

Humanitarian Supply Management and Logistics in the Health Sector



Emergency Preparedness
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Preface

Emergencies and disasters place exceptional demands on the logistical and organizational skills of the affected country. This challenge is felt with particular intensity in the health sector, where deficiencies in the flow of supplies may have dire consequences. The problem does not merely lie in the procurement of emergency goods and equipment. Special attention must also be paid to the management of those supplies already at hand or in the pipeline. Supplies may be piling up at the central level while acute shortages are painfully evident at the emergency site. Unsolicited—and often inappropriate—donations also compete for storage and transport facilities that may be in short supply.

Humanitarian personnel may be unfamiliar with standard accounting and stock-control procedures. Alternatively, these procedures may be overlooked under the pressure of the emergency. Accountability and a thorough paper trail are likely to fail at exactly the moment when the mass media are most eager to find evidence of misappropriation of external assistance, and thus perpetuate the myth of local incompetence or, worse still, corruption.

Since the publication in 1983 of PAHO's handbook, *Medical Supply Management after Natural Disasters*, and particularly over the last decade, considerable progress has been made worldwide toward the effective management of humanitarian supplies, proper accountability, and greater transparency. The development by the Pan American Health Organization of the SUMA emergency supply management methodology has helped to place the effective and accountable control of the supply chain high on the list of priorities of both governments and nongovernmental organizations.

This handbook aims to present the most basic concepts of humanitarian supply management and logistics. Although the handling of medical and pharmaceutical supplies is given special attention, the logistics principles described here have multisectoral applications, not only in emergency situations, but also in the day-to-day operations that must be a part of disaster prevention and preparedness.

Throughout this manual, a basic premise is maintained: that disaster management is primarily a national responsibility. While the massive inflow of donations may occasionally exceed the capacity of the affected country to absorb them, the most effective and appropriate response by the international community and humanitarian organizations is to contribute to capacity building at the national level. This manual is directed at those who are locally responsible for managing the flow of supplies and ensuring the timely delivery of emergency supplies to disaster victims—from civil protection experts to custom officers, and from ministry of health and social security professionals to the dedicated volunteers of humanitarian organizations.

It is our hope that this publication will contribute to greater effectiveness and accountability in the process of providing humanitarian assistance to the victims of disasters, and therefore to more equitable access to health by the affected population.

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Introduction

Procurement, storage, mobilization, distribution—these and other aspects of providing material assistance to people affected by disasters, and the handling of those supplies employed by relief organizations in their aid operations, require an organizational structure to ensure the efficient management and utilization of resources that in emergency situations, almost by definition, tend to be limited.

This structure is provided by logistics, the art or strategy of achieving practical objectives as promptly and methodically as possible while making the most effective use of available resources.

Two basic premises are addressed in this handbook:

1. Humanitarian supply logistics cannot be improvised at the time of the emergency. Countries and organizations must see it as a cornerstone of emergency planning and preparedness efforts. Employing resources appropriately, and being able to secure those that are not at hand, depends on first identifying their availability and location, as well as the sources for obtaining them. All those activities demanded by logistical deployment during an emergency—the mechanisms for standardizing the various processes and all the necessary documents for recording information and controlling, monitoring and following up on the flow of supplies—must be prepared, understood, and tested in advance.
2. The various stages in the flow of supplies from their point of origin to the moment they reach their recipients—whether they be the organizations managing the emergency or the actual beneficiaries of the assistance—are a chain made up of very close links. How any one of these links is managed invariably affects the others. Supply management must therefore be the focus of an integral approach that looks at all the links in the sequence and never loses sight of their interdependence. This is known as supply chain logistics.

This handbook is intended as a guide to certain basic aspects of emergency supply logistics and as reference material for all those involved in

the management of humanitarian supplies. It describes a series of procedures for the correct handling of supplies at each of the stages of the logistics chain. Some of these procedures reflect the standards of international organizations involved in disaster response. Many others, however, are the distillation of concrete experiences by those in the field.

While no guidelines can be universally applicable, the techniques and procedures proposed here should be of some value in almost all circumstances involving emergency operations.

The manual is aimed at all those who work in emergency management, whether government officials or members of nongovernmental organizations; the procedures outlined should be applicable in both cases. The content has been organized in such a way that those who are already experts in the field can use it as reference material, while those who wish to learn about the subject will find a systematic presentation of the most relevant aspects of the logistics of managing humanitarian supplies.

This is a new contribution by the Pan American Health Organization and the World Health Organization to national efforts to strengthen operational capacity, particularly in those aspects related to the management of humanitarian assistance. It expands and updates information in PAHO/WHO's Scientific Publication *Medical Supply Management after Natural Disasters* (1983).

Chapter 1

*The Context*¹

The purpose of this chapter is to provide a general context for the most common scenarios that would call for an intervention by humanitarian organizations, as well as for those recurring conditions in which these organizations must act to meet the needs of the victims of disasters.

Disasters – General Aspects

The term “disaster” is usually applied to a breakdown in the normal functioning of a community that has a significant adverse impact on people, their works, and their environment, overwhelming local response capacity. This situation may be the result of a natural event—say, a hurricane or earthquake—or it may be the result of human activity.

Some organizations make a distinction between “disasters”—the result of natural phenomena—and “complex emergencies” that are the product of armed conflicts or large-scale violence and often lead to massive displacements of people, famine, and outflows of refugees. Examples would include the Balkan crisis, the Ethiopian, Somali and Sudanese famines, the genocide in Rwanda and the violence in East Timor.

Each disaster is unique—its effects not only have to do with the type of natural or man-made phenomenon, but also with the economic, health, and social conditions of the area. However, there are common features, and identifying them can help improve the management of humanitarian assistance and the use of resources. The following aspects should be taken into account when considering the nature of a disaster (see also Table 1.1):

1. There is a correlation between the *type* of disaster and its impact on health, particularly the occurrence of injuries. For instance, earth-

¹ This chapter was originally written by Dr. Edgardo Acosta Nassar and partially modified to meet the needs of this handbook. Dr. Acosta is Executive Director of FUNDESUMA, a foundation dedicated to maintaining and disseminating the SUMA humanitarian supply management methodology. Dr. Acosta has extensive international experience in disaster preparedness and management.

quakes cause many traumas that demand medical attention, while floods tend to produce relatively few injuries;

2. Some of a disaster's effects do not have an immediate impact on public health, but pose a potential threat. Population displacements and environmental changes may increase the risk of a spread in communicable diseases. In general, though, epidemics are not *caused* by natural disasters;
3. Immediate and potential health hazards in the aftermath of a disaster seldom materialize simultaneously; they tend to strike at different times, and with variable intensity within the affected area. Thus, injuries tend to happen at the time and place of the impact, demanding immediate medical attention, while the risk of an increase in communicable diseases evolves more slowly and reaches maximum intensity with overcrowding and breakdowns in hygiene;
4. After a disaster, the need for food, clothing, shelter, and primary health care is rarely absolute; even the displaced often have the resources to satisfy some of their own basic needs. Moreover, it is common for the victims of a disaster to recover quickly from the initial shock and participate spontaneously in search and rescue efforts and other relief initiatives, such as the storage and distribution of emergency supplies;
5. Wars and civil conflicts generate a particular set of health problems and operational obstacles. Overcoming them requires dealing with many political, social, ethnic and geographical issues.

Effective humanitarian relief management is based on anticipating problems and identifying them as they arise, and providing specific supplies at the right time where they are most needed.

Main Effects of Disasters

The various effects of disasters on the population and its surroundings generate different kinds of needs and require different approaches to meet those needs. It is therefore important to have a general sense of what these effects are, and which systems are most commonly affected. However, experience shows that the effects in question cannot be taken as absolutes, since the impact and form a disaster takes depends on the specifics of the affected region. Bearing this in mind, the following is an overview of some basic characteristics of these effects.

Social Reactions

The behavior of disaster victims rarely explodes into general panic or sinks into stunned apathy. After the initial shock, people tend to start acting positively to meet well-defined personal goals, leading to an increase in individual activities that, in spite of being spontaneous, quickly self-organize into collective endeavors. Earthquake survivors, for instance, are usually the first to engage in search and rescue efforts, often within minutes of the impact; in a matter of hours, self-organized groups have already assigned themselves specific tasks that play a key role in relief and recovery.

It is only in exceptional circumstances that actively antisocial behavior such as looting takes place. However, sometimes individuals' spontaneous reactions, while perfectly rational from the point of view of self-interest, can prove detrimental to the community as a whole, as when public utility employees do not show up at the workplace until they have taken steps to ensure the safety of their family and possessions.

Since rumors abound after a disaster, especially concerning epidemics, the authorities may face tremendous pressure to adopt emergency measures, such as massive vaccination campaigns against typhoid or cholera, without there being solid public health evidence for doing so. Moreover, many people are reluctant to apply the measures considered necessary by the authorities.

After an early warning has been issued concerning a major risk, and even after a disaster has actually taken place, many are reluctant to be

evacuated, although their homes may no longer be safe or, quite simply, may no longer exist.

Communicable Diseases

Natural disasters do not cause massive outbreaks of infectious diseases, although in some circumstances they may increase the odds of their spreading. In the short term, the increase in morbidity is frequently the result of fecal contamination of drinking water and food, causing gastrointestinal diseases.

