

HUMANITARIAN LOGISTICS

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Context

- Natural and Man-Made Disaster
- Ongoing Problems:
 - Food, water, shelter....essential components of life





Humanitarian Logistics

Relief logistics

Development logistics

Type

Complex emergencies
(Man-made disaster)

Natural disaster

Slow onset
-Famine
-Drought

Sudden onset

Unpredictable Location
-Tsunami

Predictable Location

Predictable Timing
-Hurricane
-Flood

Unpredictable Timing
-Earthquake
-Volcanic eruption

Timeline

Pre-disaster
(mitigation & preparedness)

Disaster
(response)

Post-disaster
(recovery)

- * assessment
- * planning
- * training/education

- * relief operations
- * second phase
- * logistics stages

- * debris cleaning
- * measure the effect of
 - infrastructure
 - planning
 - response
- * short & long term
- * lessons learned



Disasters

Natural

Man-Made

Slow Onset
-Famine
- Drought

Sudden Onset

Slow Onset
- Political Crisis
- Refugee Crisis

Sudden Onset
- Terrorist Attack
- Chemical attack

Unpredictable Location
- Tsunamis

Predictable Location

Predictable Timing
- Hurricanes
- Floods

Unpredictable Timing
- Earthquakes
- Volcanic Eruption

Context

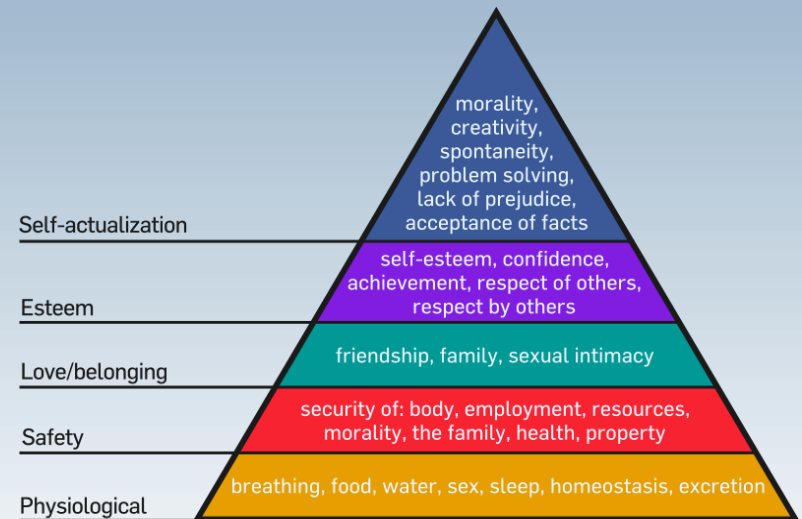
- Natural and Man-Made Disaster
- **Ongoing Problems:**
 - Food, water, shelter...essential components of life



Humanitarian Crises

- Top Ten Problems Facing Humanity Over the Next 50 Years (Richard Smalley, Nobel Prize Winner)

1. Energy
2. Water
3. Food
4. Environment
5. Poverty
6. Terrorism and War
7. Disease/Health
8. Education
9. Democracy
10. Population



An interpretation of Maslow's hierarchy of needs, represented as a pyramid with the more basic needs at the bottom. Wikipedia

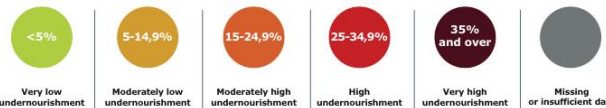


World Overview: Hunger

- Hunger and malnutrition are the #1 risks to health worldwide
 - Greater than AIDS, malaria, tuberculosis combined
- 1 in 8 people goes to bed hungry every night.
- 148 million children are underweight in the developing world
- Source: WFP, <http://www.wfp.org/hunger>



Proportion of total population undernourished, 2011-13



Take a look at our interactive hunger map at <http://cdn.wfp.org/hungermap/>

This map shows the proportion of undernourishment in the total population of developing countries as of 2011-13. The indicator is an estimate of the percentage of the population at risk of caloric inadequacy. Further information is available at www.fao.org/publications/moody.

Sources: FAO, IFAD and WFP. 2013. The State of Food Insecurity in the World 2013. The multiple dimensions of food security. Rome, FAO. Data source: fao.org/economic/ess

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The designations employed and the presentation of material in the maps do not imply the expression of any opinion whatsoever on the part of WFP concerning the legal or constitutional status of any country, territory or sea area, or concerning the delimitation of frontiers.

* Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

** A dispute exists between the governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

*** Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. South Sudan declared its independence on 9 July 2011. Data for Sudan (past 2011) and South Sudan are not yet available.

Every 3.6 seconds one person dies of starvation. Usually it is a child under the age of 5.
www.unicef.org

World Overview: Health

	African Region	Americas Region
Life expectancy	52	76
Mortality (per 1000 live births)	145	19

- In 2007, 9.2 million children died before age five. 92% of these deaths were in Africa and Asia.
- A child born in a least developed country is almost 14 times more likely to die during the first 28 days of life than one born in an industrialized country.

UN Millenium Development Goals 2015



- “This is the historic promise 189 world leaders made at the United Nations Millennium Summit in 2000 when they agreed to meet the Millennium Development Goals (MDGs). The United Nations Millennium Campaign supports and inspires people from around the world to take action in support of the MDGs.”

UN Millenium Development Goals 2015



- Goal 1: Eradicate extreme poverty and hunger
 - Number of people living under international poverty line of \$1.25 / day declined to 1.4 billion by 2005
- Goal 2: Achieve universal primary education
 - Enrollment in developing regions reached 89% in 2008
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
 - In some regions 1 of 7 die before age 5, many of preventable causes
- Goal 5: Improve maternal health
 - Insub-Saharan Africa, maternal mortality risk is 1 in 30
- Goal 6: Combat HIV/AIDS, malaria, other diseases
 - In Africa, malaria accounts for one-fifth of childhood mortality
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

Context

- Natural and Man-Made Disaster
- Ongoing Problems:
 - Food, water, shelter... essential components of life
- Environments with disruptions
- Many decision makers but often limited resources





Humanitarian supply Chains : Challenges

Challenges with demand

- Uncertain and dynamic demand
- Specific to disaster or humanitarian issue

Challenges with supply

- Uncertainties in supply quantities
- Timing of supplies
- Perishability
- Unnecessary, unusable and/or unwanted donations

Humanitarian Supply Chains – Examples of Supply-Demand Mismatch



- In the months following the January 12 **earthquake**, donated medical equipment and supplies were shipped into **Haiti** by the container-full, overwhelming hospitals across this disaster-ravaged nation. Much of it will **never get used**, and even worse, the **unopened boxes** sometimes **obstruct doctors** from locating supplies they actually need to treat patients. (Huffington Post, May 2013)
- In **Japan in 2011**... about **60%** of the supplies that arrive at a disaster site are not beneficial to the survivors and should **not have been sent**. ... relief workers reported "too many blankets," "too much clothing" and "a lot of broken bikes." (Los Angeles Times, November 2012)



Examples of Supply-Demand Mismatch

- Stockpiling antiviral drugs in preparation for a flu pandemic (Wall Street Journal, May 2009)
- Despite months of dire warnings ..., less than half of the 229 million doses of H1N1 vaccine the government bought to fight the pandemic have been administered -- leaving an estimated 71.5 million doses that must be discarded if they are not used before they expire. (Washington Post, April 2012)
- When Supply > Demand
 - Inefficient use of limited funds and resources
 - Bottlenecks in the network
 - Extra cost of managing and storing
 - Extra cost and environmental impact of disposal



Summary of Problem Characteristics

- High complexity
- High uncertainty, dynamically changing environments, information may not be available or reliable
- Timing is key for decisions and actions
- Multiple players, multiple perspectives, multiple/conflicting objectives
- Difficult (but very important!) to assess the potential impact and consequences of actions (short term and long term)
- Important to consider the human/social/behavioral component
- Interdisciplinary nature



- Video 1: WFP
- <https://www.youtube.com/watch?v=zYikcJcBass>
- Video 2 : Hunger is not a food issue
- <https://www.youtube.com/watch?v=oXIMn3WGHkE>
- Video 3: Child Mortality
- https://www.ted.com/talks/hans_rosling_the_good_news_of_the_decade?utm_campaign=tedsread&utm_medium=referral&utm_source=tedcomshare
- Video 4: New UNGoals
- <https://www.youtube.com/watch?v=5G0ndS3uRdo>
- <https://www.youtube.com/watch?v=A5giOGjj5X8>