

A SYNOPSIS OF HUMANITARIAN LOGISTICS

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The Objective of Logistics Management

To get the right **product** to the right **customer**,
at the right **time** and **place**, in the right **quantity** and **condition**,
at the right **price**, and in the right (sustainable) **way**.

(Mangan et al, 2008, p. 9)

Cardinal Humanitarian Principles

- **Humanity:** The humanitarian response should be based solely on needs, and should not be influenced by political or cultural inclinations.
- **Neutrality:** Humanitarian organizations must not take sides in any conflict.
- **Impartiality:** There should be no discrimination between the beneficiaries of humanitarian aid on any basis, like race, gender, or religion.

Disasters

- Occurrences that cause **damage**, ecological **destruction**, loss of human **lives**, or deterioration of **health** and **health services**, on a scale sufficient to warrant an **extraordinary response** from **outside** the affected community area.

(Skolnik, 2014, p. 316)

- Classification:

- Estimated global expenditures on relief operations:
1990: **\$2.1 billion**
2016: **\$30 billion**

	Natural	Man-made
Rapid-onset	<ul style="list-style-type: none">EarthquakesHurricanes	<ul style="list-style-type: none">Terrorist attacksTechnological failures
Slow-onset	<ul style="list-style-type: none">FamineDrought	<ul style="list-style-type: none">Complex humanitarian emergencies

(Donini, 2017)

(Van Wassenhove, 2006)

Humanitarian Logistics

- Planning, implementing, and controlling of the **flow** and **storage** of **goods**, **material**, and related **information**, from the point of origin to the point of consumption, for the purpose of **alleviating the suffering** of vulnerable people.
(Thomas & Kopczak, 2005, p. 2)
- **Activities** include planning, procurement, transport, warehousing, tracking, and customs clearance.
- Of the total expenditure on humanitarian operations, **80%** is on logistics.

(Van Wassenhove, 2006)

Recognition of the Importance of Humanitarian Logistics

- Major failures in the response to the **Asian Tsunami**, in December 2004, drew great attention from practitioners and researchers to Humanitarian logistics.
- **Developments:**
 - Large humanitarian agencies established dedicated **logistics units**.
 - Many international organizations collaborated through **logistics clusters**.
 - Research institutions, like the Fritz Institute and University of Lugano, provided **certification programs** in humanitarian logistics.
 - Scholarly **research** boosted, and a dedicated journal (JHLSCM) was introduced in 2011.

Phases of the Humanitarian Response

- **Preparation**

- Occurs before disaster onset
- Considered the *most decisive phase* of response effectiveness
- Includes pre-positioning of supplies in regional centers, customs clearance, visa agreements, standardization agreements, personnel training and education
- Implements organizational learning

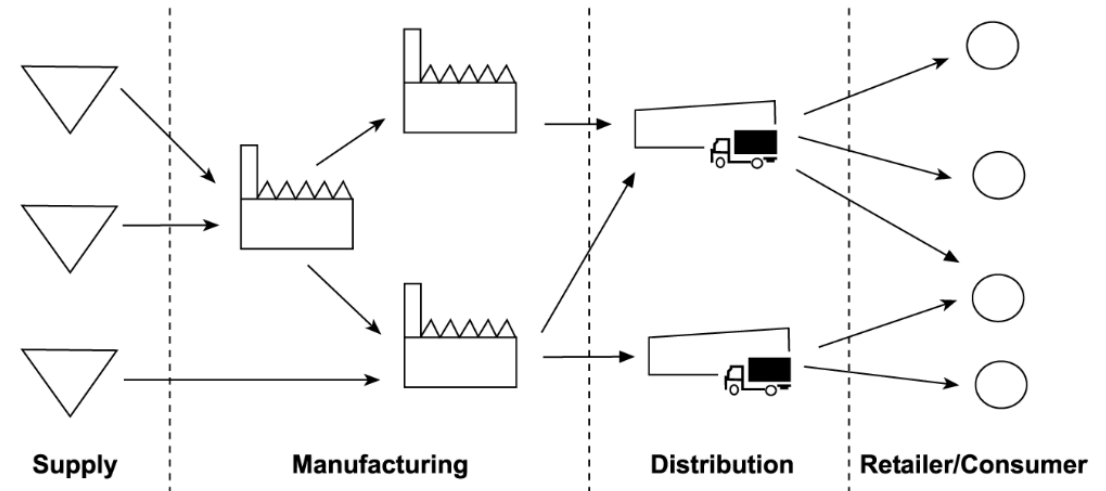
- **Response**

- Occurs immediately after the disaster strikes
- Improvisation is allowed only when preparation falls short of responding to the evolving demands

