Refugees can participate in evaluations into two ways, in planning and in carrying out the evaluation. Again, a committee structure can be an appropriate means of involving the refugees. The committee can help design the evaluation and help select appropriate questions. Once the evaluation procedure and instruments have been developed, the refugees themselves can carry out a large portion of the evaluation. In some cases, refugees will be much more effective at gathering information than outsiders, especially expatriates. If adequate attention is given to training the people in survey methods, sample surveys using questionnaires can be an effective evaluation tool.

In 1985, Redd Barna (Norwegian Save the Children) carried out an evaluation of needs for women and children in the war-torn areas of Guatemala. An outside consultant was retained to conduct the evaluation and develop the survey and questionnaires to be used to determine family needs. The consultant produced a draft questionnaire and then formed a committee of women representing households in the affected communities. For one week, the committee worked with the consultant to revise the questionnaire, making it more applicable to the situation and less threatening to the persons being

interviewed. As a result of the participatory process, Redd Barna was able to develop an evaluation that provided the basis for a major readjustment of the project. The information developed also provided insights that otherwise would probably not have come out.

E. Special Projects

Every refugee society will have special needs that cannot be foreseen or that are unique to a particular situation. Refugee participation leads to the identification of these needs and can be very useful in the formulation of special projects to meet the needs. Examples of special projects include:

1. Special projects for women. These projects may be no more than social or work activities but can also include projects designed to help women that have experienced special personal trauma such as the loss of children, women who have been physically abused or raped, and women who have special physiological or health needs.
2. Coping programs. Special programs are often designed to help people cope with their circumstances. An example would be childrens' houses, such as those set up by relief agencies in Kampuchean refugee camps in 1979. One of the most innovative programs that this author has seen was an "arts" program started in 1969 to help Biafran children cope with their experiences by getting them to draw or paint scenes from their life. Expatriate observers were horrified by the drawings, which often depicted massacres, people being burned alive, etc. But for the children, the ability to express these things and get them out in the open played a vital part in the coping process. The project was originated by social workers from the refugee community and has since been copied by many relief agencies in other parts of the world.
3. Return Training. An innovative project was designed in 1985 to help prepare Tigrayans to return to their villages with enhanced skills. This approach was used in eastern Sudan in 1985 in the Sefawa camp. First, the refugees were assigned to sectors of the camp according to their original villages. Next, workers were identified and trained to work in the camp doing activities and learning skills that would be useful to their community once they returned. The objective was to provide skills that were not already there. For

example, women were trained to be nutrition extensionists and to promote better nutrition practices. Traditional healers and birth attendants were identified and brought into the SCF clinics to receive special training to improve their skills, reduce infection, and carry out their normal activities in a more sanitary environment. Community leaders were educated on the need for instituting GOBI-like programs to reduce infant mortality. And farmers were given specialized instruction to improve their crop yields once they returned to their lands. This program, conceived by SCF (U.K.) and developed with the cooperation of REST (the Relief Society of Tigray), was carried out with the participation of the village elders.