The risk of epidemic outbreaks of communicable diseases is proportional to the density and displacement of the population, since these factors degrade living conditions and substantially increase the demand for drinking water and food, which tend to be scarce in such circumstances. In the immediate aftermath of a disaster, the risk of contamination grows—as in the case of refugee camps—as existing sanitation services such as water supply and sewerage systems break down and it becomes impossible to maintain or restore public health programs.

In the case of complex disasters, malnutrition, overcrowding, and the lack of basic sanitary conditions are frequent. In such circumstances, outbreaks of cholera and other diseases have occurred.

Population Displacements

When large population displacements take place, whether spontaneous or organized, humanitarian assistance becomes crucial—and urgent. People tend to flock to urban areas, where public services do not have the capability to handle sudden, very large increases in the population served, leading to increased mortality and morbidity rates. If the disaster destroys most homes in a given area, large local “migrations” may take place within the same urban environment, as victims look for shelter in the homes of relatives and friends.

In situations in which large numbers of the population flee their homes due to war or other forms of violence, and the threat to life is imminent, organized reactions are much less likely, since the chief priority of the

victims is to get away from the danger as quickly as possible. In these cases, the timely intervention of international aid organizations can still make the difference between life and death. Even so, these agencies may find among these populations attitudes of mutual assistance and organized response that can maximize the effectiveness of the intervention.

Exposure to the Elements

Health hazards associated with exposure to the elements are not common in temperate zones, even after a disaster, as long as the displaced are kept in dry places where they can remain sheltered from the wind and cold. However, in other climates with significant extremes in temperature, whether too hot or too cold, proper shelter can be vital. Hence, the need to provide emergency shelter should not be seen as a given, but depends instead, to a large extent, on local circumstances.

Food and Nutrition

Food shortages in the aftermath of a disaster are generally due to two causes. The first is the destruction of food stocks in the affected area, which combines with personal losses to reduce the immediate availability or affordability of food. The second is disorganized distribution systems, which may contribute to shortages even if there is no absolute scarcity of food.

After an earthquake, lack of food is rarely severe enough to cause malnutrition. River floods and unusually high tides causing coastal flooding may affect food stocks and ruin crops, as well as interfering with distribution. Efficient food distribution may be a key need in the short term, but large-scale imports or donations of food are seldom needed.

One crucial exception must be mentioned. In the case of mass displacements of people, the victims do not carry much in the way of provisions, if they carry anything at all. All too frequently, supplies in the population centers that play host to them are insufficient and are quickly depleted.

Water Supply and Sewerage

Water supply and sewage systems are especially vulnerable to natural disasters. The interruption of such services leads to severe health risks. These systems are widely distributed, often poorly maintained or in disrepair even before a disaster strikes, and exposed to a variety of hazards. Deficiencies in the quantity and quality of drinking water, or the safe disposal of fecal and other human waste, bring about a degradation of sanitary services, which in turn contributes to creating favorable conditions for the spread of water-borne diseases.

Mental Health

In the immediate aftermath of a disaster, anxiety, neurosis and depression are not a major public health issue, and can generally be handled temporarily by other members of rural or traditional communities without external support. Confounding expectations, it is relief workers who may comprise a high-risk group. Whenever possible, all efforts must be made to preserve the social structure of families and communities. Likewise, the indiscriminate use of sedatives or tranquilizers during the relief stage of the disaster must be vigorously discouraged.

In the industrialized or urbanized areas of developing countries, a significant increase in mental health problems often accompanies the long-term rehabilitation and reconstruction phase. Treatment must be provided.

Special reference must be made to the traumas that are the result of contact with the horrors of armed confrontation and other forms of extreme violence. The violent death, disappearance, or injury of relatives and friends aggravates the trauma, which generally calls for protracted therapy.

Damage to Infrastructure

Natural disasters frequently cause severe damage to key facilities, affecting the health of those sectors of the community that depend on the services provided. In the case of hospitals and health centers whose

structure is unsafe, natural disasters put its occupants at risk and limit institutional capacity to provide services to the victims. The 1985 Mexico City earthquake triggered the collapse of 13 hospitals. In three of them alone, 866 people died, including 100 hospital staffers; some 6,000 beds were lost. In 1998, Hurricane Mitch damaged or destroyed the water supply systems of 23 hospitals in Honduras and affected 123 health centers. The disasters set off by the El Niño phenomenon in Peru between 1997 and 1998 affected almost 10% of the country's health services.

These destructive effects also have an impact on infrastructure, equipment, and other useful resources for managing the arrival, storage, and distribution of emergency supplies.

Table 1.1 Short-term effects of major disasters

Effect	Earthquakes	Windstorms (without flooding)	Tsunamis and sudden floods	Slow-onset floods	Landslides	Volcanoes and mudslides
Deaths ^a	Many	Few	Many	Few	Many	Many
Severe injuries requiring extensive treatment	Many	Moderate	Few	Few	Few	Few
Increased risk of communicable diseases	This is a potential hazard after any significant natural disaster. The potential increases in close correlation with overcrowding and the degradation of the sanitation situation.					
Damage to health facilities	Severe (structure and equipment)	Severe	Severe, but localized	Severe (equipment only)	Severe, but localized	Severe (structure and equipment)
Damage to water supply systems	Severe	Minor	Severe	Minor	Severe but localized	Severe
Lack of food	Infrequent (generally caused by economic or logistical factors)		Common	Common	Infrequent	Infrequent
Large population displacements	Infrequent (tend to occur in urban areas that have suffered severe damage)		Common (generally limited)			

^a Including potential lethal effects in the absence of prevention measures.

Chapter 2

Logistics

Logistics and Emergencies

Although the word "logistics" applied originally to the military procedures for the procurement, maintenance, and transportation of materiel, facilities, and personnel, it now has practical applications in civilian life. It generally refers to a system whose parts interact smoothly to help reach a goal promptly and effectively thanks to the optimized use of resources. While this is an immensely productive approach, its downside is that the failure of even one of the components can affect the final result.

Many commercial enterprises have a logistics department that coordinates, through a logical and sequential series of steps, all aspects related to procurement, transport, maintenance, stock management, and the flow of both material and intangible inputs—broadly speaking, all activities considered auxiliary to the production and marketing process.

In emergency relief operations, logistics are required to support the organization and implementation of response operations in order to ensure their timeliness and efficiency. Mobilizing the staff, equipment and goods of humanitarian assistance organizations, the evacuation of the injured or the resettlement of those directly affected by the disaster, requires a logistics system to maximize effectiveness.

Logistics Planning and Preparedness²

It is beyond the scope of this section to explain in detail how to develop an emergency response logistics plan. However, it is feasible to provide a few guidelines for developing such a plan, as well as to underscore the importance of planning as a key component of any disaster reduction effort.

² This section is based on *Logistics*, a module prepared by R.S. Stephenson, for the United Nations Development Programme, Disaster Management Training Program (Madison, University of Wisconsin, Disaster Management Center, 1991).

Logistical activities have to be planned, since adequate preparations are essential to a smooth operation. It is indispensable to renounce the commonly held notion that transport and other arrangements can be improvised, depending on circumstances “in the field” when disaster strikes. Planning is both necessary and practical, since it is generally possible to foresee the types of disasters that may affect a given location and the needs that such disasters will be likely to engender.

In fact, logistics should be an active component of any national emergency response plan, as well as of the individual plans of disaster response organizations and key institutions such as schools and health establishments. Logistics must be closely linked to all other operational activities in the context of responding to a given emergency.

The Plan

Planning and anticipation are vital to an effective logistical system. The plan must be based, first of all, on a good working knowledge of the geographical, social, political and physical characteristics of the area where the operations are to take place. Such a plan must not only be well thought out in advance, so that it can run smoothly—it must, above all, be clearly understood and accepted by all stakeholders in any future relief operation.

The plan must provide clear answers to the following questions:

- ◆ Which tasks must be carried out? How do they relate to all the other activities, and what are the correct sequences for carrying them out?
- ◆ Who will be responsible for performing such tasks? (Rather than individuals, what must be identified here are organizations or departments.)
- ◆ Who will be in charge of the overall coordination of the logistical system?
- ◆ What resources are needed? How, when, and where can they be procured?
- ◆ What alternative actions can be implemented if the system is somehow disrupted?

Preparedness

After these questions have been answered satisfactorily, we must draw up a list of preparatory activities. The more time and effort we invest in such activities, the greater the return in terms of our knowledge of the theater of operations, our weaknesses and those of our partners, eventual needs, and alternative solutions depending on different scenarios. These activities, which are described below, can be broken down by national regions, depending on the size of the country, beginning with those areas most at risk from natural disasters. Alternatively, organizations may decide on which geographical areas they will focus their attention.

Preparedness must also be based on the vulnerability and resource assessments normally carried out to develop a national or regional emergency response plan. We must never forget that logistics has to be a key component of any such plan.

