2. TOOLS

2.14. Logistics

From UN Disaster Management Training Programme, DHA. 94.6
2.14. Logistics

Overhead Transparencies

2.14.1. Learning Objectives
2.14.2. What is a Relief Logistics System?
2.14.3. Commodities and Means of Transport
2.14.4. The Operating Environment
2.14.5. Planning a Logistics Programme
2.14.6. International Involvement
2.14.7. UN and Other Agencies in Logistics Assistance
2.14.9. Typical Logistics System
2.14.10. Facilities and Equipment
2.14.11. Operational and Support Functions
2.14.13. Unitary Structures
2.14.15. Planning for Emergency Logistics
2.14.16. Analysing Infrastructure Vulnerability
2.14.17. Strategic Resources
2.14.18. Strengthening Local Infrastructure and Institutions
2.14.19. External Logistics Resources
2.14.20. Information Systems
2.14.22. Controlling and Monitoring
2.14.25. Relief and Recovery Capacity
2.14. Logistics
Trainers' Guide

Objective:
To introduce participants to basic concepts of logistics. (Knowledge)

Key-message:
Appropriateness, good conditions, sufficient quantities, right place and right time.
Logistic systems can be seen as a chain: if one link is missing, the system will not work.

2.14.1. Learning Objectives
Compare the participants' learning objectives with the ones on the overhead.

2.14.2. What is a Relief Logistics System?
Present and discuss. The goal of a logistic system and the activities that a logistics operation may entail. Ask the audience for examples of logistics operations they are familiar with and describe some aspects. Appropriateness, good conditions, sufficient quantities, right place and right time.

2.14.3. Commodities and Means of Transport
Present and discuss. Relief goods must be limited and prioritised. Moving bulk relief commodities is different from moving people or from longer term supply programmes. List and ask for examples of logistics operations, the types of disasters addressed and the commodities transported. Planning for transporting commodities and for moving people varies. Nonetheless, they have something in common, such as the need for a systematic and professional approach.

2.14.4. The Operating Environment
Present and discuss. Various aspects of the operating environment need to be considered when planning a relief logistics operation. Start with capacity or infrastructure. Elicit a list of points from the audience and compare it to the one on the overhead.

2.14.5. Planning a Logistics Programme
Present and discuss. The essentials of an operation plan for logistics. How does this fit into a larger emergency management plan? Display or pass around emergency management plans, logistics operations plans or field manuals. Many
NGOs have manuals, which detail information and control systems and other aspects of logistics.

2.14.6. International Involvement
   Present and ask questions: When is international management of a relief logistics system necessary? What is the role of international agencies in relation to the national government in the management of logistics?

2.14.7. UN and Other Agencies in Logistics Assistance
   Present and discuss. The roles of the various UN Agencies: how do they differ, where do they overlap? Ask the audience to mention agencies not listed on the overhead and to describe others that they are familiar with.

   Present and explain. The concept of a supply chain is applicable to all relief programs. Explain the difference between the long haul and forward supply divisions (short haul) of the supply chain.

2.14.9. Typical Logistics System
   Present the diagram. This is only a scheme, not a representation of a real operation. Divide the participants into groups and ask them to make a diagram describing a real (present or past) operation. If nobody is familiar with a real situation, ask to design an ideal system incorporating realities of their own region.

2.14.10. Facilities and Equipment
   Ask for examples of both large and small-scale relief logistics operations and the extent of the facilities needed to manage them. Have some examples ready to fill in the discussion. Use the overhead to check that all items have been mentioned.

2.14.11. Operational and Support Functions
   Present and discuss. Do all of these functions need to be covered regardless of the size of the operation? What are the repercussions of neglecting any aspect? Can the participants think of any functions not mentioned?

   Present and discuss. There are many types of structures for logistics operations.
What structures do the local or regional governments offer for a relief logistics operation? What problems can arise from separating the management of the general national transport network from the emergency relief logistics network?

