

CIVIL ENGINEERING
COMMUNICATIONS
LOGISTICS

USEFUL REFERENCES

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Matheson, I & Hawley, A (Ed) (2010) *Making Sense of Disaster Medicine*. London: Hodder Arnold


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Davis, J & Lambert, R (2002) *Engineering in Emergencies*. Rugby: Practical Action Publishing

CIVIL ENGINEERING



Scope

- Clearance of debris
 - Reconstruction of buildings
 - Rehabilitation of infrastructure:
 - Transport
 - Power
 - Communications
 - Water supply and distribution
 - Sewage collection and treatment
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LOGISTICS

A system whose purpose is to deliver the right supplies, in good condition and to the quantities requested, in the right places and at the time they are needed.

LOGISTIC ACTIVITIES

PROCUREMENT

TRANSPORT

STORAGE

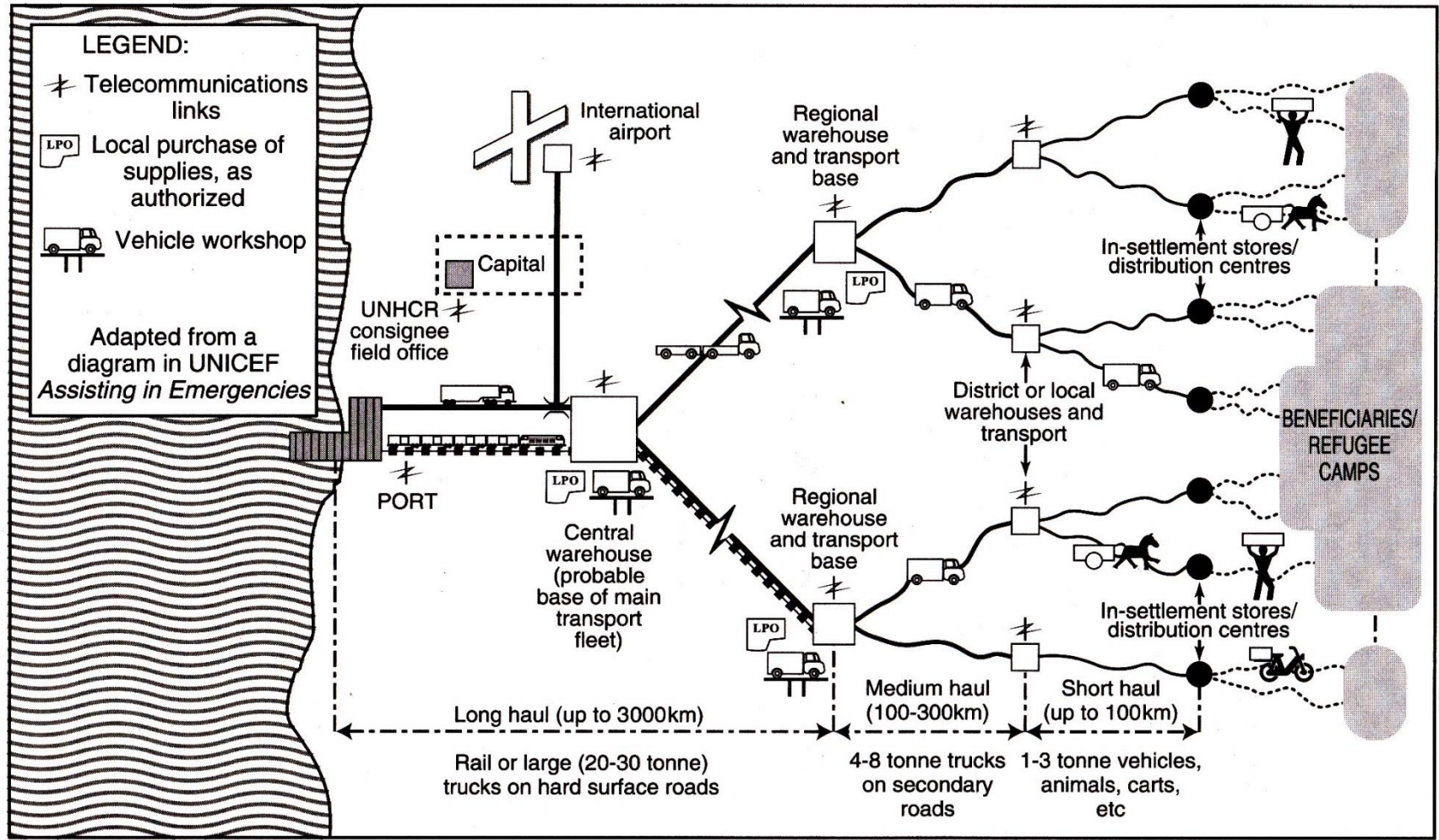
DISTRIBUTION

MONITORING AND CONTROL

BASIC PRINCIPLES

- Pre-planning
- Co-ordination with other potential players
- Base specific logistic requirements on NEEDS ASSESSMENT:
 - Needs of the PAR
 - Available local capacity and resources
 - Complementary capabilities and resources required to meet the need