Preparatory activities must include the following:

- ◆ *Assessing the vulnerability of key infrastructure*—The goal is to identify the strengths and weaknesses of public works and strategic structures of the country or region—highways, water supply systems, schools, hospitals—as well as alternative actions that may be required should the infrastructure collapse. Specific actions would include:
 - ▲ Systematically mapping and evaluating national transport infrastructure (ports, airports, highways, railroads, and waterways), taking into account the capacity and potential weaknesses of strategic routes, possible bottlenecks (bridges, ferries), availability of communication resources, and risks to the infrastructure in the event of an emergency. It is essential to determine the vulnerability of ports and airports to natural disasters. We must consider, for instance, the exposure of hangars and warehouses, or loading and fueling equipment, to the impact of a hurricane or an earthquake;
 - ▲ Analyzing the historical meteorological records of the country or region to determine the impact that severe weather might have on the capacity of the transport system at different times of the year;

- ▲ Regularly monitoring major new construction or changes to existing structures that might cause bottlenecks or the temporary need for rerouting, e.g., changes in a bridge's weight or width restrictions, the closure of a route due to road repairs, and so on.
- ◆ *Determining the availability of strategic resources for logistical support*—These resources are constantly changing, so they must be reviewed frequently to keep the information as up-to-date as possible. The review must also involve the private sector, the public sector, and national and international nongovernmental organizations.
 - ▲ Taking stock at the national level of the location and sources of key supplies—including drugs and medical supplies, food, clothing, fuel, and rescue equipment. This inventory must also determine how long it would take for critical supplies to be delivered to their required destinations;
 - ▲ Analyzing the capacity of the transport system for moving people and supplies—assessing in detail the country's transport capacity, such as the size of fleets, their type and capacity, location, costs, and availability;
 - ▲ Assessing potential sites for logistic bases, supply distribution centers, and fuel distribution points—including public and private facilities, large storage complexes, factories, and other facilities that might be adapted to these purposes;
 - ▲ Assessing the availability of spare parts and repair services—including private and public repair shops;
 - ▲ Determining the capacity of ports and airports to handle emergency supplies under different scenarios:

Ports: Examining the capacity of port facilities to handle the arrival, storage, and flow of consignments, including repackaging and distribution. Reviewing with the port authorities the various procedures and formalities for the arrival of emergency consignments, and so on.

Airports: Determining their capacity, which types of aircraft can land, which services are offered, availability of machinery and

equipment for unloading and loading, whether fuel supplies are available, and so on.

Other transport options: Determining alternative routes and options, such as waterways, in the event of an emergency.

- ◆ *Reviewing government policies, plans, and preparations*—It is very important for international agencies and nongovernmental organizations to know the government’s emergency response policies and plans. Since government disaster response agencies are the ones entrusted with coordinating relief efforts, it is crucial for the organizations that take part in these efforts to establish solid links with the local or national agencies. The contacts can also be used to negotiate mutual cooperation agreements for emergency situations, such as providing tax-exempt status to humanitarian supplies, priority treatment at customs, and so on.

All the information compiled and the activities carried out at the planning and preparation stage should serve as the basis for the development of the logistics plan, which must spell out procedures, responsibilities, and timetables for implementation.

Supply Chain Logistics

This handbook will focus on supply chain logistics in emergency situations, the purpose of which is to “deliver the right supplies, in good condition and the quantities requested, in the right places and at the time they are needed”.³ The links in this logistics chain are not necessarily sequential or linear; indeed, they are often carried out in parallel. However, they must not be considered as separate activities but integrally, due to their complex interrelationships.

Although a general coordinator must keep track of all the threads, no one could expect a single individual to micromanage the entire process. Accordingly, someone should be responsible for procurement, transport, storage, and distribution, as outlined below.

Procurement

The purpose of the procurement process is to make sure that the organizations involved in relief management have the resources needed to

meet identified needs. This in turn requires identifying the sources of those goods and services and the way in which they will be acquired.

Transport

Transport is the means whereby supplies reach the places where they are needed. A transport strategy must not only take into account the means of transport but also the actual possibilities of getting supplies from point A to B, as well as alternatives for the prompt, safe delivery of relief assistance.

Storage

The purpose of storage is to protect the emergency supplies in an organized, systematic fashion until they can be delivered to their ultimate recipients. It must also take into account reserve supplies, or stockpiles, for future or unforeseen needs.

Distribution

The chief goal of the logistics chain in relief operations is delivering aid to the people affected by a disaster, or at least to the organizations entrusted with managing emergency supplies, in a way that is proportional to existing needs, fair, and properly controlled to prevent abuses or waste.

Putting it all Together

It is important to underscore the fact that all of the above components are closely linked. The failure or ineffective functioning of any of the links in the chain will affect overall performance. For instance, if the transport of a load of supplies has been organized correctly, but upon arrival it turns out that no provisions were made for storage, the efficiency of the transport effort will have been to no avail. Alternatively, if there are enough resources to cover the needs of an affected area, but no transport to take them where they are needed, the success of the other efforts will be, for all practical purposes, moot, because they were not properly synchronized with the transport component. One missing link is all that is needed for the chain to break.

Chapter 3

*Assessing Logistical and Supply Needs*⁴

The Importance of Needs Assessment

Assessing logistical and supply needs is crucial to determine as accurately as possible:

- ◆ The needs of the population after a disaster;
- ◆ Available local capacity and resources;
- ◆ Complementary capabilities and resources required for meeting those needs.

Such assessments should be fully integrated into the general needs-assessment process that is carried out in a disaster area to determine the type and severity of the damage and the most urgent intervention priorities. The quality of this assessment is very important, since requests for supplies will be based on the disaster situation as identified on the ground.

It should be emphasized that the need for accurate assessments should not lead to paralysis. While assessments are the tool that enables relief managers to identify the affected sectors and the nature of the damage, and to quantify and qualify more precisely the type of assistance required, there is no need for them to be completed before the most pressing relief actions are undertaken.

Needs assessments should make it possible to answer the following questions:

- ◆ What are the needs?
 - a . What are the needs of the population?
 - b . What are the operational needs?

⁴ This chapter was written with the support of Alvaro Montero Sánchez. Mr. Montero is a consultant for USAID/OFDA and FUNDESUMA on emergency operations centers.

- ◆ What is available capacity?
 - a . What is the capacity of the local infrastructure?
 - b . What resources (including human and information resources) are available locally?
- ◆ What factors may hinder or facilitate relief efforts?
- ◆ What are the social, cultural and environmental characteristics of the potential disaster area that may have a bearing on the effectiveness of the relief efforts?

It is important to determine not just the needs of the affected population, but also of the organizations in charge of providing relief assistance. Some of the key questions that need to be answered are the following:

- ◆ What is needed?
- ◆ How much is needed?
- ◆ When is it needed? (Is it urgent?)
- ◆ Where is it needed?

We also know that disasters are dynamic, changing processes. Accordingly, an assessment of this sort must not only help us to identify the current situation, but also to foresee likely needs in the future.

Needs of the Population

As we have seen, it is important not to stereotype disasters, since the needs they generate depend not only on the kind of event but also on the socioeconomic and other characteristics of the affected region or country. Nevertheless, experience shows that some aspects of everyday life are more likely to be affected by disasters, making it possible to foresee the most probable needs for survival.

Such aspects include the following:

- ◆ **Health care:** Most catastrophic events tend to affect public health to a greater or lesser extent, generating additional or urgent needs in this area.
- ◆ **Availability of water:** It is common for drinking water supply systems to suffer damage or fail to function.

- ◆ **Availability of food:** Not all events lead to dwindling stocks of food, but people who have lost their homes or belongings will likely require some temporary support in this regard.
- ◆ **Shelter:** The impact of a disaster might force people to look for temporary shelter until they resolve their housing situation.
- ◆ **Sanitation:** The generally sudden disruptions of the everyday functioning of a community, as well as the displacement or temporary resettlement of the victims, can cause environmental degradation and imperil health due to a rise in unsanitary conditions.

Bearing in mind which kind of disaster we are facing, we can come to preliminary conclusions on what type of assistance will most likely be necessary, and launch an appropriate response in the field until more thorough assessments reveal to us in greater detail the needs that must be met.

Operational Needs

All too often, local organizations involved in emergency response do not have the resources to respond effectively to a disaster. It is therefore important to determine what resources an organization has (or is lacking), and what is required for relief operations to be carried out effectively. If logistical planning and preparations have taken place before the event, this will make it easier to determine which resources are available—and which are lacking and must be procured elsewhere. (See also the section on Logistics Planning and Preparedness in Chapter 2.)

Assessment of Local Capacity

By local capacity we mean not only the physical resources available at the site of an emergency, but any factors that may help emergency supply management, such as local knowledge of the terrain or weather patterns, or social capital in the form of community organizations, formal and informal communications channels, and the like.

Local Infrastructure Capacity

Since disasters tend to affect lifelines, including roads and infrastructure in general, it is essential to carry out a quick inventory of their availabil-

ity and operational capacity for the mobilization and reception of incoming supplies.

From the point of view of infrastructure, the following issues must be dealt with:

- ◆ The state of roads, waterways, and other transport infrastructure needed to guarantee the arrival of emergency supplies in the region or country that has been affected. Are there any restrictions on their effective use, such as the threat of landslides blocking access to a town, or a landing strip that may be unavailable in the event of flooding? Are any changes being contemplated, such as the digging of a tunnel? Is maintenance so deficient that the infrastructure is becoming increasingly vulnerable to the impact of an earthquake or hurricane?
- ◆ The existence and availability of supply storage facilities;
- ◆ The existence and availability of means of transport;
- ◆ The state and capacity of points of arrival (airports, ports, borders, and so on). Are there any restrictions on their use? Are changes in the works, such as the expansion of a runway? Is maintenance a problem?