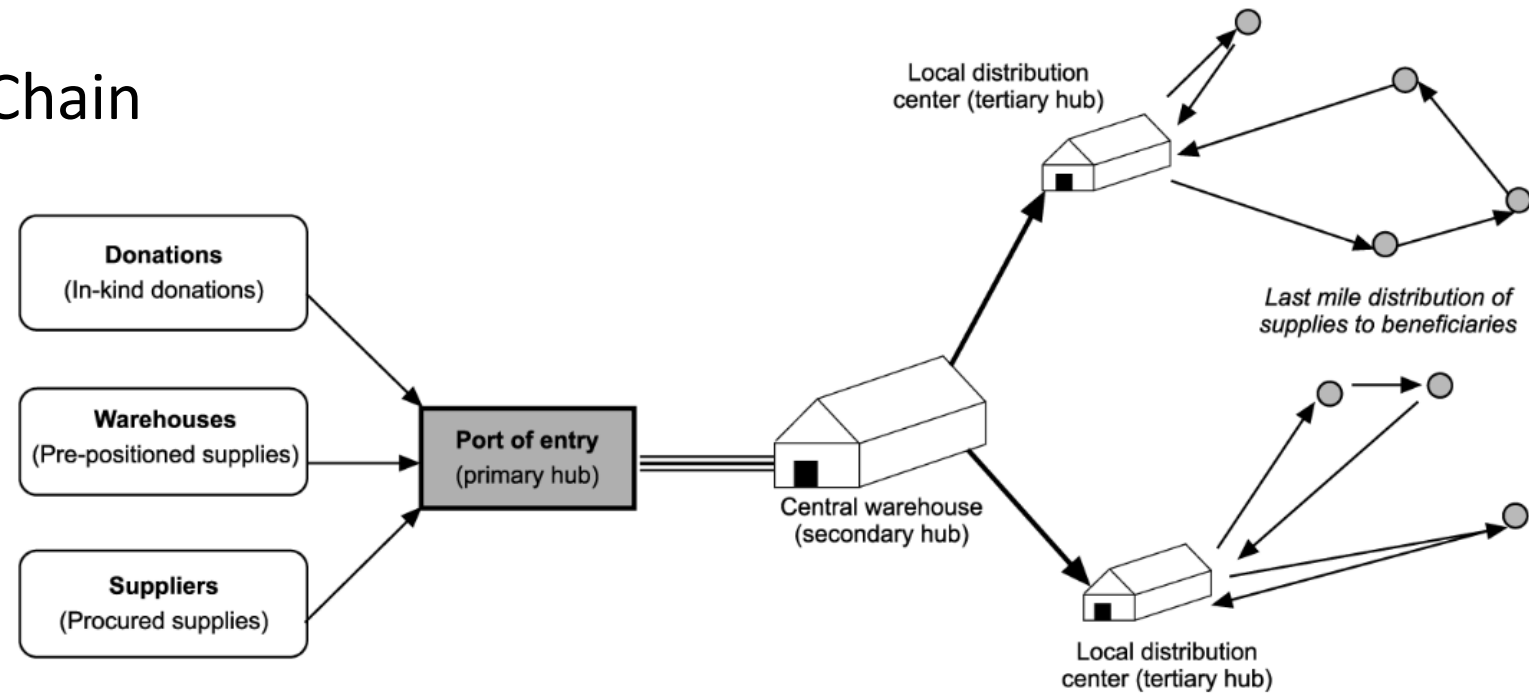
- **Recovery**

- Denotes long-term reconstruction in the aftermath of the disaster

- Typical Commercial Chain



- Typical Humanitarian Chain



(Beamon & Balcik, 2008)

