

The Top Ten Lessons From Large Disasters and Catastrophes: Implications for Resiliency

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(Pictures taken by JHV 10 days after the disaster)

Major components of our work

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- ❖ Fieldwork: 9/11, Katrina, Indian Ocean, Haiti, Chile, Joplin, Japan, Nepal, etc. etc.
- ❖ Diagnosis and characterization:
 - ❖ Causes of problems encountered
 - ❖ How humanitarian logistics take place
 - ❖ Quantification:
 - ❖ Aimed at obtaining empirical estimates
 - ❖ Provide support to analytical modeling
- ❖ Define mechanisms to improve response
 - ❖ Policy Suggestions → FEMA, Catastrophic Planning Groups
- ❖ Basic research on analytical modeling
 - ❖ To develop Decision Support Tools

The JHV Principle: In Complex Problems,
Obvious/Simple Solutions are ALWAYS Wrong



The Top Ten Lessons ...



Main Focus Due to Time Constraints

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- ❖ **Disaster Response is a Socio-Technical Process**
- ❖ **Disasters ≠ ≠ ≠ ≠ ≠ ≠ ≠ ≠ ≠ Catastrophes**
- ❖ **Commercial Logistics ≠ ≠ ≠ Post-Disaster Logistics**
- ❖ **Controlling Material Convergence is a MUST**
- ❖ **In Catastrophes: Local Distribution Is the Challenge, Only option: Collaborative Aid Networks**
- ❖ **Effective Private Sector Integration is KEY**
- ❖ **Supply and Demand Are Very Dynamic, Be Ready**
- ❖ **Controlling Precautionary/Opportunistic Buying Helps**
- ❖ **Preventing Collapse of Private Supply Chains Helps**
- ❖ **Comprehensive Approaches Are Needed**

Lesson #1: Disaster Response (DR) is More Than a Technical Problem...



DR is a Socio-Technical System (STS)...

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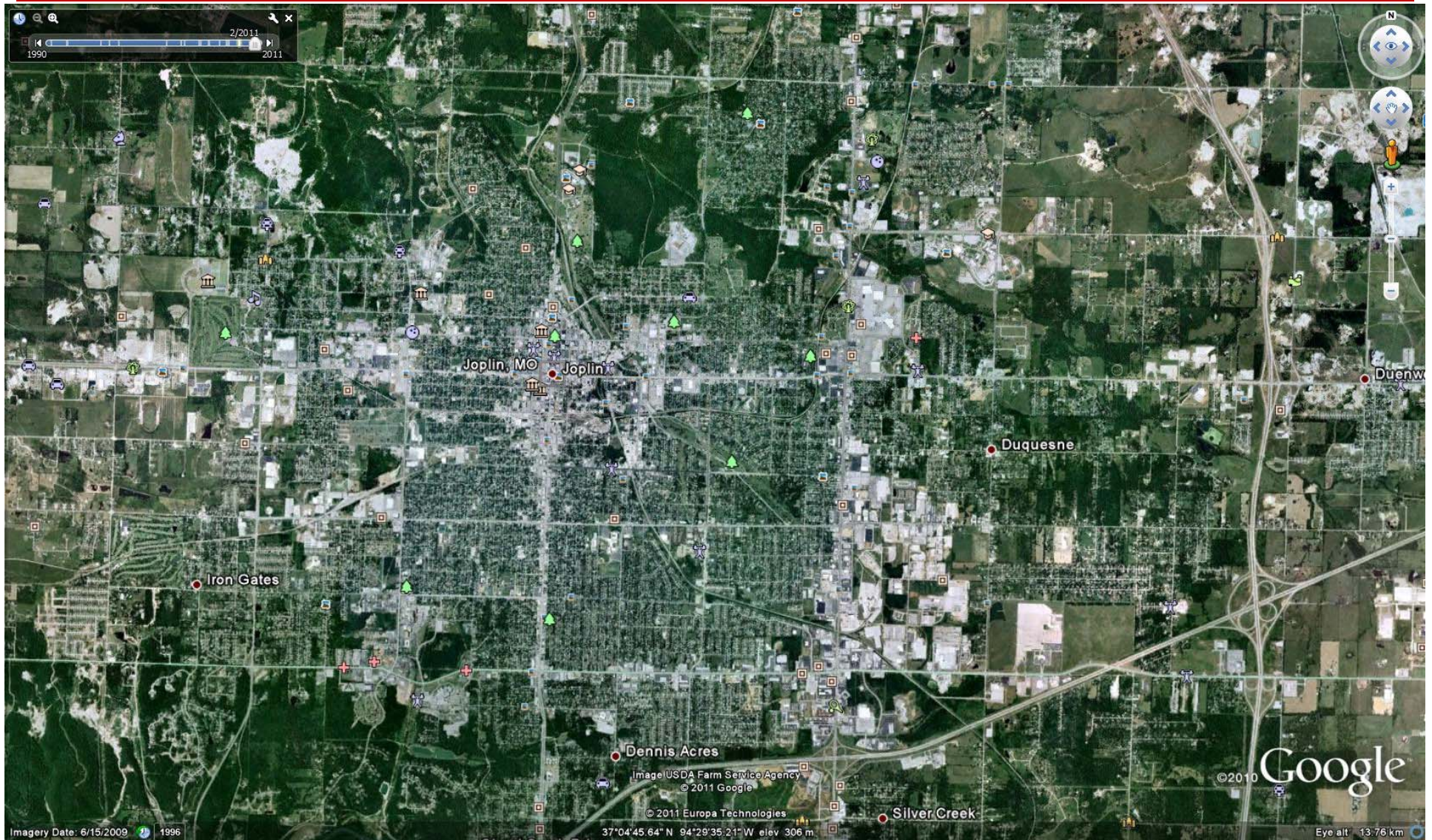