2.14.13. Unitary Structures
Discuss the meaning of a unitary organisation as it applies to logistics. Is this concept a realistic one, and if not, why not?

Present and discuss. Distribution is the "end of the chain". Distributing commodities to people in need is distinct from transporting and handling other bulk consignments. Why is distribution difficult to control? What problems might occur within a unitary structure?

2.14.15. Planning for Emergency Logistics
Launch a general discussion of the preparedness process for emergency logistics and the role of the UN-DMT. Refer to the checklist on the overhead for emergency logistics planning activities.

2.14.16. Analysing Infrastructure Vulnerability
Present and discuss. Vulnerability assessment is needed also for logistic planning. The OHT lists a series of activities for vulnerability analysis. Ask the audience to add or delete items from the list so to make it applicable to their countries/regions.

2.14.17. Strategic Resources
Present and discuss. An assessment should be done prior to the operation. Discuss the resources and information about resources that may be available. Discuss transport options and alternatives. Ask which other aspects should be examined that are not listed in the OHT.

2.14.18. Strengthening Local Infrastructure and Institutions
Ask the participants to list ways in which local infrastructure and institutions can be strengthened in their regions. Show the overhead if not all of the points listed have been addressed.
2.14.19. External Logistics Resources
   Ask the audience to fill in the blanks on the overhead. Which external agencies have provided logistics resources in their regions? Discuss the role of the UN in allocating these resources. Discuss the role of national co-ordinating structures.

2.14.20. Information Systems
   Review the functions of information systems in the context of logistics. Show the overhead as a list of functions that an information system can perform. Ask the audience if the system can have other uses.

   Present and discuss. Good working conditions require good administrative practices. Discuss responsibility, mobility, and pre-packaging. Ask the participants if this list needs further additions. Requirements of UN agencies and local government.

2.14.22. Controlling and Monitoring
   Present and discuss. Good monitoring is an absolute must. (Pass around samples of waybills or other monitoring or tracking tools or forms).

   Discuss the immediate logistical needs for early response. Go through the list to make sure that all of the points are covered.

   Present and discuss. Operating within the context of government relations is almost always a necessity. Ask the group to name the situations where this is not the case. Some issues or procedures are vital. The OHT lists the basics to be agreed upon with the government. Read through the list asking what the consequences of failure to reach agreement on each of these issues might be.

   Emphasise the importance of considering the long-term outcomes of emergency programmes from the start. Open the discussion up to local topics that illustrate the link between planning for emergency logistics and planning for development.
Stand-alone. *Source UN-DMT Logistics.*

Essential Reading:
- UN-DMTP Training Modules, UN-DMTP, 1990
- Emergency Relief Items, Compendium of Basic Specifications, UN-DHA/WHO, 1995
- Guidelines for Health Logistics Management in Emergency Situation, WHO, 1999
LEARNING OBJECTIVES

- Recognise the effects that the operating environment has on a logistics system
- Analyse logistics systems by the “supply chain” concept
- Promote improvement in logistics capabilities as preparedness
- List the elements of a logistics preparedness plan
- See long term effects of short-term logistics operations
- Describe the links between logistics programs and development
What is a relief logistics system?

“The basic task of a logistics system is to deliver the appropriate supplies, in good condition, in the quantities required, and at the places and time they are needed.”
## Commodities and means of transport

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<thead>
<tr>
<th>Disaster</th>
<th>Commodities moved</th>
<th>Equipment or vehicles used</th>
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The operating environment

Analysis of the operating environment for logistics should include determination of the:

- Capacity of the system
- Vulnerability of infrastructure and equipment
- Political situation
- Conflict situation, if any
Planning a logistics program

A good implementation and operations plan requires clear delineation of:

- Goals and responsibilities
- Step needed to build the system
- Resources involved
- Measurable progress milestones or goals
- Co-ordination with other plans or systems
- Alternative procedures and redundancies
- Adequate information and control systems
INTERNATIONAL INVOLVEMENT

List:

- OCHA
- UNICEF
- WHO
- WFP
- IFRL
- ILRI
- MSF
- CARE
- GTZ

Etc.
### UN and Other Agencies in Logistics Assistance

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<tr>
<th>Agency</th>
<th>UN</th>
<th>IFRC</th>
<th>UNDP</th>
<th>UNHCR</th>
<th>ICRC</th>
<th>CARE</th>
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The flow of transport and goods

The Logistics chain
2.14.9. Typical Logistics System

Typical logistics system

- **RAILWAY** — Used if possible from port of entry to Central Warehouse
- **LONG HAUL ON HARD ROADS** — (20-30 M. Tons capacity trucks/trailers)
- **REGIONAL TO LOCAL WAREHOUSES** — Poor roads/tracks (5-6 M. Ton trucks)
- **FINAL DISTRIBUTION** — Light 4-wheel drive vehicles/carts/animals
- **TELEPHONE/TELEX/RADIO LINK** — Required between points as indicated (and with local warehouses if possible) — may be combined with Field Office radios if there is no existing link
Facilities and equipment

Depending on the size of the operation, logistics programs may require:

- offices and administrative equipment
- warehousing
- fuel stores and workshops
- vehicle parks and checkpoints
- personal; vehicles for staff
- truck fleets and specialised moving & handling equipment
- communications equipment
- accommodations for field personnel
Operational and support functions

- Director/Senior Management
- Central support
- Procurement
- Port Clearance
- Warehousing
- Transport
- Scheduling
- Commodity Control
- Terminal Distribution
Organisational structures

- Loose
- Governmental
- Unitary
- Others?
Unitary Structure

A Unitary Logistics Organization

Senior Management

Administration  Transport  Workshop  Commodities  Field Operations

Finance  Personnel  Security  Procurement  Communications

Fleet management  Dispatch  Heavy vehicles  Light vehicles  Spares control

Port Operations  Warehousing  Commodity accounting  Operation scheduling  Field supervisors
Field distribution
Planning for emergency logistics

Checklist

• Analyse infrastructure vulnerability
• Review strategic resources
• Review existing plans
• Clarify role of UN resources
• Establish co-ordinating structures
• Establish information systems
Analysing infrastructure vulnerability

- Map and review key elements
- Review potential secondary effects of disaster
- Analyse historical weather records
- Monitor major modifications and new construction
**Strategic resources**

*Review the existing situation:*

- Build and inventory
- Review means of transport for moving food and people
- Examine sites for logistics bases
- Review availability of spare parts
- Review port and airport capacities
- Explore other options
Strengthening local infrastructure and institutions

- Protect key resources from hazards
- Protect existing supply systems and staff will be available
- Ensure capacity at ports and airports
- Make arrangements for cash management
External logistics resources
Information systems

Functions of Emergency Information Systems are:

• Assisting assessment
• Tracking needs
• Tracking local resources
• Co-ordination
• Tracking international requests, pledges, and arrivals
• Others?
Administrative and equipment support

Good administrative practices in logistics operations will provide:

- Clear delegation of responsibility and authority
- Mobility for key staff
- An appropriate level of pre-packaging of the systems
- Adequate telecommunications support
- Clear and efficient procurement procedures
- Expedited customs procedures
- Guidelines on proper packaging
- Security arrangements
Controlling and monitoring

“The level of control should match the value and importance of the goods.”
Specific early logistical needs in sudden emergencies

- Preparation upon receipt of warning
- Evacuation
- Assessment
- Road clearance
- Movement of casualties
- Transport of rescue and repair teams
- Re-supply and rescue of isolated populations
Government relations

Key aspects:

- Agreement on commodity management plan
- Agreement on issues of authority
- Agreement on communications networks and clearances
- Travel clearance
- Commitment to security of agency staff
- Use of agency resources
- Duty-free and tax exempt status
- Favourable exchange rates
- Strategy of hand-over phase of operation
Development opportunities

“Planners must consider how the location and design of emergency facilities and staff development methods can contribute to the improvement of the transport sector in the long term.”