Characteristics of the Humanitarian Context

- **Emergencies are the rule**, not the exception. (Thompson et al., 2006, p. 25)
- The context is **chaotic**, with a “complex set of rapidly evolving problems.”
- When multiple humanitarian agencies co-exist in one field, lack of **collaboration** adds to the chaos.
- Initial assessment of the demands is based on **limited information**.
- Each disaster is **different**.
- Response is **mandated** by the humanitarian principles.
- Effectiveness of the relief operation is a matter of **life and death**.

The Flows in Humanitarian Chains

- **Material Flow**

Humanitarian supplies and services flow downstream.
(In principle, not different from commercial chains)

- **Money Flow**

Donations flow downstream and get transformed into humanitarian supplies and services, which are delivered to vulnerable people, who are not in a position to engage in commercial transactions.
(Radically different from commercial chains)

- **Information Flow**

During disasters it is difficult for humanitarian agencies to collect sufficient data and process information.
(Similar difficulties exist in the commercial sector, but less intensely)

Uncertainties in Humanitarian Chains

- **Demand**

Demand is extremely volatile, with unpredictable time, location, type, and scale.

- **Supply**

Suppliers and distribution sites are very rarely predetermined.

- **Transportation and Communication**

Most means are lost, due to the disintegration of local infrastructures.

- **Inventory**

Inventory management is challenging because of the above uncertainties, and because the objective of relief is saving lives and alleviating suffering; effectiveness is *not achieved by holding minimal stocks, but by delivering the needed aid in the right time.*

The Triple-A Concept

(Lee, 2004)

- **Agility**

The ability to respond swiftly and cost-efficiently to rapid fluctuations in supply and demand, and to handle smoothly the external disruptions.

- **Adaptability**

The ability to adjust supply chain's design to changing needs in the market (The firm needs to be proactive rather than defensive).

- **Alignment**

Aligning the interests of all the parties that participate in the supply chain with the interests of the firm, through incentives for better performance.

The Triple-A Concept Applied in Humanitarian Chain Preparedness

(Tomasini & Van Wassenhove, 2009, pp. 60-61)

In the International Federation of the Red Cross and Red Crescent Societies (IFRC), the five building blocks of preparedness are **human resources**, **knowledge management**, **logistics**, **finance**, and the **professional community**.

To Achieve Agility ...	
Human Resources	<ul style="list-style-type: none">• Develop emergency response units at different levels, which can be deployed within 12-24 hrs.
Knowledge Management	<ul style="list-style-type: none">• Process previously captured information so as to make it available as a reference for field workers.• Provide contact information for workers who have developed specific skills, so that they can be accessed whenever their advice is needed.

Continue ...

To Achieve Agility ...

Logistics

- Develop commodity tracking systems to trace the flow of goods.
- Set up pre-positioned goods and buffer inventories.
- Frequently exchange information about the needs with all interested parties.

Finance

- Put in place immediate response accounts.
- Avoid reliance on earmarked (dedicated) funds.

Community

- Tap into others' expertise and knowledge.
- Liaise with local actors to improve forecasting and planning.

Continue ...

To Achieve Adaptability ...

Human Resources

- Continuously train staff on the experiences gained from past disasters and the latest organizational developments.
- Create a dialogue to exchange expertise between the IFRC and the national societies.

Knowledge Management

- Codify systematically all learned knowledge and disseminate it in modules, so that staff can adapt it to future responses.

Logistics

- Let contingency planning incorporate simulation of scenarios and forecasting of potential changes in supply chain design.
- Develop flexible products and designs, such as kits.

Finance

- Broaden the base of donors and increase the flexibility of funds, in order to free the operations from political agendas.

Community

- Develop strategic alliances to tap into specialized and/or local knowledge.

Continue ...

To Achieve Alignment ...

Human Resources

- Maintain a pool of experts between the IFRC and the national societies
- Create incentives for career development, training, and mobility across the IFRC and the national societies.