Lesson #2: Disaster and Catastrophes Are Not the Same...



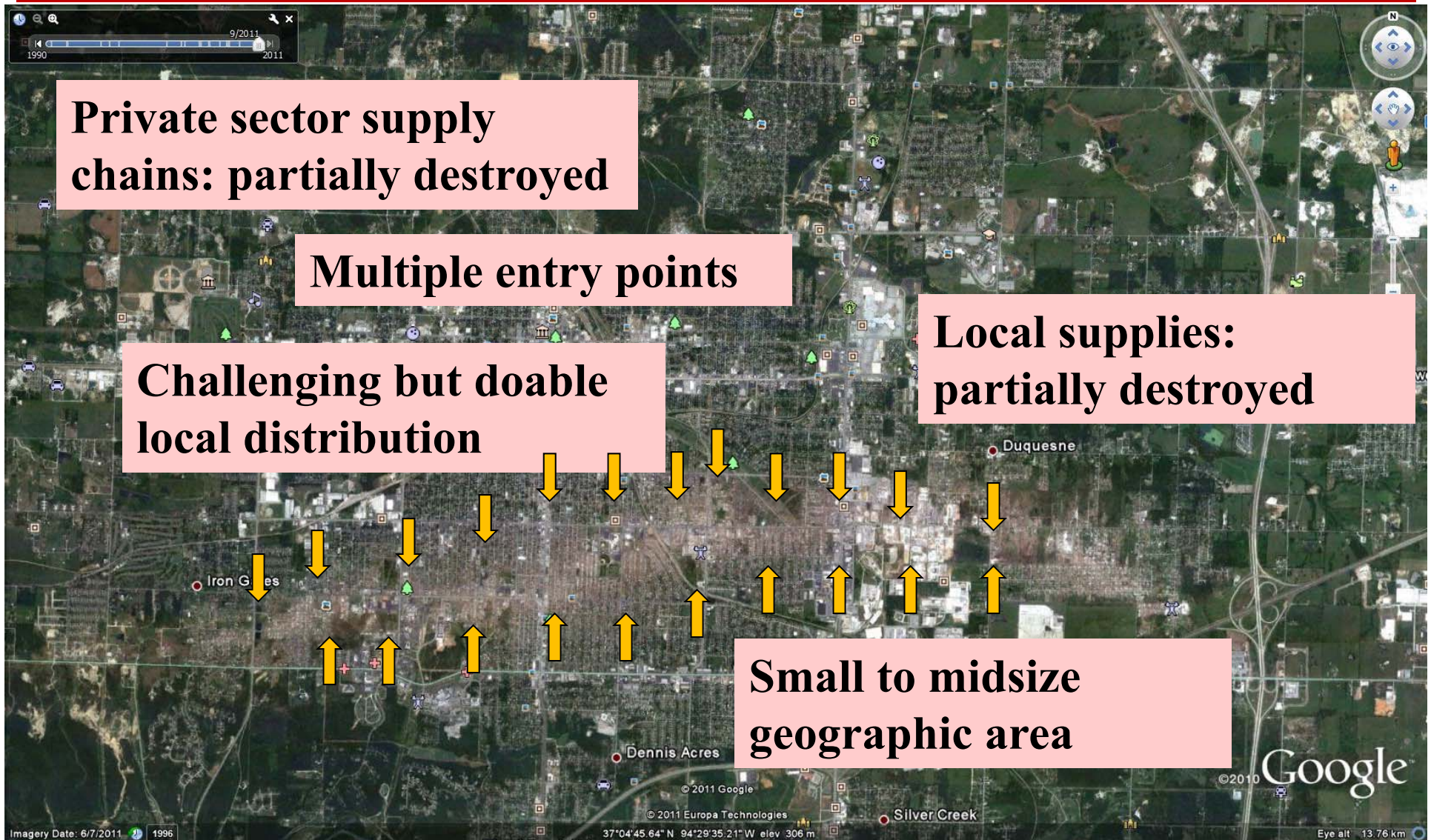
Disaster: Joplin, Missouri (50,000 residents)

