

Preparedness

Co-leaders

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Participants

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Summary Discussion

- Strategies for being effective within an atmosphere of corruption
- Development of effective models of community-based participatory activities for mitigation and preparedness.
- Development of economically and culturally appropriate mitigation and preparedness measures.
- Development and assessment of grass-root strategies for timely education and technology transfer, including guidance on appropriate construction practices.
- Development and assessment of methods for providing mechanisms/incentives for risk-reduction activities.
- Strategies for focusing on systems approach to critical facilities, equipment, networks and human resources, in a fragile society.



Summary Discussion

- Strategies to address fragmentary nature of institutions and lack of vision; capacity building around coordination, organization, communication and network planning.
- Strategies to optimize performance of interacting human/physical networks.
- Develop data and methodologies for reliable cost-benefit assessments to help prioritize resource allocation in the developing world
- Development and assessment of effective communication strategies in the developing world setting.
- Evaluation and articulation of differential impact of preparation and mitigation activities, and social justice considerations.
- Development of technical basis for reconstruction of engineered and non-engineered buildings and community



Breakout session #2

Response 1

Leaders

Cecilia McHugh, Tricia Wachtendorf

Participants

Ozlem Ergun, Chen Li, David McEntire,
Khalid Mosalam,

Response to Research

- Goals: How to acquire and disseminate information in time of crisis? Create low cost low maintenance technology that can be rapidly implemented.
- Technology has to be good to be able to work with communities in Haiti and other locations and to develop research tools (i.e., cell phones).
- Low cost technology solutions: for example, scanners implemented in camps that can alter camp management for an effective solution. Research in these low cost technology can be used in response efforts.

Response

- How does data acquisition for example in earth sciences helps in the reconstruction process. For example assessing seismic risk based on surveys and rapidly disseminated through the web.
- Cameras can be used in assessing in the transportation network roads, ports, airports.
- Working in deploying networks of sensors that can be prepared and applied rapidly. This would include satellites and airborne photos to quantify damage, collapse (degree of collapse), road blocks.
- How do you apply this technology to be more effective in our rapid response?

Response as related to society

- Impact of interventions to the extent in which reduces and magnifies social vulnerability.
- Interaction between local sensors and global needs of the country.
- Improve or device avenues of communication between the ground needs and these new sources of information.

Breakout Session #2 – Response 2

Leaders:

Catherine Peters and Harvey Rhody

Participants:

**Norma Alcantar, Sean Gulick, Jose Holguin-Veras,
Scott Olson, John Yen**



Discussion Context

-- How do we define what is meant by
“RESPONSE”

-- What are the types of RESPONSE NEEDS

- Disaster Response – humanitarian -- what is the time frame? How do we define when this ends and when transition and recovery begin?
 - Immediate – first week: medical needs, search and rescue, immediate housing, building inspections, and immediate food and water, immediate electric power Stabilize
- Disaster response – research – immediate data collection
 - Geological
 - Structural and Infrastructure damage
 - Information and communication needs



I. Research needs related to the humanitarian disaster response

- What is the “optimal” way for a network of aid efforts and organizations to work in concert. For example, how to influence donation patterns, such as unsolicited donation patterns?
 - Research needed:
 - data collection – supply chain, relief effectiveness.
 - Modeling: systems modeling: disaster response modeling. Build new knowledge about how post-disaster relief functions.
 - Identification of immediate resource requirements. FEMA has this for the U.S. How does this translate to an international context?
 - Need to study bureaucratic barriers to RAPID research response. Examples include:
 - Need for IRB certification for human interviews
 - Difficulties getting research equipment into Haiti
 - Getting samples out of Haiti

II. Research needs related to civil engineering in the context of earthquake hazards

- Data collection for verification of modeling codes that predict infrastructure response to earthquake loads. In particular, the role of uncommon soil types – now much known about this. Also, there is much that can be learned from examining the structures that remained standing but were damaged. Also, once there is a hazard microzonation map, structural damage data serves to validate those predictions.
- Note – this activity serves two purposes ... can be used for the humanitarian need of structural safety assessment, for the immediate need of advising people which buildings are safe and not.

