



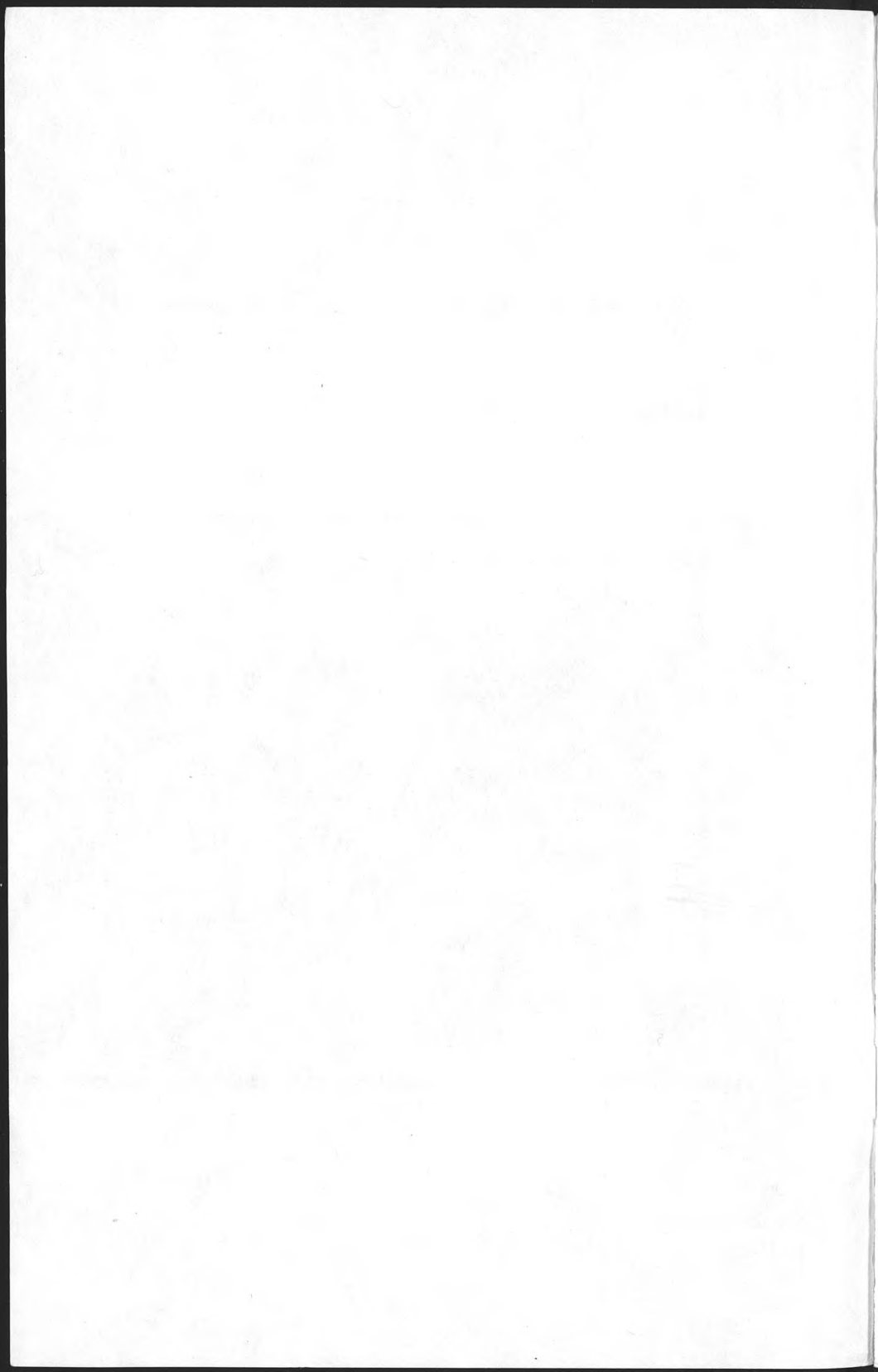
UNHCR

Emergency Management Training Programme
Video Number 10

Logistics



Disaster
Management Center



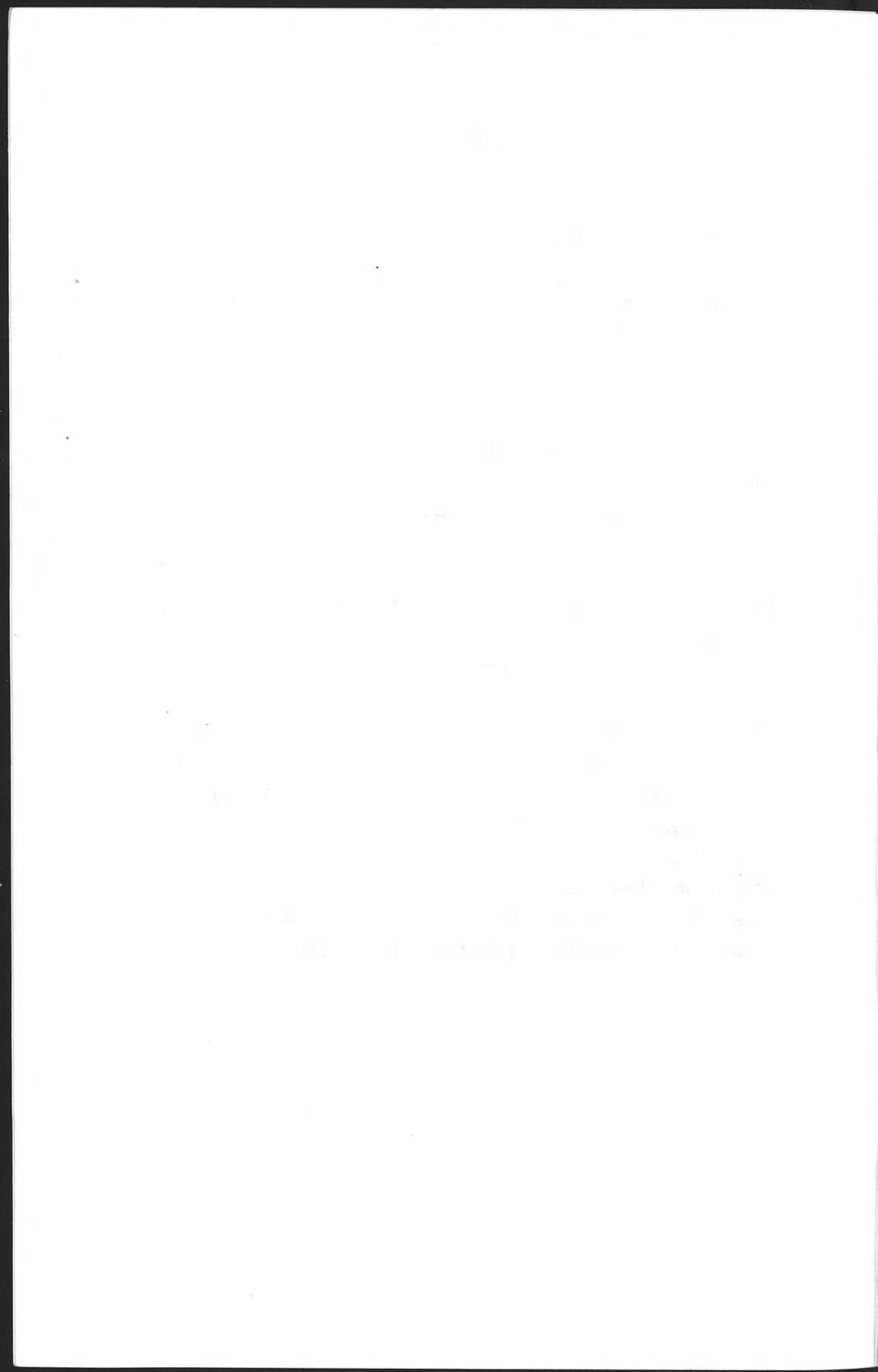
FOREWORD

This booklet is a companion guide to the video in this package. The video is from a series of presentations made at one of the UNHCR Emergency Management Training Programmes. The presentations were made before a classroom audience and edited into this format.

Each video is an introduction to the key issues of the topic. They are designed to be useful in the field as a quick source of information during emergencies, as a supplement to training programmes and as a review of the topic for experienced professionals.

Each video represents only a small part of the information that a refugee relief manager needs in emergencies. The viewer will benefit from using several of the videos from this series.