12

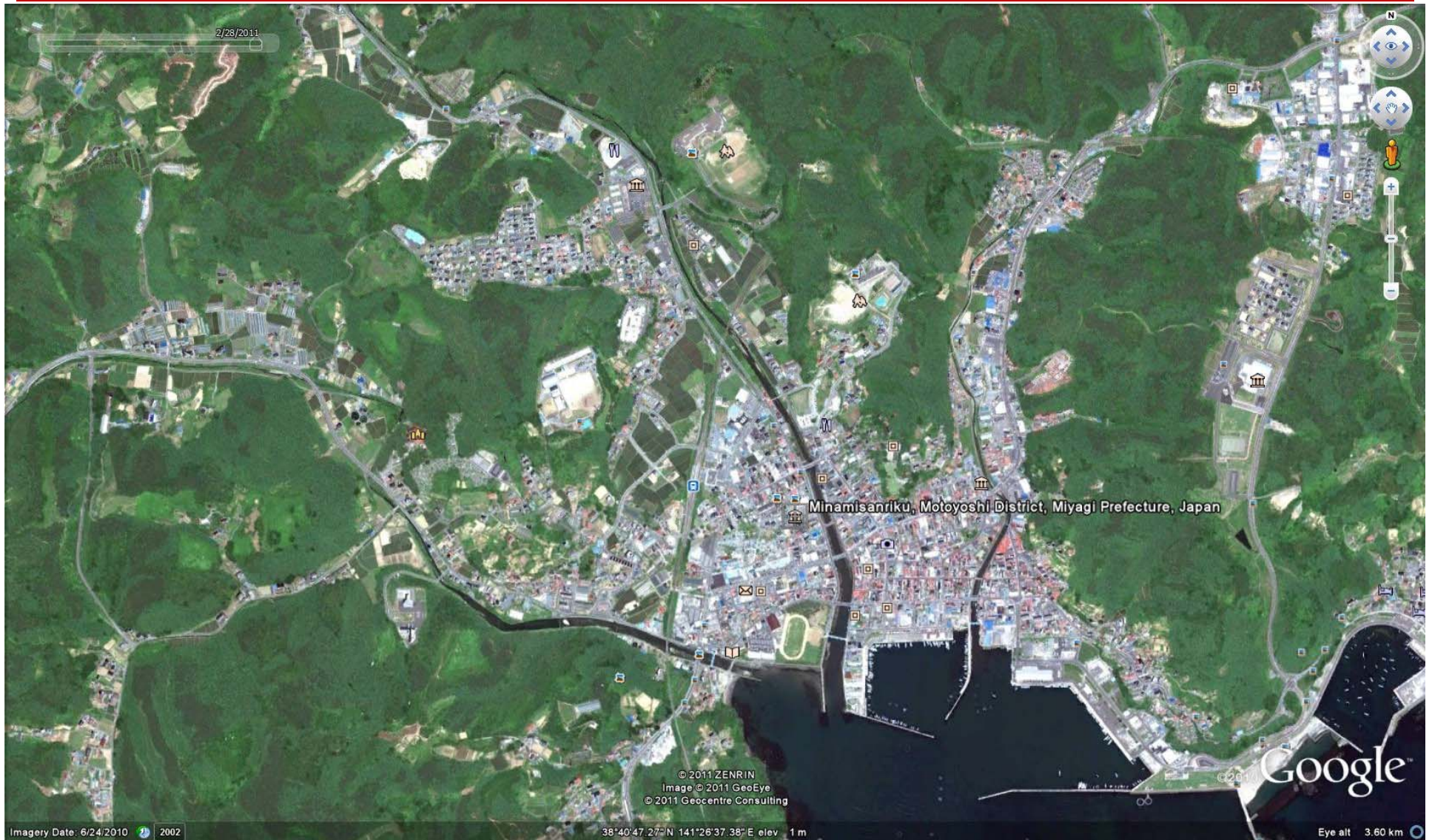


Disaster: Joplin, Missouri (160 deaths)

13

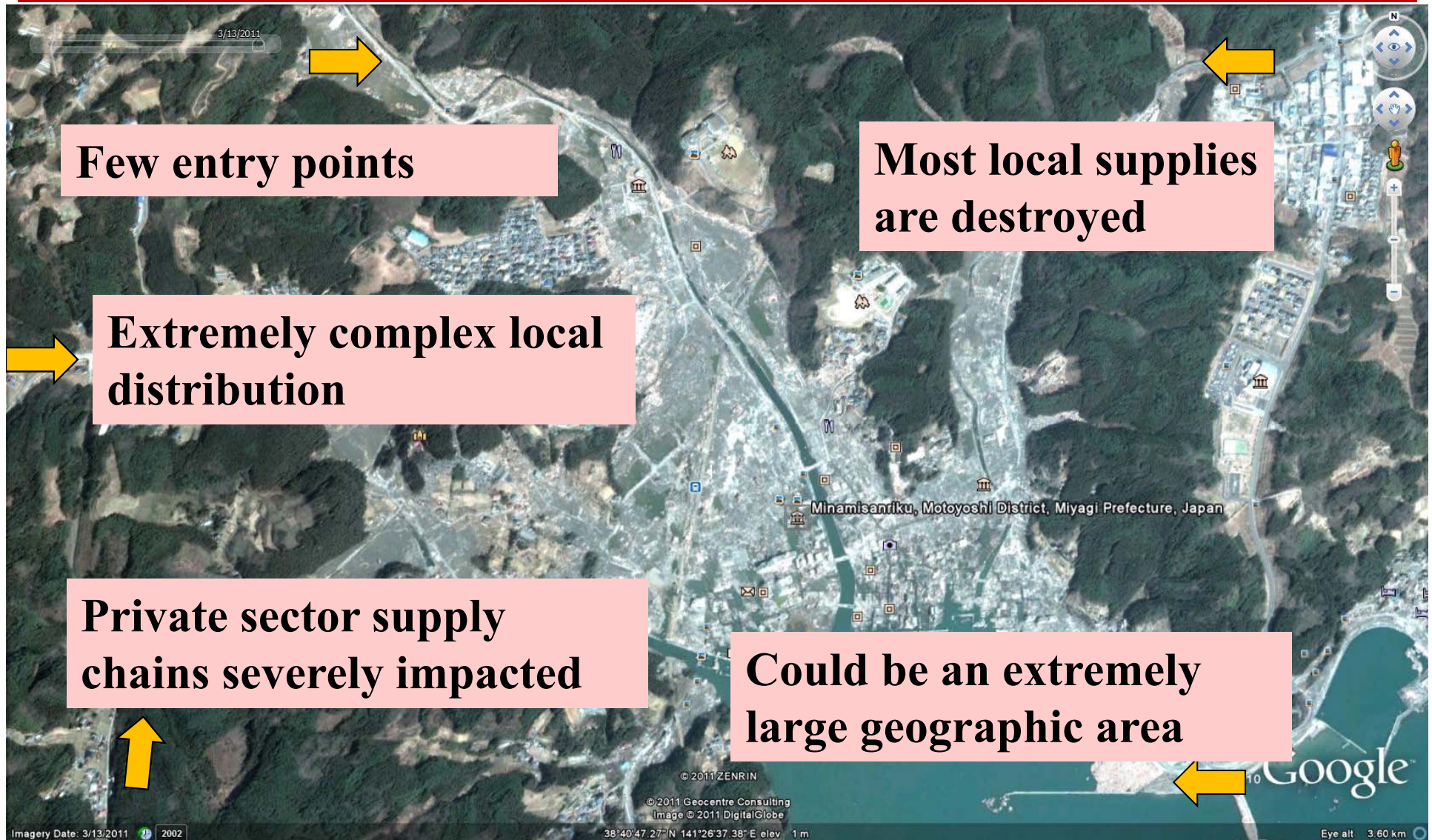


Catastrophe: Minami Sanriku (19,170 residents)¹⁴



Catastrophe: Minami Sanriku (1,205 fatalities)