Local Availability of Resources

One can frequently find the necessary supplies locally, or at least not far from the emergency zone. Part of our assessment, then, must involve identifying the existence and location of such resources. Attention should not be paid only to commercially available goods that need to be purchased; there may also be public, and even private, resources that can eventually be put to use in relief efforts. This applies to resources for the affected population as well those required by relief organizations.

Factors That May Restrict or Facilitate Relief Efforts

Many factors may hinder or, alternatively, facilitate relief efforts. For instance, during a complex emergency, or in particular political contexts, national authorities may restrict humanitarian operations and supplies. A government may ban foreign-based relief organizations from entering the

disaster or conflict area, or even the country itself. Another may put forward religious, political, or health reasons for preventing the arrival of a given product or material.

On the other hand, some governments may adopt exceptional measures to facilitate the efforts of relief organizations and the arrival of humanitarian assistance into the country or the area where operations are underway. This would include offering priority treatment at customs, lowering or eliminating tariffs and taxes, or making government facilities available to humanitarian operations.

The assessment report must mention the existence of any such measures, since they will have an impact on the supplies that may or may not be used and the movement of relief teams. Restrictions may have to be circumvented, while favorable measures should be maximized.

Other Relevant Issues

Any other information that may affect supply availability, transport and distribution should also be recorded to assist in decision-making—weather forecasts, other events related to the event causing the emergency, or safety and security considerations that must be taken into account regarding the movement and positioning of supplies.

Social, Environmental and Cultural Features of the Affected Population and Region

In order to provide the most appropriate and effective assistance to the affected population, it is imperative to identify and understand their social and cultural customs, as well as environmental characteristics of the area they occupy.

This information must be taken into account when making decisions about the type of supplies needed, how they can best be distributed, and how they are likely to be used—in the case of clothing, housing, or household items—or consumed, when it comes to water, food, and drink.

The following are essential tasks:

- ◆ Identifying the population's dietary habits, including the types of food they will not consume for religious, cultural, or traditional rea-

sons, the kitchen utensils they use for cooking, and any other relevant information that can help determine what kind of assistance to offer and what kind to avoid;

- ◆ Identifying local and regional producers before asking for food assistance or negotiating the acquisition of food in other regions;
- ◆ Finding out what type of clothes are used, and which ones are not worn due to cultural or environmental reasons;
- ◆ Identifying the most common types of housing and construction materials, including the cultural or environmental reasons, if any, for such buildings and building practices;
- ◆ Collecting information about the needs and type of assistance considered a priority by the community itself;
- ◆ Identifying ethnic or cultural minorities and their specific needs, in order to prevent any form of exclusion.

Once again, a proper assessment will help to guide the decisions needed to provide appropriate and effective assistance. Defining the need for specific supplies must be done as part of the overall assessment of the emergency.

Chapter 4

Coordination

The actors who intervene in relief operations are diverse, with different mandates and working methods. Although they all share the desire to help, lack of coordination is common in emergency situations. Disputes between organizations, or the unwillingness to share information and work side by side, can delay the provision of care to disaster victims, lead to duplication of efforts, and waste valuable resources.

To prevent this predicament, and to maximize available resources and expertise, relief efforts should be launched in a spirit of coordination. This will be possible to the extent that participating organizations know each other, share information, identify and acknowledge their respective strengths, and explore ways of collaborating and supporting each other.

Coordination Structures

The Actors⁵

Minor emergencies are generally handled by specialized national or local agencies, perhaps with the collaboration of international organizations present in the country. However, when an event is catastrophic, other sectors of the nation and the international community must often mobilize to provide relief. The increase in the arrival of emergency supplies and response personnel places an extra burden on the efforts to coordinate relief on the ground. It is crucial to establish effective working relationships with the following stakeholders (see also Annex 4.1):

- ◆ The local population: The residents of the affected area are the first to engage in search and rescue operations, and often among the first to share vital supplies such as food and water with victims of the disaster.
- ◆ Neighboring communities or regions: It is also common for neighboring communities or even countries to respond quickly with donations and the sending of volunteers.

⁵ This section is partially based on J. Davis and R. Lambert, *Engineering in Emergencies*, Intermediate Technology Publications Ltd., 1995, London.

- ◆ The national and local governments: A significant adverse event generally prompts the intervention, not only of the national disaster response agency, but of other government bodies as well.
- ◆ Foreign governments: The governments of other nations intervene through their embassies and their bilateral cooperation agencies. This assistance, which occurs between the two governments, may include financial and in-kind donations, the financing of rehabilitation and reconstruction projects, or the sending of consultants and experts. (See Annex 4.1.)
- ◆ Multilateral agencies: These are mostly intergovernmental agencies, such as those of the United Nations, whose mandate includes disaster reduction or humanitarian assistance. Generally, their support focuses on technical assistance related to their own field of expertise, sending consultants and experts, or supporting the allocation of resources to help the affected country in rehabilitation and reconstruction efforts. (See Annex 4.1.)
- ◆ Nongovernmental organizations (NGOs): National and international, religious or social, their capabilities, experience and resources cover a wide spectrum. Some international NGOs specialize in emergency management, and their skills and resources are tailored for disaster situations. (See Annex 4.1.)
- ◆ The private sector: National or transnational in scope, for-profit corporations can get involved at different levels, from donations to providing specialized services in areas such as transportation, warehouse rentals, or the sale or in-kind donation of equipment, food and drugs.
- ◆ Specialized institutions: These can provide highly valuable technical assistance in areas such as vulnerability assessments and risk reduction, needs assessment, and more concrete efforts such as water purification or medical supply management.
- ◆ Military institutions: A country's armed forces have the experience and equipment to support logistical operations. They have their own means of transport, including sophisticated aircraft such as helicopters, highly flexible and deployable human resources, and essential skills in crucial fields such as rapid road repair and bridge construc-

tion. When the armed forces are taking active part in a conflict, however, their involvement in relief operations must be closely reviewed and might not be advisable for security reasons.

Coordination Mechanisms

It must be borne in mind that most countries have a national focal point—a National Emergency Commission, Civil Defense or Civil Protection—in charge of disaster response. It is generally a permanent structure, with its own budget and organizational structure. At times, however, governments establish temporary, ad hoc structures to respond to a particular disaster which will, at some point, transfer responsibility for their activities to permanent government agencies. Regardless of the arrangement involved, it makes sense, in order to discourage the duplication of efforts, to try to channel all emergency assistance through such structures.

The tasks of coordinating relief efforts must be viewed from a cross-sectoral, inter-institutional, and interdisciplinary perspective. They should also, obviously, start long before an emergency takes place, and be reinforced during a catastrophic event. Some of the key activities during these two crucial stages in the coordination process are the following:

During the Preparedness Phase

- ◆ Determine who is supposed to do what in the context of humanitarian intervention: which national, international, governmental, non-profit organizations are present in the country, and what are their specialties and fields of action;
- ◆ Carry out frequent meetings and coordination activities to decide and even rehearse what is to be done before, during, and after an emergency;
- ◆ Develop joint plans and seek collaborative agreements with the various organizations for the stages before, during, and after an emergency;
- ◆ Carry out inventories (national, regional, or institutional, as the case

may be) of resources and contacts that would prove useful in the event of an emergency, and keep the inventories up to date;

- ◆ Exchange information about resources that may be useful in the event of an emergency, whether the resources are in the hands of participating organizations or come from another source.

During the Response Phase

- ◆ Carry out joint assessments of the situation in the field. This can be extremely useful, since it allows for an interdisciplinary view of the emergency and makes it easier to identify areas for inter-agency collaboration;
- ◆ Maintain close and permanent contact between the various organizations involved;
- ◆ Share among the organizations the results of any assessments and findings with a view to finding fields of action where the strengths of the various organizations can complement each other;
- ◆ Share information about the activities undertaken and planned by each organization, to prevent duplication of efforts;
- ◆ Promote the exchange of resources among the organizations, as well as the development and implementation of cooperation agreements;
- ◆ In emergency situations that require a complex response, establish specialized working groups with representatives from all relevant organizations. Examples include a water and sanitation group, or a medical assistance group.

Cooperation Agreements

Disaster response organizations' primary goal is to provide relief to those in need. Depending on its nature and history, each organization tends to specialize, to a greater or lesser extent, in a given work area. It is also evident that no agency, on its own, can handle all the logistical problems attending a natural catastrophe.

The way in which international donors transfer resources for humanitarian assistance has led to the emergence of many new relief organizations and the entrance of existing institutions into this field, resulting in intense competition among these organizations for external resources.

In spite of this competition, it is essential to develop mutual support and cooperation agreements, so that humanitarian assistance can be delivered promptly and relief efforts can complement each other. These agreements must be both specific and feasible, so as not to create false expectations.

Requests for Humanitarian Assistance

Calls on the International Community

When the impact of a disaster is such that it overwhelms national response capacity, a call for help soon goes out to the international community. This is the responsibility of the national government, and the requests for assistance are usually channeled by embassies and the country offices of the various UN bodies. The crucial point, again, is not to make such requests until needs have been assessed and it is clear that they cannot be met with local resources. Only then can international solidarity provide emergency relief that is truly useful.