Logistic System Components



PROCUREMENT PURCHASING

- LOCAL
 - Availability
 - Quality/quantity
 - Urgency
 - Effect of bulk purchasing
 - Interim storage
- EXTERNAL
 - Delivery timelines

PROCUREMENT DONATIONS

- Governmental/Inter-Governmental
- Ad Hoc/Spontaneous
 - May not be appropriate
 - May actually hamper effective logistics
 - Requires co-ordination

TRANSPORT

- AIM

To ensure supplies arrive safely and on time

- EXAMINE ALTERNATIVE

- Means
- Methods
- Routes

TRANSPORT - MEANS

- NEEDS

- Urgency
- Type(s) of supplies
- Volume and weight of supplies
- Destination
- Distances

- FEASIBILITY

- Availability (commercial and non-commercial)
- Cost
- Travelling conditions

OTHER CONSIDERATIONS

- Vehicle control
 - “One vehicle, one driver”
 - Maintenance
 - Logs
- No overloading
- Cover loads
- Secure loads
- HAZMAT
- Convoys
- Route selection

STORAGE

- GENERAL DELIVERY
 - Bulk storage
 - 'Strategic'
- SLOW ROTATION
 - Non-urgent/reserve stockpiles
 - 'Reserve'
- QUICK ROTATION
 - Balance storage
 - 'Tactical'
- TEMPORARY COLLECTION SITES

STOCK MANAGEMENT

- Reception
- Sorting
- Breaking bulk
- Use of control forms
 - Monitors outloads
 - Prompts requests for re-supply
 - Auditable

DISTRIBUTION KEY POINTS

Cannot be generalised and
indiscriminate

Must be proportionate and controlled

DISTRIBUTION

BASIC PRINCIPLES

- Never distribute until the capacity to meet the operational/organisational requirements are in place
- Define criteria for selecting beneficiaries in advance
- Be prepared to change what is distributed and how it is distributed as the operation develops

DISTRIBUTION SYSTEMS

- DIRECT
 - Provides greater control
 - Requires experience and capability
- INDIRECT
 - Requires careful monitoring
 - Diminishes visibility of the distributing organisation

MONITORING AND CONTROL

Aims to ensure humanitarian assistance reaches the victims of a disaster, rather than anyone else

DOCUMENTARY CONTROL AND MONITORING

- Arrival of loads
- Dispatch
- Distribution
- Daily inventories and reports
- Record on agreed forms

PHYSICAL CONTROL AND MONITORING

- Frequent physical reviews/audits at all points in the storage/distribution chain
- Do the books balance?
- Are the procedures right?
- Have the needs of the PAR been accurately identified? Have they changed?
- How can problems be corrected? Have they been identified and corrected?

PAHO/WHO SUPPLY MANAGEMENT SYSTEM

- Outcome of a Joint PAHO/WHO study
- CD-ROM based Supply Management system
- Publication of a manual (2001):
 - *Humanitarian Supply Management and Logistics in the Health Sector*
- Yet to be universally accepted as a benchmark
- Web-site:
www.paho-org/English/Ped/supplies.htm

COMMUNICATIONS

- Required
- Reasonable cost
- Robust
- Reliable
- Really easy
- Resource-constrained
- Routine
- Reviewed

COMMUNICATION REQUIREMENTS

- Pre-deployment/preparation
- Early entry
- Main deployment
 - Intra-theatre
 - Inter-theatre
- Post-deployment

CAPABILITY SPECTRUM

- Voice
- Data transfer
- Visual data transfer

COMMUNICATIONS OPTIONS

- Existing telephone network
- Cellphones
- E-mail
 - Communications
 - Web-site access
 - Telemedicine
- Satellite phones
- Radios

RADIO COMMUNICATIONS

- Requires disciplines and drills to be effective
- Capability may be affected by type of radio communications used:
 - HF
 - VHF
 - UHF

Voice Procedure

- Use of the accepted phonetic alphabet
- Use of procedural words/phrases

Hello – *the 'alert'*

Go ahead – *I am ready*

Roger – *I understand*

Over – *invitation for you to transmit*

Out – *I am closing down (returning to listening)*

Standby – *wait while I deal with your request*

Repeat – *I will repeat the last message (do not use in a conflict zone as this can mean 'fire again' to the military!)*

Wait – *I am busy*

Listening – *I am prepared to take calls*

Say again –

Say all after –

Say all before –

Spell (I Spell) – *words requiring phonetic spelling*

Message – *I have a message that requires writing down*

QUESTIONS?