15



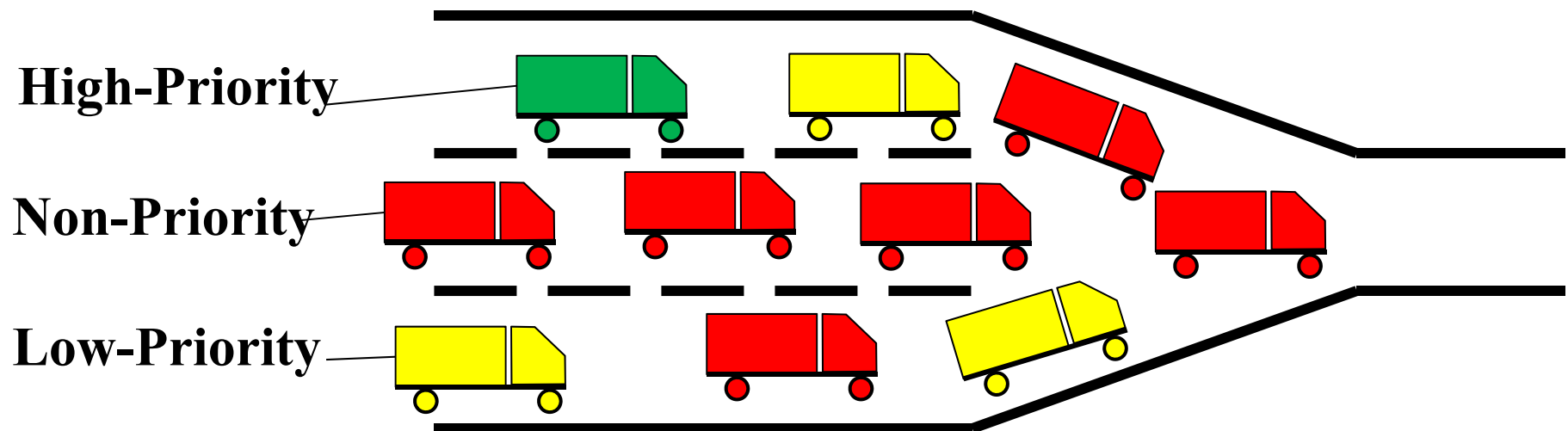
Lesson #4: Controlling Material Convergence is a MUST



What is the problem?

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- ❖ The efficiency of the flow of high-priority goods depend on the flow of low/non priority cargoes



- ❖ The cargo that arrive to a disaster site (estimates):
 - ❖ 60% are non-priority,
 - ❖ 30-35% are low priority,
 - ❖ 5-10% are high priority

- ❖ **"Donation management is the most difficult part of every disaster,"** he said of the unsorted mountains of clothes. "We have a little bit of everything.".... (Caller-Times, 2005).
- ❖ "Sometimes generosity can go awry."... In Katrina's immediate aftermath... collection sites along the Mississippi Gulf Coast became "nothing more than dump sites"..." (Times-Piscayune, 2005).



2010 Haiti

28

- ❖ “Nobody seemed to know exactly what was on the boat, or who actually sent it. One rumor was that it was from Costa Rica.” “The boat it turned out had mostly packed everything right after Sanitation had been more might have (National P



DC in Tohoku: 1/3 of staff handling clothing

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2016 Alberta fires Act 1 (early on May 13)

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'Desperate need' continues for donations of basics for Fort McMurray evacuees

Effective Saturday there will be only one site for donation drop-offs in Edmonton, at 3870 98 Street.

By Lydia Neufeld, CBC News | Posted: May 13, 2016 5:45 PM MT | Last Updated: May 13, 2016 5:45 PM MT



Water, dog food, diapers and canned food are among the donations for Fort McMurray evacuees. (CBC)

There is still a "desperate need" for donations of basic necessities for Fort McMurray residents displaced by a wildfire.