As part of disaster preparedness efforts, the foreign ministries of some countries—regrettably few—have issued guidelines to their diplomatic representatives abroad in the event of a disaster. These guidelines are meant to help the diplomats inform the authorities, potential donors, and the public about the impact of the event, the needs of the victims, and the type of assistance that would prove most valuable in the circumstances, based on official reports issued by those responsible for disaster response.

Ideally, this should help to identify and screen aid offers, reducing the number of inappropriate donations and helping to make sure that useful supplies arrive when and where they are most needed.

Similarly, the country offices of international organizations may call on headquarters or other counterparts in the region to provide humanitarian assistance. Normally, these organizations have their own procedures

for mobilizing aid. It goes without saying that when calling for donations, they should apply the same criteria outlined above.

Information Exchange and Coordination with International Organizations

International organizations, whether they have a country office or send delegations when a disaster occurs, are excellent vehicles for identifying sources of appropriate assistance, procuring the aid and channeling it to the victims. It is therefore vital to establish mechanisms to keep them informed of the evolution of the situation in the field of operations and the needs as they are identified.

Instructions for Donors

Guiding potential donors, not just about the type of assistance needed, but also about the most appropriate way to make it reach its destination, is extremely important. International organizations with ample experience in disaster relief claim that there are some supplies and forms of assistance that should never be the subject of an open, massive appeal:⁶

- ◆ Used clothing and footwear: Generally, needs of this sort are met locally. In any case, for reasons of hygiene and convenience, it is best to obtain such items locally;
- ◆ Pharmaceutical products: The arrival of drugs of every sort in all kinds of presentations, quantities, and packaging only serves to distract already overstretched human and logistical resources, since the drugs need to be classified, labeled and, often, discarded or destroyed;
- ◆ Food: The sending of food of any sort should not be encouraged, at least not as a given. In the event that food should be needed, donors should be advised to send non-perishable goods that can be adapted to local consumption patterns and correctly labeled;
- ◆ Blood and blood derivatives: Once again, local donations are usually enough to satisfy local needs. Moreover, the arrival of such prod-

6 Adapted from Pan American Health Organization (PAHO), *Humanitarian Assistance in Disaster Situations: A Guide for Effective Aid*. Washington D.C., 1999.

ucts from abroad causes more difficulties than benefits, from the health and logistical point of view;

- ◆ Medical and paramedical personnel: Generally, national health services can cope with the need for medical care during an emergency. Should additional human resources be needed, it is always better for them to come from another part of the country than from abroad;
- ◆ Other specialized personnel: Generally, national relief organizations have enough staff to meet the basic requirements of an emergency. Any need for specialized assistance should be handled directly through the relevant organizations, to prevent a rush of unneeded "experts";
- ◆ Field hospitals: These are not recommended; by the time they have been set up and are ready to operate, local health services and facilities will probably have been restored;
- ◆ Medical equipment, new or old: Medical equipment is rarely needed or, if necessary, it is generally highly specific, to be dealt with by asking specialized organizations, not by broadcasting a general appeal;
- ◆ Tents: New trends in disaster response discourage their use. Should they be needed, it is always better to exhaust the possibilities of local procurement, preventing the technical difficulties and cost of having them sent in from abroad.

It should be stressed that in very specific cases it might be necessary to request some material or aid of the kind listed above. However, these cases should be addressed by asking a specialized institution and providing all the specifications of the supplies needed. Such items should not be included in lists used for general appeals.

The best approach is to ask the national and international community only for those supplies and assistance that will be unquestionably useful as determined by an assessment of real needs.

Whenever possible, cash donations are preferable since they can be used to purchase supplies and services locally, saving the time and resources required for shipping and storing supplies.

Another key consideration is how supplies are sent. Guidelines for donors should take into account the following:

- ◆ Consignments should be sorted by product before they are dispatched. Donors must be asked not to mix different products in the same package;
- ◆ Consignments should be classified in advance, and packed according to standard categories (see section on Categories in Chapter 5);
- ◆ Consignments should be labeled and identified, ideally in the local language, or else in a language that can be easily understood or translated at the disaster site;
- ◆ Consignments should display the expiry dates of the products sent. Products with limited shelf life should not be sent if they will expire in less than one year or, in very special circumstances, six months at the shortest.

The task of making international and national donors aware of the need for appropriate donations requires a permanent information and education effort as part of each country's overall disaster preparedness strategy. The goal is to ensure that generosity goes beyond good intentions alone, and is of actual benefit to disaster victims.

Following Up on Offers of Assistance

Many governments and international organizations have become aware of the need for more targeted donations, and will not send any consignments until they have been notified of the needs that must be met. However, they might still offer assistance that could be useful later on, but not immediately.

When an offer of this sort is made, an answer should be sent immediately to the donor and a system must be in place to record such offers and follow up on them when they are finally needed.

This approach also allows some time for evaluation and consultation when the offer includes unusual supplies whose usefulness is not immediately apparent. In such cases, specialized national organizations should be consulted.

One of the most awkward diplomatic tasks is to refuse an offer of aid outright. Sometimes, after consultations have been made, local decision-makers may determine that the supplies offered would be useless, draining energy and resources away from the distribution of more effective assistance. Recipient countries should feel free to reject, with all due courtesy, such offers and to provide guidance to potential donors about the types of assistance that would be more appropriate in the circumstances.

In practice, every donation has a cost for the recipient since financial and human resources are required for storing the supplies, transporting them, and all too frequently discarding those that are in poor condition or are otherwise unusable.

Annex 4.1

International Organizations that Intervene in Emergencies⁷

Any country can be a potential donor of humanitarian aid to another nation affected by a disaster or emergency. Bilateral assistance, from government to government, is probably the most significant overall source of foreign assistance, whether it involves human resources, humanitarian supplies, or both.

In order to show the great variety of international organizations working in the field of humanitarian aid, this annex lists some of the best-known among them. The list does not in any way pretend to be comprehensive, and it leaves out many dedicated organizations with ample experience in providing emergency assistance.

1. United Nations Agencies

United Nations Development Program (UNDP)

The United Nations Development Program (UNDP) promotes and supports disaster preparedness activities in member countries. In disaster situations, the UNDP Country Office can help governments in areas such as channeling international assistance requests. The Country Office may also coordinate a Disaster Management Team (UN-DMT) comprising representatives of the various United Nations agencies, whose goal is to provide effective and coordinated assistance to governments in the wake of a disaster and during subsequent recovery and reconstruction efforts. Web site: <http://www.UNDP.org>

United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA), which in 1998 replaced the Department of Humanitarian Affairs, coordinates the response of the U.N. system to humanitarian emergencies. Its mission, in collaboration with other national and international actors, is to mobilize and coordinate effective humanitarian actions aimed at relieving human suffering in disasters and emergencies. An advocate for the rights of disaster victims and other affected groups, it also promotes prevention and preparedness, and encourages sustainable solutions to the problems posed by natural or manmade hazards. Web site: http://www.reliefweb.int/ocha_ol

⁷ More complete listings of disaster-related organizations can be found at <http://www.reliefweb.int>, <http://www.colorado.edu/hazards/>, and <http://www.crid.or.cr>.

United Nations Disaster Assessment and Coordination (UNDAC) teams are groups of professionals who can be convened by the United Nations under the coordination of OCHA, at the request of an affected country, to carry out rapid assessment of priority needs and support the national authorities and the United Nations Resident Coordinator in the coordination of international relief aid on the ground. These teams are appointed and funded by U.N. member governments and by OCHA, UNDP and operational humanitarian United Nations agencies such as WFP, UNICEF and WHO. Web site: <http://www.reliefweb.int/undac>

World Food Program (WFP)

The World Food Program (WFP) provides and coordinates food assistance and is frequently assigned the coordination of general logistics in large-scale emergencies. Its “Food for Work” program provides temporary livelihoods to the affected population during the rehabilitation and reconstruction stage. Web site: <http://www.wfp.org>

United Nations High Commissioner for Refugees (UNHCR)

The mission of the United Nations High Commissioner for Refugees (UNHCR) is to protect refugees and search for sustainable solutions to their problems. It coordinates all assistance to refugees. Web site: <http://www.unhcr.ch>

United Nations Children's Fund (UNICEF)

The main concerns of the United Nations Children's Fund (UNICEF) are the health, education and welfare of women and children in developing countries. It has mechanisms in place to cover their needs during emergencies, including food, water, sanitation, health care, and social services. Web site: <http://www.UNICEF.org>

World Health Organization (WHO)

The World Health Organization (WHO) is in charge of coordinating international health action. The Pan American Health Organization (PAHO) and other regional WHO offices act as focal points for national health authorities and donors when disasters strike. WHO can provide technical cooperation aimed at assessing health needs, coordinating international health assistance, managing the stocks and distribution of supplies, carrying out epidemiological surveillance, establishing measures for disease control, assessing environmental health, managing health services, and estimating the costs of assistance projects. WHO also promotes the implementation and use of the SUMA system for humanitarian supply management. Web sites: <http://www.who.org> and <http://www.paho.org>

2. Intergovernmental Agencies

European Community Humanitarian Office (ECHO)

