

EERI-NSF Rapid and Research Needs Workshop

Breakout Session Title: Logistics & Networks/Organizational Coordination

Discussion Leaders and Recorders: Barry Goodno, Jose Holguin-Veras, and Jun Zhuang

Panel Members: Jean-Robert Altidor, Louise Comfort, Ozlem Ergun, Jose Holguin-Veras, Catherine Peters, Deborah Thomas, and Tricia Wachtendorf

Session Overview: Logistics & network/organizational coordination are critical but not well studied in emergency management. Further studies are therefore desired in three major areas:

Establishing effective information/knowledge systems

- How to establish effective information/knowledge systems, which could serve as a virtual sharing platform, function multi-jurisdictionally and multi-lingually, and could acquire and archive data efficiently?
- How to establish a mechanism to transfer technology and knowledge among locals, and across organizations?

Understanding disaster response networks

- What are the characteristics of multi-layer disaster response networks, including physical, social, informational ones? How do they integrate with each other?
- How can the performance of networks be measured, in terms of fragility, scalability, reliability, redundancy, connectivity, coverage, and interdependencies?
- What are the system interdependencies within, between, and among networks? What are the possible cascading effects when network infrastructure breaks down?
- What are the characteristics of network adaptability or robustness to changing conditions?
- How can mixed methods of qualitative analyses/mathematical modeling /simulation be used effectively to study networks in disaster mitigation, response, and recovery systems?
- How can the degree of centralization of networks be measured, appropriate to the context?
- How can the appropriate balance between efficiency and equity be achieved?
- How can the impacts of alternative response scenarios be evaluated, considering social costs/benefits?

Studying communication and coordination

- What/how/when/to whom/from whom to share information?
- How can communication and coordination in both inter and intra organizations/networks be assessed in dynamic environments?
- How can varying degrees of proficiencies and capabilities among organizations be reconciled?
- How can incentives and disincentives (penalties) be used to design and manage networks?
- What are the impacts of heterogeneity among different organizations in social practice and culture? What are the challenges and possibilities? What are possible characterizations and typologies?
- What are the longitudinal/long term issues in communication and coordination studies?