The Edmonton Emergency Relief Services Society **emphasized the need, and issued another call for volunteers**, as it announced Friday that it will centralize the drop-off location for donations.

"Donations need to keep coming," said spokesperson Nicole Geoffroy.

"Donations need to keep coming," said spokesperson ...



2016 Alberta fires Act 2 (later on May 13)

34

www.nationalpost.com/m/wp/blog.html?b=news.nationalpost.com/news/canada/after-fort-m hotel habana libre

After Fort McMurray fire, Alberta copes with 'second disaster' of misguided donations

Tristin Hopper
Friday, May 13, 2016

With the initial disaster now passed, Alberta evacuee centers are now v the dark side of Alberta's famed post-disaster generosity, whole truckloads of donated goods that are soiled, unnecessary and getting in the way.

"NO USED DONATIONS CAN BE ACCEPTED," reads the all-caps warning in a Thursday statement from Edmonton Emergency Relief Services. Similar pleas were posted on the doors of evacuation centres throughout Alberta, with Facebook pages similarly abounding with accounts of supply truckloads being turned away.

"Do not forcibly donate food to shelters in Edmonton," wrote one volunteer. "We cannot use it and it WILL go to waste."

**"NO USED DONATIONS
CAN BE ACCEPTED"**



At the Edmonton Emergency Relief Services which is coordinating donation efforts for Fort McMurray evacuees. ED KAISER



Implications

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- ❖ We need to proactively deal with LP/NP convergence
- ❖ The huge volumes of NP-MC produces major impact at entry points, and at the disaster site
 - ❖ Impacts at entry points
 - ❖ Increased congestion due the vehicular traffic
 - ❖ Increased delays due to lack of proper documentation (bill of lading, manifest, consignees)
 - ❖ If not controlled → they impact the disaster site
 - ❖ Impacts at disaster site
 - ❖ Only a fraction of the massive volumes of cargo are actually needed at the disaster site
 - ❖ More often than not, the incoming trucks dump the cargo anywhere they can