This booklet supplements the video and functions as a Viewer's Guide. Most Guides are in two parts. The first part gives an outline of the key words and phrases in the presentations, many of which frequently appear on screen. This material assists the viewer to follow the presentation and to make quick reviews during the video. The second part of most study guides is a "Presentation Summary". This is intended to be useful as a review of the material and a reference to the topic.



LOGISTICS

By

FREDERICK C. CUNY
INTERTECT

DEFINITIONS

Logistics:

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

Commodities

Transport

IMPORTANCE OF LOGISTICS

Lifeline Of A Relief Operation

Most Expensive Area

Most Problematic Area

SCOPE OF LOGISTICS

Food

Non-Food Items

Medicines And Medical Equipment

People

PRIMARY COMPONENTS (THE HARDWARE):

Warehouses

Transport

Special Facilities

SECONDARY COMPONENTS (THE SOFTWARE):

Control System

Procurement

-monitoring

-traffic director

Distribution System

WHO CONTROLS LOGISTICS

Procurement/Supplier

Consignee And Traffic Director

Camp Administrator Or Agency

RECORD-KEEPING AND CONTROLS

Waybills

Stock Controls & Warehouse Records

Ration Cards

Call Forwards

Requisitions

Purchase Orders

THE HARDWARE SYSTEM

Warehouses

- space
- protection
- control

Transport

- shipments
- carriers
- transport control systems

Special Facilities

- milling facilities
- fuel depots
- cold storage
- cold chain for medicines

PROCUREMENT SYSTEM

Principles Of Procurement

- respond to field
- center in the field

MONITORING SYSTEM

Requisitions
Warehouse Records
Call Forwards
People

TRAFFIC DIRECTOR

Controls Procurement
Controls Distribution
Monitors Warehouses
Directs Allocations
Plans Distribution System

DISTRIBUTION SYSTEM IN CAMP

By Large Block
By Individual
Combination
Primary Controls
 -ration card
 -camp registration

LOGISTICS CONCEPTS

Contingency Planning
Buffer Stocks
Transit Time
Simplification
Consolidation Of Facilities
Unified Logistics System
Redundancy In Transport
Captive Contractors
Defining Area Of Operation
Standardizing Equipment
Small Shipments

