Using Lessons from Earthquakes in Haiti and Chile to Reduce Global Risk

The Hard Lessons of Haiti for Humanitarian Logistics

José Holguín-Veras,
William H. Hart Professor, Director of the Center for Infrastructure, Transportation, and the Environment, Rensselaer Polytechnic Institute, jhv@rpi.edu

Tricia Wachtendorf
Associate Professor, Associate Director, Disaster Research Center University of Delaware, twachten@udel.edu

Disasters Roundtable of the National Academies
March 1, 2011 -- Workshop
The earthquake severely disrupted the centers of power (Government, United Nations, Catholic Church) and in doing so posed a huge obstacle to aid efforts that did not have alternative paths to distribute critical supplies.

Two structures emerged: Agency Centric Efforts (ACEs), Collaborative Aid Networks (CANs).

- Aid flowing to Port au Prince faced huge distribution bottlenecks.
- Aid from rest of Haiti and Dominican Republic through CANs flowed relatively well.
- Physical and social links with local distribution networks were severely disrupted.
- Initial Findings: Failure Mechanism
Efforts of large foreign aid agencies were hampered by:
- Lack of suitable interlocutors: the disaster impacted the centers of power and removed their natural partners ➔ They were forced to create the distribution network almost from scratch
- Difficulties in articulating efforts with locals
  - Could not find enough manpower and trucks (list of truckers created two weeks after the disaster)
  - Lacked local knowledge needed for such effort
  - Faced numerous security problems
  - Lack of familiarity with local milieu may have precipitated over cautious security measures
- Very few points of distribution (PODs)
  - Trying to deliver aid to tens of thousands ➔ instability at some PODs, helicopter drops
  - Some had to walk miles to get aid
  - Structural inertia made it difficult to adjust
  - Earthquake survivors forced to choose between maintaining social ties by staying near their destroyed homes or moving to camps to better position themselves to receive aid
- Created for another purpose, extended to humanitarian logistics:
  - Highly decentralized/redundant networks, with thousands of individuals
  ➔ Only had to extend the mission of their existing networks to humanitarian logistics
  - They are local, knew and trusted the others
    - Found the trucks, drivers, and helpers needed; had manpower for points of distribution (PODs)
    - Geographically distributed with local knowledge
    - No security problems (protected by locals)
    - Enjoyed the trust of the population
- Their massive coverage enabled them to:
  - Organize the population at a very fine level
  - Engage their support in aid distribution
  - Deliver the aid to small groups of people in coordination with local community leaders
  - The close coordination between community leaders and helpers provide a better chance of maintaining social ties

**Two Main Paradigms**

**Agency Centric Efforts (ACEs)**

Efforts of large foreign aid agencies were hampered by:
- Lack of suitable interlocutors: the disaster impacted the centers of power and removed their natural partners ➔ They were forced to create the distribution network almost from scratch
- Difficulties in articulating efforts with locals
  - Could not find enough manpower and trucks (list of truckers created two weeks after the disaster)
  - Lacked local knowledge needed for such effort
  - Faced numerous security problems
  - Lack of familiarity with local milieu may have precipitated over cautious security measures
- Very few points of distribution (PODs)
  - Trying to deliver aid to tens of thousands ➔ instability at some PODs, helicopter drops
  - Some had to walk miles to get aid
  - Structural inertia made it difficult to adjust
  - Earthquake survivors forced to choose between maintaining social ties by staying near their destroyed homes or moving to camps to better position themselves to receive aid

**Collaborative Aid Networks (CANs)**

Created for another purpose, extended to humanitarian logistics:
- Highly decentralized/redundant networks, with thousands of individuals
  ➔ Only had to extend the mission of their existing networks to humanitarian logistics
- They are local, knew and trusted the others
  - Found the trucks, drivers, and helpers needed; had manpower for points of distribution (PODs)
  - Geographically distributed with local knowledge
  - No security problems (protected by locals)
  - Enjoyed the trust of the population
- Their massive coverage enabled them to:
  - Organize the population at a very fine level
  - Engage their support in aid distribution
  - Deliver the aid to small groups of people in coordination with local community leaders
  - The close coordination between community leaders and helpers provide a better chance of maintaining social ties
Using Lessons from Earthquakes in Haiti and Chile to Reduce Global Risk

The take home message(s)

1. What happened in PaP could happen in other large cities
   - Reason #1: In catastrophic events, the decapitation of the local leadership (ACEs’ interlocutors) is a real possibility
   - Reason #2: In large urban disasters, manpower needed at PODs will exceed what the ACEs could timely deliver. 200-300 PODs in PaP require 16,000-24,000 staffers → Same size of the average size division in the US Army (which may take 3-4 weeks to fully deploy)
   - Reason #3: Good Humanitarian Logistics depends on community buy-in/support, which is almost impossible for ACEs to achieve in post disaster chaos because lack of time and resources

2. What are the three big messages of the story?
   - Rethink humanitarian logistics, more emphasis in local distribution is needed
     - The real challenge is not the transport of supplies to the disaster site
     - The real challenge is how to distribute the supplies efficiently
     - The best way is to set up the local distribution networks before the disaster
   - Humanitarian crises do not have to be accompanied by deadly events (Chile)
Using Lessons from Earthquakes in Haiti and Chile to Reduce Global Risk

2. What were the most surprising outcomes or events?
   - The resiliency, reliability, robustness, and efficiency of the CANs
     • No incident of theft or unsafe operations
     • Very efficient logistics, distributed large volumes of goods without any problem
     • They kept working at periods when the UN cluster had to suspend delivery operations, e.g., during the political crisis

3. What advice would you offer to adapt…be better prepared… transfer lessons…reduce the risk…?
   - Redirect humanitarian logistic planning efforts towards local distribution
   - Take advantage of the CANs, integrating them as part of response process
   - Engage the CANs as part of a holistic strategy of preparation and response:
     • Train them in risk reduction, first aid, humanitarian logistics, disaster mitigation
     • Designate their meeting places as Points of Distribution
     • In case of a disaster, activate the ones needed
     • Remain open to involving new CANs if they could help
   - Let the ACEs take care of the transport of large flows of supplies to the site
   - Let the CANs take care of local distribution