The European Community Humanitarian Office (ECHO) works in collaboration with nongovernmental organizations, specialized United Nations agencies, and other international organizations, providing food and other emergency assistance and helping refugees and displaced populations. It also invests in projects aimed at disaster prevention in high-risk regions. Web site: <http://www.europa.eu.int/comm/echo/>

Organization of American States (OAS)

The Organization of American States (OAS) is a regional body that supports member states by assessing their vulnerability to natural hazards and implementing measures to mitigate the impact of disasters. It provides technical assistance in development planning, the design of projects, and training. It also manages the Inter-American Fund for Assistance in Emergency Situations (FONDEM). Web site: <http://www.oas.org>

Caribbean Disaster and Emergency Response Agency (CDERA)

CDERA is a regional organization established by the Caribbean Community; based in Barbados, it has 16 member states. Its chief functions are coordinating the response to any disaster affecting member countries and contributing to disaster reduction. Web site: <http://www.cdera.org>

Coordination Center for the Prevention of Natural Disasters in Central America (CEPRENAC)

CEPRENAC is an official organization within the Central American Integration System (SICA). It works with national scientific and operations agencies to build local capacity for vulnerability reduction. Its objective is to promote disaster reduction in Central America through the exchange of experiences, technology and information, the joint analysis of common strategic problems, and channeling foreign cooperation. Web site: <http://www.ceprenec.org>

3. Nongovernmental Organizations

The International Federation of Red Cross and Red Crescent Societies (IFRC)

The IFRC is an international humanitarian organization bringing together national bodies from 175 countries. Its international secretariat is based in Geneva. It coordinates international humanitarian assistance

and intervenes in affected countries through its national societies or, should no national office exist, with the Federation's own staff. Its great experience and flexibility, and its considerable resources, make the IFRC the most useful nongovernmental source of cooperation and support for the health sector. Web site: <http://www.ifrc.org>

Médecins sans Frontières (MSF)

MSF is a European organization comprised of several independent national bodies (MSF Spain, MSF France, MSF Holland, etc.). Its interventions focus on medical assistance, but it also has great experience and capacity in logistics, water purification, sanitation, and the provision of temporary shelter. Web site: <http://www.msf.org>

Doctors of the World

Doctors of the World is a humanitarian medical NGO that intervenes in emergencies and carries out medium- and long-term development projects. Web site: <http://www.doctorsoftheworld.org/>

Cooperative for Assistance and Relief Everywhere (CARE)

CARE International is a confederation of 10 national agencies from North America, Europe, Japan and Australia. Headquartered in Belgium, it manages development and aid projects in 62 countries in Africa, Asia, Latin America and Eastern Europe. CARE USA, based in Atlanta, oversees CARE projects in Latin America and provides emergency assistance to communities affected by disasters. Web site: <http://www.care.org>

World Vision International

World Vision International is a Christian organization that intervenes in aid activities during disasters. It also provides development aid. Web site: <http://www.wvi.org>

Caritas Internationalis

Caritas Internationalis is an international confederation of 146 Roman Catholic agencies working in 194 countries and territories. It promotes, coordinates, and supports emergency aid and long-term rehabilitation activities. Web site: <http://www.caritas.org>

OXFAM

The Oxford Committee for Famine Relief (OXFAM), originally an English organization, is a network of 11 humanitarian groups from Australia, Belgium, Canada, Hong Kong, Ireland, the Netherlands, New Zealand, Spain, the United Kingdom and the United States. It provides funds and technical assistance for immediate and long-term aid in disaster situations. Web site: <http://www.oxfam.org>

Action Against Hunger

Action Against Hunger is a European organization that focuses on food security and distribution and supports projects to rehabilitate agriculture and food production. U.S. Web site: <http://www.aah-usa.org>. U.K. Web site: <http://www.aah-uk.org>

The Salvation Army

The Salvation Army intervenes in more than 100 countries, providing social, medical, educational and other types of community assistance. In disaster situations, national affiliates provide health assistance and emergency supplies. Web site: <http://www.salvationarmy.org>

World Council of Churches

The Council is a coordinating body representing over 330 Christian and Orthodox denominations from 120 countries and territories worldwide. It supports disaster relief efforts through its member churches in various countries. Web site: <http://www.wcc-coe.org/wcc/english.html>

Save the Children

Save the Children intervenes in long-term development projects. In emergency situations, it provides humanitarian supplies and rehabilitation and reconstruction assistance. Web site: <http://www.savethechildren.org/home.shtml>

International Red Cross Committee (ICRC)

The International Committee of the Red Cross (ICRC) is a humanitarian Swiss organization, strictly private and neutral, that is based in Geneva. It protects and helps the victims of armed conflicts or civil disturbances and monitors the application of international humanitarian law. Web site: <http://www.icrc.org/eng>

Voluntary Organizations in Cooperation in Emergencies (VOICE)

Voluntary Organizations in Cooperation in Emergencies (VOICE) is a network of European nongovernmental organizations that provide emergency and rehabilitation assistance and contribute to disaster preparedness and conflict prevention. VOICE often collaborates with ECHO (see above). Web site: <http://www.oneworld.org/voice>

Chapter 5

Key Characteristics of Emergency Supplies

What Are Emergency Supplies?

Humanitarian or emergency supplies are those goods, materials, and equipment used by organizations to provide relief in a disaster, particularly those required to meet the essential needs of the affected population. Such supplies cover an enormous spectrum, from food, drugs, and clothing to rescue equipment, electric generators, construction materials, and tools.

As noted earlier, these supplies come from many different places. Some are procured or channeled by organizations in response to specific needs on the ground; most, however, are the result of the spontaneous solidarity of the national and international community.

From the point of view of their origin, then, supplies can be of two kinds:

1. Those requested or acquired by organizations based on their intervention profiles—medical, economic, reconstructive—and on the needs of the affected population. Regardless of their relevance, they are generally managed by institutions that have asked for them, are aware of the contents of the shipments, and can assign a specific recipient for the aid.
2. Those supplies that are the result of the praiseworthy solidarity of the rest of the country or the world, but which do not necessarily meet the needs faced on the ground. They frequently do not have a specified recipient, and their management is the responsibility of national emergency authorities, who may have to start out by identifying the goods, their characteristics and condition; the authorities must also assign a use—if any—for the supplies, select the recipients, and coordinate delivery.

Categories

Based on the experience of many humanitarian organizations around the world and the thousands of emergencies they have faced, it is generally

possible to determine in advance which supplies are most likely to be needed. The World Health Organization (WHO), in consultation with other international organizations, has adopted a standard classification that places humanitarian supplies in 10 different categories.

This form of identification is particularly useful for the sorting and recording of supplies. The SUMA system employs these categories for managing the data on incoming supplies. (See Annex 8.1 at the end of Chapter 8.)

The categories are the following:

1. Medicines;
2. Water and environmental health;
3. Health supplies/Kits⁸;
4. Food;
5. Shelter/Electrical/Construction;
6. Logistics/Administration;
7. Personal needs/Education;
8. Human resources⁹;
9. Agriculture/Livestock;
10. Unclassified.

The "unclassified" category is used for those supplies that may have expired, cannot be identified due to lack of labeling or any other reason, are useless in the circumstances, have spoiled, or were packed too haphazardly (different types of supplies in the same bags or boxes) for them to be effectively classified during the critical stage of the emergency.

Every category is subdivided into subcategories, and the subcategories into items, as in the following example:

8 The "Medicines" category refers exclusively to pharmaceutical products. The "Health" category refers to those non-pharmaceutical supplies aimed at supporting health care activities; they include surgical instruments and materials, laboratory equipment, X-rays, and so on.

9 While "Human resources" are not considered supplies, it is useful to have a category to classify the expertise of volunteers or support personnel, particularly those from abroad, who offer assistance during an emergency.

Category	Water and environmental health
Subcategory	Water treatment
Item	Calcium hypochlorite

Human Resources

Obviously, the people who take part in relief activities should not be considered, nor classified as, supplies, but their participation in humanitarian operations entails a series of needs and services, from their transport and mobilization to their feeding, lodging and health care, which must be taken into account in logistics planning. The teams on the ground should be as self-sufficient as possible, so as not to place an added burden on the already diminished resources of the affected country or region.

The Standardization of Emergency Supplies

The United Nations Development Program's Inter-Agency Procurement Services Office (UNDP/IAPSO) has published a series of practical handbooks or catalogs on the availability, technical aspects, and use of standardized equipment and materials that can be used for disaster response by humanitarian organizations. The *Compendium of Generic Specifications*,¹⁰ contains information on emergency items for humanitarian relief such as the following:

- ▲ Telecommunications equipment;
- ▲ Shelter, housing, storage and kitchen equipment;
- ▲ Water supply and distribution equipment;
- ▲ Food;
- ▲ Hygiene and sanitation goods and equipment;
- ▲ Equipment for the handling of different materials;
- ▲ Electrical power supply equipment.

¹⁰ United Nations Development Program (UNDP), *Emergency Relief Items. Compendium of Generic Specifications*, Volume 1, New York: UNDP, 1995.

The *Compendium of Basic Specifications*,¹¹ deals specifically with:

- ▲ Medical supplies and equipment;
- ▲ A select set of essential drugs;
- ▲ Guidelines for donations of medicines.