DILEMMAS OF A LOGISTICS OFFICER

Local Purchase Or Import
When To Transport By Air
Rail vs. Road

IMPLEMENTATION: LOGISTICS STAFF

Traffic Director

Procurement Coordinator

Transport Coordinator

Forward Logistics Officer

Inventory Control Officers

Procurement Officer

Maintenance Officers

CRITICAL EQUIPMENT FOR RELIEF OPERATION

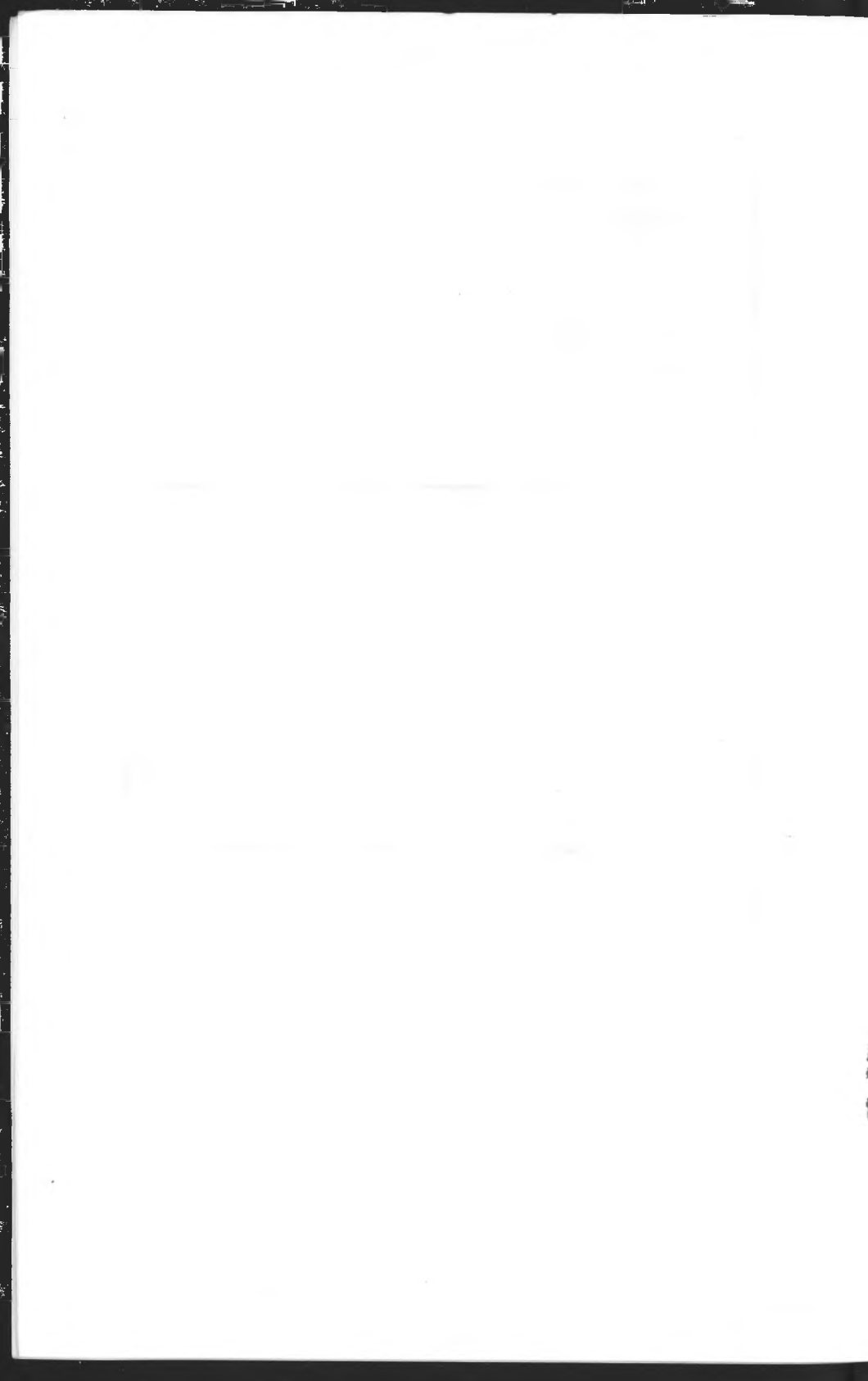
Telecommunications

Forms

Forklifts

Pallets

Vehicles And Spare Parts



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The purpose of this presentation is to:

1. describe the conceptual framework;
2. identify principles of organization; and
3. describe general aspects of a logistics system.

INTRODUCTION

Logistics is not a complicated activity, but is one that is seldom implemented successfully, in part because there are too few trained logisticians working in the field. The biggest problem in logistics, however, is selecting the correct agency to operate the system. Often, donors control logistics. This typically results in setting up an international logistics system (that may not otherwise be necessary) because international donors want to give commodities rather than the cash needed to procure items locally.

DEFINITIONS

The ILO definition of logistics is:

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

Logistics should be conceived as a linear system, i.e., a flow of supplies from point to point. Another way to consider logistics is as a system of supply, where something is flowing in one direction (commodities) and something else (paperwork) is flowing back in the other direction. For example, supplies such as food move down the system while requisitions and reports flow back in the opposite direction.

THE IMPORTANCE OF LOGISTICS

Logistics is the lifeline of a relief operation; people are dependent upon food and other supplies in the system. Logistics is also usually the most expensive part of an operation. For example, a truck that can move across unpaved roads costs approximately 50,000 U.S. dollars; its trailer costs \$10,000 - \$15,000 or more. Therefore, a 100-truck fleet with spares costs approximately \$10 million. (This amount does not include fuel, maintenance or insurance.)

Because it is so expensive, logistics is the most problematic part of a relief operation. It is the most subject to corruption, especially when there are competing demands for food, fuel and other relief supplies. Another problem is insufficient trained logisticians. Logistics may be the most complex aspect of a relief operation because of all the different parties involved.

SCOPE OF LOGISTICS

The primary function of logistics operations is moving food. Additional activities include movement of non-food items such as household supplies, medicines and medical equipment, and the movement of people from one site to another.