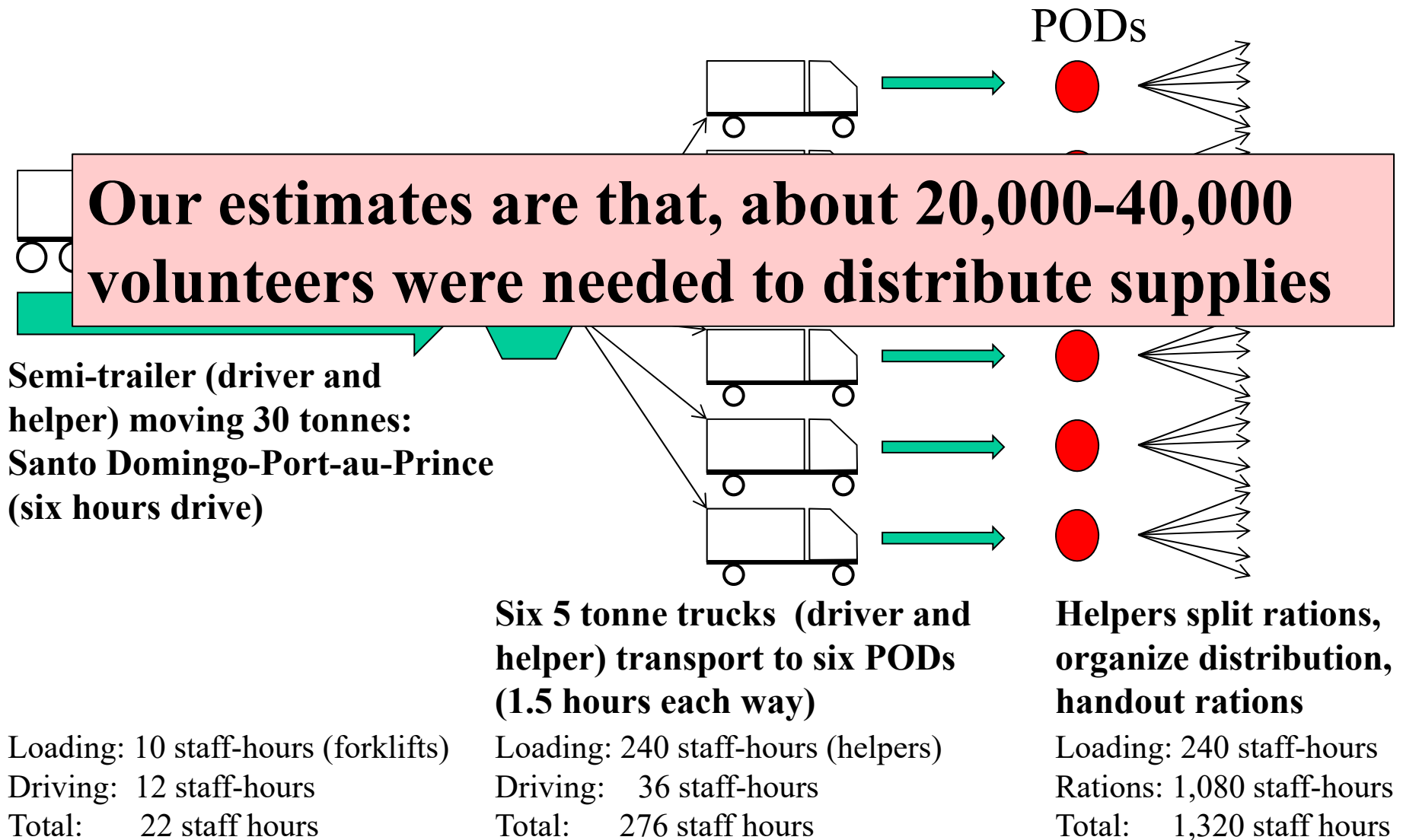


Lesson #5-A: In Catastrophic Events the Local Distribution Is The Most Difficult Challenge...



Resources (staff-hours) consumed

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Relative manpower used → 1:12:60

Lesson #5-B:

Only the Collaborative Aid Networks Can Do the Local Distribution Effectively (Haiti's Lesson)



Why did this happen?

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The New York Times

Sunday, January 17, 2010 Last Update: 10:50 AM ET

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Aid Arrives but Stalls in Haitian Chaos



Jae C. Hong/AP

◀ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 ▶

People ran toward a U.S. helicopter as it made a water drop near a country club used as a base.

Access Limited by Damage in Capital

By GINGER THOMPSON and
DAMIEN CAVE

A sprawling assembly of
international officials and
aid workers struggled to fix
a troubled relief effort.

- [Quake Ignores Class Divisions](#)
- [Clinton Goes to Haiti](#)

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THE LEDE BLOG

10:21 AM ET | Information
and calls for help **continue**
to spread online.

10:05 AM ET | Doctors
Without Borders **is having**
trouble getting into the
airport, which is effectively
under U.S. control.

Looting Flares Where Authority Breaks Down

By SIMON ROMERO and MARC
LACEY

The impulses for theft were
borne of desperation and the
lack of food and water as
well as the absence of law.

- [Satellite: Before and After](#)
- [A Haitian Literary Sampler](#)

OPINION »

Clinton and Bush: A Helping Hand for Haiti

Bill Clinton and George W.
Bush write about how aid
can be delivered and why
there are reasons to hope for
Haiti's future.



Stephen Crowley/The New York Times

- [Op-Ed: Rebuilding Haiti](#)
- [Rich: Tea Party Rip-Off](#)
- [Dowd: An Odd Couple](#)

- [Kristof: Giving's Reward](#)
- [Friedman: Our Sputnik](#)
- [Editorial: Bank Reform](#)