The purpose of these catalogs is to facilitate the procurement of appropriate equipment and materials by organizations and donors from qualified suppliers in a timely fashion.

Another useful tool is the *Register of Emergency Stockpiles*, a worldwide listing of various organizations' emergency supply stockpiles in various regions.¹²

Hazardous Materials

Hazardous materials are those that, though useful, have a chemical composition that might be dangerous to people and their surroundings.

Fuels, chlorinated products, cooking gas, oxygen, or laboratory reagents, which are used in everyday circumstances and are also needed during an emergency, require careful handling to prevent fires, explosions, poisoning, pollution, and injuries.

Hazardous materials fall into nine categories, based on their predominant risk (radioactive, explosive, corrosive, flammable, poisonous, etc.) and, within these categories, according to other characteristics of the substances themselves and their chemical reactions. (See Annex 5.1.)

International regulations set standards for labeling these products according to their characteristics and potential effects, the way they must be transported, and the precautions that must be taken when they are handled or stored.

Those who participate in emergency supply transport and storage must have access to these guidelines, which also describe the composition of the products, their mutual incompatibilities, and procedures to follow in

11 United Nations Development Program (UNDP), *Emergency Relief Items. Compendium of Generic Specifications*, Volume 2, New York: UNDP, 1996.

12 For more information, please visit <http://www.iapso.org>, or contact: registry.iapso@iapso.org.

the event of an accident. Knowledge of these standards ensures the proper handling of hazardous materials.

One such set of guidelines, the *2000 Emergency Response Guidebook* of the Canadian Transport Emergency Center (CANUTEC), can be found online at: http://www.tc.gc.ca/canutec/erg_gmu/erg2000_menu.htm.

Another useful link, in Spanish, is: <http://www.profepa.gob.mx/saa/audita68.htm>. It shows a listing of hazardous material emergency response centers with their Web addresses, and links to other sites of interest.

Specialized Materials¹³

Frequently, a need arises for equipment or materials so specialized that no one can expect their arrival as part of the general donations. Instead, disaster response agencies must acquire them on their own or rely on international organizations that might have them available or can offer guidance on where and how to procure them.

Organizations such as OXFAM, Médecins sans Frontières, the World Health Organization (WHO), or the Office of U.S. Foreign Disaster Assistance of the U.S. Agency for International Development (OFDA/USAID), for instance, have assembled kits for water treatment, storage and distribution, or the building of shelters. Other kits focus on cholera prevention and treatment, lighting and power generation, pharmaceuticals, or essential medical equipment.

These kits are generally donated or lent to relief agencies. The contents and characteristics of existing kits are described in detail in the catalogs of the respective organizations.

Specialized equipment is often very costly. It is therefore essential to be certain that a real need exists for such supplies before asking for them. It is also important to have a clear picture of what is required (the specifications), so that donors have the information necessary to respond effectively.




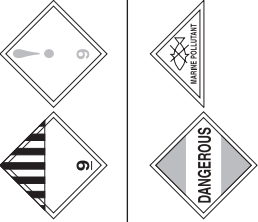
13 See also the section on "Standardization of Emergency Supplies," earlier in this chapter.

Annex 5.1

Classification and transport placards for hazardous materials

<p>Class 1: Explosives</p> <ol style="list-style-type: none"> 1.1. Explosives that have a mass explosion hazard. 1.2. Explosives that have a projection hazard. 1.3. Explosives that have a fire hazard. 1.4. Explosives that present a minor blast hazard. 1.5. Blasting agents. Very insensitive explosives. 1.6. Explosives. Extremely insensitive detonating devices. 	
<p>Class 2: Compressed Gases</p> <ol style="list-style-type: none"> 2.1. Flammable gases. 2.1. Non-flammable gases. 2.3. Poisonous gases. 2.4. Corrosive gases (Canada). 	
<p>Class 3: Flammable liquids</p> <ol style="list-style-type: none"> 3.1. Flashpoint below -18°C. 3.2. Flashpoint between -18° and 23°C. 3.3. Flashpoint higher than 23° and lower than 61°C 	
<p>Class 4: Oxidizers and organic peroxides</p> <ol style="list-style-type: none"> 5.1. Oxidizers. 5.2. Organic peroxides. 	

Classification and transport placards for hazardous materials (cont.)

<p>Class 6: Poisonous and toxic materials</p> <p>6.1. Poisonous materials.</p> <p>6.2. Toxic materials.</p>	
<p>Class 7: Radioactive materials</p>	
<p>Class 8: Corrosive materials</p> <p>Acids and bases</p>	
<p>Class 9: Miscellaneous Hazardous Materials</p> <p>9.1. Miscellaneous hazardous merchandise (CANADA)</p> <p>9.2. Environmentally hazardous materials (CANADA)</p> <p>9.3. Hazardous waste (CANADA)</p> <p>Other hazardous materials transportation placards</p>	

Source: Departamento de Protección Integral, Refinadora Costarricense de Petróleo (RECOPE), Costa Rica.

Chapter 6

*Procurement*¹⁴

Sources and Procurement of Emergency Supplies¹⁵

The supplies required to respond to an emergency come from different sources, whether disaster relief organizations acquire them directly, receive them as donations from the national and international community, or get them as loans.

Normally, all these procurement methods will come into play in an emergency, and each has its advantages and disadvantages. Not only that, but we are seldom in a position to choose the most appropriate one in the circumstances. Whenever possible, however, the decision should be based on technical criteria and an unbiased assessment of the needs of the affected population.

Purchasing

Purchasing can be local or external. To choose one or the other, certain issues should be borne in mind.

Local purchasing: The merits of local purchasing depend on several criteria, such as the local availability of the products needed, their quality and quantity, and how urgently they are needed. In any case, a cost/benefit analysis (including the key question of quality) must be made, and this may call for technical advice.

Bulk purchases: Buying a specific product in large quantities may eventually have an adverse effect on the local market, by upsetting the equilibrium of supply and demand and artificially raising prices. On the other hand, sensitive local purchasing can promote the economic recovery of the affected region.

14 This chapter has benefited from contributions by Médecins sans Frontières (MSF) and Gerard Gómez, of the MSF Regional Emergency Response Office for Latin America and the Caribbean.

15 See also the section on requesting international assistance in Chapter 4.

Storage: Since space limitations are common when storing emergency supplies, it is sometimes possible to negotiate with local vendors so that the purchased goods can remain in their warehouses until needed by the end users.

External purchases: Frequently, local availability of specific items is low or unpredictable, or the quantity and quality of locally available products is not good enough to meet needs efficiently. In these cases, procurement from abroad or from another part of the country is an option, as long as delivery times are acceptable.

Donations

Donations may make up the bulk of the supplies received and handled during an emergency. When they comprise items that have not been requested, are not a priority, or do not meet the needs generated by the emergency, they often complicate unnecessarily the logistics of relief operations.

However, donations are still very important. When appropriate, they can not only be of value to the affected population, but also provide budgetary relief for the often cash-strapped disaster relief organizations. They also promote and strengthen solidarity. (See also Chapter 12 on standards and guidelines for requesting and donating drugs and medical equipment.)

Loans

Some people, organizations, and private firms lend equipment or their services and expertise during a particular phase of the emergency. Although many of these loans are spontaneous, it is important to identify potential lenders before disaster strikes and, if possible, establish agreements for these services during the planning stage.

Table 6.1 shows some of the advantages and disadvantages of the various forms of supply procurement.

Table 6.1 – Pros and cons of different kinds of acquisition.

Form of acquisition	Advantages	Disadvantages
Local purchase	<ul style="list-style-type: none"> ◆ Prompt delivery ◆ Lower transport costs ◆ Support for local economy 	<ul style="list-style-type: none"> ◆ Not always available in the quantity and quality needed ◆ Can generate competition between organizations for the purchase of a product ◆ Can cause shortages in the local market
Imports	<ul style="list-style-type: none"> ◆ Possible to obtain better quality, larger quantities ◆ Can order according to specifications 	<ul style="list-style-type: none"> ◆ Longer delivery time ◆ Higher transportation costs ◆ Do not support the local economy
Donations	<ul style="list-style-type: none"> ◆ Free or low-cost (bear in mind: every donation has a cost) ◆ Promotes national and international solidarity 	<ul style="list-style-type: none"> ◆ Frequently, items have not been asked for ◆ Supplies sent may not meet local needs ◆ If unusable, their handling leads to a waste of time and resources ◆ It is hard to reject them if they are useless
Loans	<ul style="list-style-type: none"> ◆ Sometimes, it is equipment or material that is hard to purchase ◆ Lowers operation costs 	<ul style="list-style-type: none"> ◆ Depends on how long the items can be on loan ◆ The loaned items must be cared for and must be replaced if damaged ◆ It is hard to demand responsibility, quality, or the meeting of deadlines and other commitments

Requisitions

The clearer and more specific our requests, the sooner the needed supplies will arrive and the more useful they will be. Misunderstandings can crop up when requesting emergency supplies, particularly when it comes to technical aspects. The following factors should be taken into consideration:

- ◆ *Requisition forms:* Standardized documents should be used to request emergency supplies. The forms should be numbered, dated, and include carbon copies to help follow up on the response to each request. (See Annex 6.1.)
- ◆ *Assignment of responsibility:* Only one clearly identified individual should be assigned responsibility for making requisitions.
- ◆ *Clarity:* Requisitions should be clearly phrased, including all the details needed to identify the supplies wanted. The use of catalogs or any other kind of illustration, including drawings if needed, is always recommended to eliminate possible ambiguities. Once again, technical advice is called for when requesting supplies, especially in the case of unfamiliar products.
- ◆ *Priority:* Every requisition should indicate clearly the priority of the supplies depending on identified needs, the volume of distribution, and stock control.
- ◆ *Frequency of requests:* It depends on the needs of the affected population, the volume to be distributed, and current stocks. However, one should not wait until the last minute before requesting new supplies, since a new shipment will take time to arrange, and to reach its destination.
- ◆ *Medicines and hazardous materials:* It is necessary to know the national laws and regulations regarding the entry and handling of these goods, including the procedures to obtain authorization for their import.
- ◆ *Follow-up on requisition orders:* When keeping track of requested supplies in transit, the number and date of the requisition must be mentioned. (See Annex 6.1.)