LOGISTICS SYSTEMS

Logistics is a set of interrelated systems. These include:

1. Hardware consisting of warehouses and other storage facilities; a transport network of trucks, planes, ships and/or other carriers; and special facilities such as fuel-depots, garages, milling facilities, cold storage for perishables, and a cold chain for medicines.
2. Recordkeeping system (the software) consisting of waybills, call forwards, requisitions, etc., which are used to monitor the operation;
3. A control system consisting of persons carrying out checks and audits of the commodities in the system and controlling distribution of the commodities in the refugee camps or settlements.

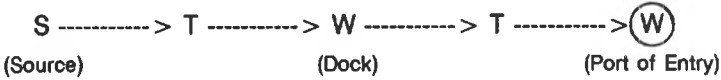
CONCEPTUAL MODEL OF A LOGISTICS SYSTEM

The following is a conceptual model of a typical logistics system. It starts at the source of the supplies (S, the supplier) and ends at the consumer's destination (R, the refugees). The movement of supplies is carried out through a series of movements (transport) and intermediate stops at warehouses. These can be represented diagrammatically by the drawing below:

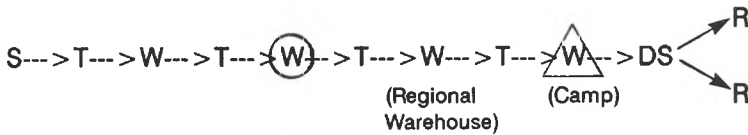


Supplies are shipped from the supplier by truck or rail to a warehouse on the dock at the port of shipment, then

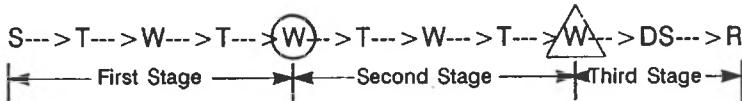
transported by ship, or in some cases plane, to another warehouse at the port of entry in the country of asylum.



At the port of entry the commodities are cleared and then transported again to another (regional) warehouse and from there to a warehouse in the refugee camp. From the warehouse in the refugee camp, the commodities go into the distribution system and directly to the refugees.



Conceptually, logistics can be broken into three stages. The first stage is from supplier to the port of entry in the country of asylum. (Note: Insurance does not extend beyond the port of entry. For this reason, in most cases the supplier will not accept responsibility beyond the acceptance of the commodity at the port of entry.)



Once the commodities have been cleared, a relief agency usually assumes responsibility for the commodities and ships them to the refugee camp (in most cases, through an intermediate

warehouse in the vicinity or region of the refugee camps). This is known as the second stage of the logistics system. Most of the effort (and problems) occur during the second stage.

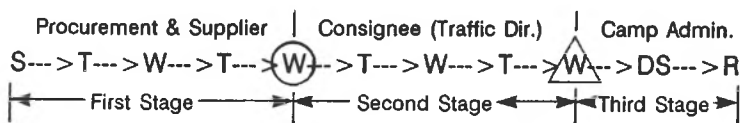
The third stage of logistics is the distribution of supplies inside the camp directly to the refugees.

1. Control Responsibilities

Responsibility for controlling logistics in the first stage lies with the purchasing agent (in UNHCR, the procurement section). Control begins with the specifications of the order. The supplier is responsible for meeting the specifications, shipping the commodity, and delivering it in good shape to the port of entry.

In the second stage, responsibility for control lies with the consignee (the relief agency) and specifically a person known as the traffic director. The traffic director controls the delivery schedules, assignment of supplies, and decisions as to when to ship from the port of entry to intermediate warehouses and/or refugee camps. The traffic director is usually the chief logistician and, in some situations, may be the local procurement officer.

In the third stage -- distribution in the refugee camp -- the camp administrator (or in the case of scattered sites, the agency in charge of distribution) provides the controls.



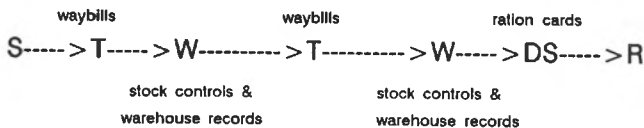
So far, we have described a full-scale international logistics system. There is, however, a way to significantly reduce and simplify logistics. This is by local procurement. With local procurement, you eliminate all of the first stage and most of the second as shown in the diagram below. Thus, relief agencies can concentrate on in-camp distribution. It is usually possible to contract with local suppliers to deliver supplies directly to the refugee camps.