Knowledge Management

- Gather information about past relief operations from staff at different levels (international, local, specialist, volunteer staff).
- Create incentives for sharing information.

Logistics

- Set collaborative relationships with partners, with clear definitions of tasks.
- Pre-negotiate agreements with suppliers.

Continue ...

To Achieve Alignment ...

Finance

- Negotiate relationships with credit terms that reflect the funding cycle.
- Maintain transparency and accountability to enhance fund-raising efficiency and brand credibility.

Community

- Develop strategic alliances to ensure adequate access to information and visibility of the actions of all the collaborating agencies.

The Problem of Convergence

(Holguin-Veras & Van Wassenhove, 2014)

The efficiency of the flow of **high-priority aids** is determined by the flow of **low-priority** and **non-priority (unsolicited)** aids.

5–10%

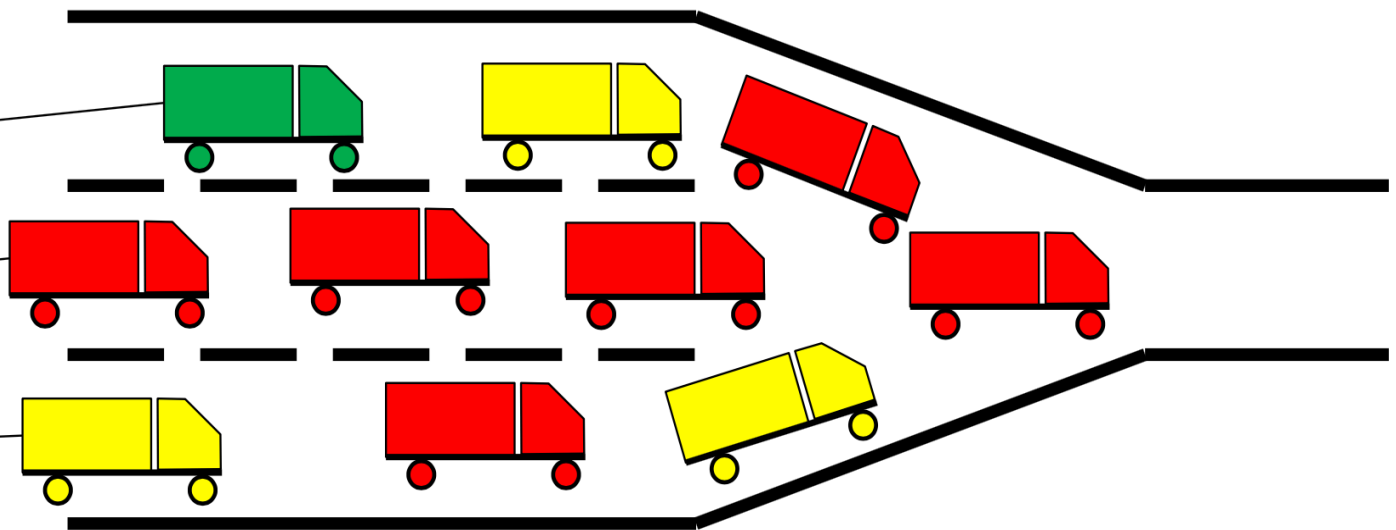
High-Priority

60%

Non-Priority

30–35%

Low-Priority



Unsolicited Aid is Very Common

(Holguin-Veras & Van Wassenhove, 2014)



Katrina, 2005



Haiti, 2010



Japan, 2010

Japan, 2010



Sandy, 2012

Mutual Learning Between Humanitarian Logistics and Commercial Logistics

- Commercial organizations can learn from the humanitarian sector to improve their crisis management strategies.
- Humanitarian organizations can also learn from commercial organizations that have highly performing supply chains.
 - **Seven Eleven Japan (SEJ)** is a huge convenience store chain that developed extremely effective supplier alliances and creative distribution means, in order to overcome traffic jams. On January 17th, 1995, a 7-Richter earthquake struck the south-eastern city Kobe. Only few hours after the incident, SEJ was able to provide the city with 64,000 rice balls, through vehicles and helicopters.

(Lee, 2004)

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