Sending Supplies

One way of easing the task of those who take delivery of emergency supplies in the field, sparing them additional complications, is to pack the supplies correctly following standardized procedures.

Another key principle of effective assistance is to send only those supplies that have been actually requested. It may occur that some product is likely to be needed, but has not been requested. In those cases, the best approach is to consult those responsible for operations in the field or suggest that the item be requested.

A few basic measures can make a big difference in how supplies are mobilized and received. The following section will mention a few of them.

Packing and Labeling the Loads

Ideally, the supplies to be sent should first be classified and sorted. Items of different kinds—say, garments and drugs—should never be sent in the same package. In fact, to the extent possible, items should be packed separately.

- ◆ In order to facilitate identifying the contents of the packages, they should be marked using the symbols and colors system that many international organizations currently use to identify the various categories and items (see Annex 6.2):
 - ▲ Green for drugs and medical equipment;
 - ▲ Red for food;
 - ▲ Blue for clothing and household items;
 - ▲ Yellow for equipment and tools.
- ◆ No supplies should ever be sent if there are any doubts about their quality or condition. Similarly, short-dated products should not be sent unless it is known that they will be distributed and used promptly.
- ◆ Each package should be clearly labeled with the following information:
 - ▲ Contents (generic);
 - ▲ Destination;
 - ▲ Name, address, and telephone number of the recipient;

- ▲ Name, address, and telephone number of the sender;
- ▲ Any specific characteristic or care that must be taken with the package ("fragile", "needs refrigeration", "hazardous material").
- ◆ Labeling must be done with indelible ink; labels should not fall off easily.
- ◆ Packages belonging to the same lot or batch should be numbered "x of y", where y is the total number of packages in the lot. For instance, in a lot of 100 packages, the first should be labeled 1/100, the second 2/100, all the way up to 100/100. This makes it easier to verify and follow up on the quantity of packages that arrive at a reception center.
- ◆ When packing a consignment, it is important to bear in mind the kind of handling the packages will undergo. The durability of the packing material is important.
- ◆ Depending on the means of transport (for instance, by air), efforts should be made to reduce "added weight", i.e., the weight of the packing material.
- ◆ One of the packages should include a copy of the packing list and be labeled as the one carrying the list. The label should be placed inside a plastic envelope and attached to the exterior of the package to prevent it from getting wet or being torn.

Volume, Weight, and Size of the Packages

It is rare for reception points on the ground to have loading and offloading machinery such as forklift trucks. In principle, the size, weight, and shape of the packages should be such that each one can be handled by one individual without mechanical aid, as follows:

- ◆ **Weight:** The packages should weigh between 25 kg and 50 kg;
- ◆ **Volume:** The volume should be such that it can be handled manually. Sometimes the weight may be all right but the size of the package makes it hard to handle;
- ◆ **Shape:** Packages should have the most symmetrical shape possible,

to make it easier to hold and lift them. Oddly shaped packages or shapeless packages should be discouraged.

Consignment Notice

Reception centers have to prepare for the arrival of new loads. They need to find storage space, arrange for transport if a transshipment needs to be made, and make sure there are enough employees or volunteers present to offload the shipment. It is therefore essential for officials at the point of origin to provide the reception center with as much advance information as possible about the consignment and the means of transportation to be used. The following information should be included.

- ◆ Regarding the consignment:
 - ▲ Type of goods or equipment included in the consignment;
 - ▲ Quantity (number of packages, boxes, etc.);
 - ▲ Weight and volume;
 - ▲ Special care required (e.g., refrigeration);
 - ▲ Requisition number (if any).
- ◆ About the means of transport:
 - ▲ Type and characteristics of the transport;
 - ▲ Shipping company (if any);
 - ▲ Person in charge of the transport.
- ◆ Regarding the itinerary:
 - ▲ Estimated time of departure and likely route;
 - ▲ Estimated time of arrival (the reception point should be notified of any change as promptly as possible);
 - ▲ Exact destination (in an area where there might be several reception points).
- ◆ Any other information considered relevant to facilitate reception.

Consignment Documents

◆ Local or national consignments

Normally, local shipments require less documentation than international consignments. They must be accompanied by a cargo or load manifest describing the consignment and any other information about the supplies sent (see Annex 6.3), as well as by the packing list mentioned earlier.

◆ International consignments

In these cases, the shipment travels with a waybill or bill of lading and its respective load manifest, prepared by the carrier. It should be noted that the manifest prepared by the carrier on its own stationery is for the use of the company itself and customs purposes. It is advisable for the organization that is sending the shipment to include its own manifest as well as a packing list outlining the contents of the load by package, to facilitate the internal controls of the organization. (See Annex 6.3.)

Control and Monitoring

Shipping operations, like any other link in the logistics chain, call for control and monitoring procedures that can track the emergency supplies from the time they are shipped until they arrive at their final destination. These controls help disaster managers, among other things, to:

1. Know the route taken by the supplies and thus be able to identify, for instance, where a consignment that has not reached its destination might have been detained;
2. Identify all the people who have been responsible for the shipment, from its point of origin to its final destination;
3. Have the necessary documents to keep track of the shipping and reception of the supplies.

In the case of consignments, these functions are made possible by the load manifest, which must be printed in standardized forms that include, as a minimum, the following information (see also Annex 6.3):

- ◆ Consignment number (consecutive);
- ◆ Date of shipment;
- ◆ Place of origin of the shipment;
- ◆ Means of transport;
- ◆ Name and signature of people responsible for the consignment, i.e. the sender, the carrier, and the recipient;
- ◆ Description of the load;
- ◆ Space for remarks.

These forms should also have the following characteristics:

- ◆ Be printed and bound in blocks;
- ◆ Be consecutively numbered;
- ◆ Provide copies for everyone involved in the process: sender, carrier, and recipient.

Cargo Insurance

When a shipment is sent through an authorized carrier, the insurance is generally part of the transport contract (see the section on “Incoterms” in chapter 7). Otherwise, it is necessary to find out what types of shipping insurance are available and what it is they cover. Clearly, one should not wait until the middle of an emergency to seek out this information. On the contrary, it is part of the preparations required for correct emergency logistical planning.

Annex 6.1













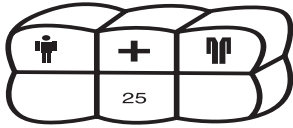
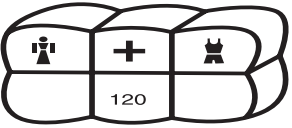
Sample – Consignment Requisition Form

Request for Supplies		
Request 00/303/LIB-3		Place and date:
Deliver at:	Priority	
	- URGENT	
	- Normal	
	Explain if necessary:	
Authorized Operator (name and signature):		
Requested Item	Characteristics/Specifications	Quantity
REMARKS:		

Annex 6.2

Selected symbols for supply identification (used by the International Federation of Red Cross and Red Crescent Societies)

Basic symbols

 <p>Men 15 years and older</p>	 <p>Women 15 years and older</p>	 <p>Boys 4-14 years</p>	 <p>Girls 4-14 years</p>	 <p>Infants 0-4 years</p>	
 <p>Outerwear— men, women, and children</p>	 <p>Suits, jackets, slacks, shirts— men, women, and children</p>	 <p>Dresses, skirts and bouses— women</p>	 <p>Sweaters, jackets—men</p>	 <p>Shoes—men, women, chil- dren</p>	 <p>Undergar- ments, sleep- wear, socks— men, women, and children</p>
<p>Labeling of bales</p>			<p>KEEP DRY</p> <p>Blankets </p>		
 <p>Symbols stamped on this bale signify that it contains 25 overcoats for men.</p>			 <p>These symbols represent 120 undergarments for women.</p>		

NOTE: These can be made with stencils, preferably metal. To label bales, they should be painted with aerosol paints, using the stencils as patterns.

Annex 6.3

Sample Shipping Manifest

0001			Shipping Manifest		
Shipment N°		Date of shipment		Requisition N°	
Consignee:			Origin of shipment:		
Exact delivery address:					
Means of transport:			Agent/responsible party:		
Quantity	Type of packaging	Detailed list of contents			
Number of pieces			Total weight (kg)		
Special instructions (handling, transport, storage)					
Remarks					
Dispatch: name, company, date		Transport: name, company, date		Recipient: name, company, date	