2. Commodity Controls

The control over commodities in the logistics systems consists of a series of documents. As supplies go down the system from the supplier to the destination, the documents include:

- Waybills, (the shipping documents) which are used to control the commodity during transport;
- Stock cards and warehouse records (the paperwork that controls the warehouse); and
- Ration cards, which are the primary control in the distribution system.



Coming up the pipeline is the paperwork which controls the flow of the commodities and the rate at which supplies move down the system. These are:

- Call forwards, the documents that are issued for supplies already in the system;
- Requisitions, which issue a call for supplies that need to be ordered or sent from a buffer stock further up the system; and
- Purchase orders or contracts, which are issued by the procurement officers to the suppliers.

3. Logistics Coordination

The most important person in the logistics operation is the traffic director. The responsibilities of the traffic director include:

- a. controlling procurement and distribution;
- b. controlling the transport, i.e., controlling allocation of trucks and where they go;
- c. monitoring the warehouses;
- d. directing allocations of supplies to the intermediate warehouses and from there on to the camp; and
- e. planning the distribution system in cooperation with the camp administrators.

The traffic director must be based in the field, have adequate transport to be able to move up and down the system from the refugee camp to the port of entry, and be

able to control the fuel allocation for the vehicles in the logistics system. Ideally, the traffic director is an experienced logistician from an agency that has extensive experience in moving large quantities of supplies and is thoroughly familiar with priorities in a relief operation.

The traffic director should be the focal point for coordination in a logistics system.

LOGISTICS CONCEPTS

1. It is important to use a contingency planning formula or some other basis of contingency planning to estimate future needs.
2. Always have adequate buffer stocks, enough supplies on hand, to cover the time when logistics operations are not able to keep up with demand and unanticipated emergencies. Plan for an oversupply of 20-50% in an emergency.
3. An important objective of a logistics operation is to reduce transit time.
4. Simplify the system; the objective is to reduce the number of stops and transfers in the system. This speeds up the operation and reduces theft. Even if simplification increases operational costs, it will in the end reduce total costs.
5. Consolidate facilities to avoid unnecessary loading and unloading or extra staffing.
6. Unify the logistics system; where there are many organizations ordering and distributing food in a large operation, unify purchasing and shipping procedures.

7. Create redundancy in transport; if the operation depends on a railway system, for example, the loss of one bridge can halt an entire operation. It is necessary to have alternative methods to deliver supplies, i.e., a back-up system.
8. Define the area of operation; the UNHCR Branch Office is likely to be in the capital but the operation is likely to be remote. Therefore, the traffic director must be in the area of operations, i.e., where the key commodities are located. The area of operation generally extends from the port of entry to the refugee camps including all the communications and transport facilities inside that area.
9. Standardize equipment, especially trucks. This is difficult when a donor wants to give you trucks from their own country, but it is extremely important to standardize vehicles.
10. Make small, manageable shipments to the camps. Shipments should be of a size that can be controlled and not consumed by the refugees too rapidly.

IMPLEMENTATION

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

Critical equipment for a relief logistics system includes: telecommunications; control forms (these should be ready before an operation starts); forklifts (special forklifts are necessary to

unload planes); pallets to store and stack supplies; and vehicles suited for the environment with a good supply of spare parts.

RULES OF THUMB FOR LOGISTICS OPERATIONS

1. Use trucks for distances under 500 km., rail for longer distances.
2. Don't build roads for food supplies; instead build up buffer stocks. (It should only be necessary to build roads for use by water tankers.)
3. Mill grains in the camps. This will prolong the life of the grain and will eliminate the need for a complex unloading, bagging and reloading operation farther up the logistics chain.
4. The need to transport supplies by air will be in the early stages of an operation, not later on.
5. If possible, buy bulk food from overseas and supplemental food from internal sources (if fresh foods of good quality are available).
6. In Africa it will generally be necessary to import foods for massive relief operations. In the rest of the world you can generally buy food locally.

Videos and Viewers' Guides produced by:
Disaster Management Center
University of Wisconsin
432 North Lake Street
Madison, WI, 53706, U.S.A.