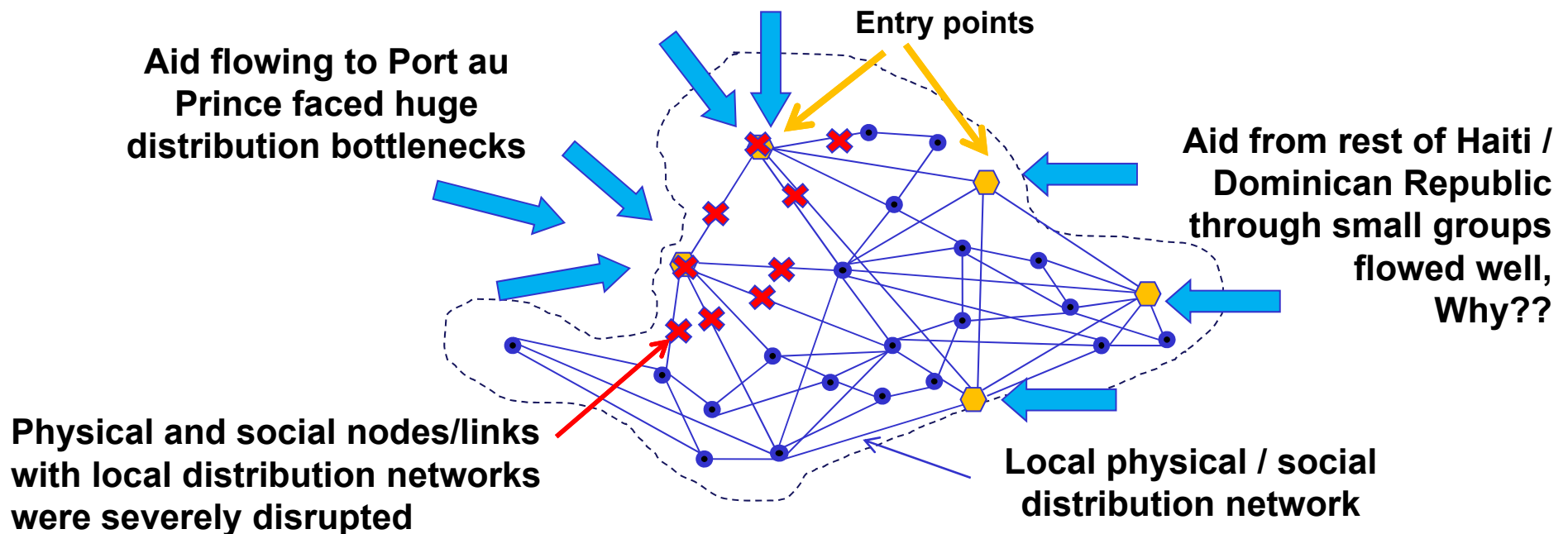
NEW YORK GETS JACKED



The Cause of the Problems Seen in TV...

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- ❖ The earthquake severely disrupted the centers of power (Government, United Nations, Catholic Church) removing the natural interlocutors of foreign (outside) aid groups



The crisis could have been avoided if the local business class would have helped the foreign aid groups
(could not find evidence that they helped much)

ACEs in action

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CANs in action: Servicio Social de Iglesias

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- ❖ After large catastrophic events, the most efficient way to distribute critical supplies at the local level is through the use of the existing social networks
 - ❖ Extending the mission of these networks is easier than creating a network from scratch
 - ❖ Outside efforts are doomed to be ineffective for distribution:
 - ❖ They are not geared for that, their strength is long-haul
 - ❖ Too many PODs are needed: cars are not an option, people cannot walk several miles to get supplies
 - ❖ Not enough man-power to man the PODs needed
 - ❖ Not enough local know-how



Lesson #6: Effective Private Sector Integration is Key (The Chief Lesson from the Tohoku Response)



Post-disaster humanitarian logistic operations

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- ❖ Inauspicious start, no agency was prepared
- ❖ During first 6 days, a very limited amount of critical supplies reached IDPs (some did not get any)
- ❖ There was looting...not reported in the press
- ❖ The needs were not being met...a crisis underway
- ❖ Then, a handful of food distribution companies:
 - ❖ Realized that private supply chains were not working, and that the government was not aware of the looming crisis
 - ❖ Approached the (surprised) government and volunteered to deliver supplies, it took them a week to start deliveries (others were turned away because of the fuel issue)
 - ❖ Volunteered for a month, fell trapped (government did not want to pay, they could not stop the service)

Implications

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- ❖ Private sector participation is crucial
- ❖ For this participation to be effective, certain conditions must be met:
 - ❖ Both sides, public and private, must know each other
 - ❖ Public sector must plan for private sector help
 - ❖ Private sector must have a clear idea what is expected... among others...



Lesson #10: Comprehensive Approaches Are Needed to Ensure Efficient Logistical Responses



Recommendations

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- ❖ Create a logistic committee to integrate civic society
- ❖ Control material convergence
- ❖ Control precautionary/ opportunistic buying
- ❖ Design scalable response plans
- ❖ Preposition critical supplies and equipment
- ❖ Develop supporting technologies and systems

Thanks!

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