III. Research needs related to geosciences/ earthquake physics

- The impact of this knowledge – better understanding of the physics of earthquakes and exacerbating and mitigating factors, and better prediction of future hazards
 - Research questions: Were there any surface ruptures, and what is the pattern of the rupture?.
 - Research question: Secondary effects? E.g. Landslides and tsunamis, liquefaction, lateral spreading.
 - Research needs: Documenting uplift and subsidence.
 - Research need: looking for an event signature – the record of this event in the sedimentary layer
- Data collection needs: onshore and offshore imaging and field observations and field sampling

IV. Research needs related to information and communication systems

- What is the optimal information systems to get the information of needs/supplies to the right people in the right time frame?
- To what extent do these decisions have to be made on a centralized basis?
- How to information dissemination to decision-making, responders and the public?

TRANSITION AND RECOVERY I

Co-Leaders: N. Emel Ganapati, Stephanie Lansing

Participants: John Bevington, Roger Bilham, Louise Comfort, Ann Margaret Esnard, Robert Fleischman, James Kendra, Kevin Meehan, Mimi Sheller, Amenold Pierre, Anna Lang



Summary Discussion

- Sustainability (definition from Haitian perspective, sustainable/locally appropriate designs/processes for buildings, sanitation, health, educational systems, environment and infrastructure)
 - Impact of rebuilding on environmental resources
- Understanding, monitoring and evaluating existing organizational structures, coordination, and processes and how links can be created among existing and emergent networks
- Decentralization/deconcentration (assessment, facilitation, needs, infrastructure, cultural perception)
- Markers of speed and quality of recovery (e.g., education, mental health, defining the matrix for defining the end of displacement)
- Comparative studies of other countries/regions to develop sustainable recovery models that could be applicable to Haiti



Summary Discussion

- Understanding community (rural and urban) participation/organizations
- Interdisciplinary approaches to monitoring migration, access to resources, and determining how links can be made between existing organizations
- Understanding cultural perceptions in building designs and sanitation
- Historical research (how international communities contributed to vulnerability and recovery efforts from past disasters)
- Recovery of vulnerable groups and inequalities
- New approaches to complexity, mobilities and emergent networks
- Legal context of land tenure – forced evictions
- Time-scale (again, better understanding of Haitian cultural contexts)



Transition and Recovery

Co-leaders: Franco Montalto (Drexel), Guitele J Rahill
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Summary Discussion: Transition and Recovery

- Engaging in research to inform / understand relationship between transition /recovery and the Haitian context

- **Barriers to and Facilitators of Transition and Recovery**

- Technical : Appropriate and efficient technology

- Logistical

- Historical factors

- Lack of Planning

- Social/ Cultural/ Political

- **Additional considerations**

- Acknowledging the continuum of basic and applied research and how what we are doing in Haiti fits on that.

- Researchers as Articulators/ Translators/ Disseminators of Research Findings to inform Recovery/ Transformation process

- Fostering Haitian Institutional (govt) support for research

- Development: Reduction of vulnerabilities

- Structural Concerns

- Links with Diaspora to Optimize Recovery/ transformation process in Haiti and ultimately in other contexts impacted by disaster



Summary Discussion: Transition and Recovery

- Development of tools to conduct quick post disaster assessment/ evaluation that optimize sustainable long term recovery with reduced risk
- Identification of strategies for reinforcing/ strengthening/ salvaging structures by retrofitting- including development of building standards that mitigate damage and loss of property and life in future disasters
- Identification of locations/ materials, policy solutions for solid structures related to temporary shelters and long term housing, towards restoration of permanent housing
- How to incorporate identified transition challenges to re-housing (governance and coordination, logistics, assessment issues) into action that impact long term transition, and insuring that post recovery level is better than pre recovery conditions (outcomes):
Transformation vs recovery
- Understanding the relationship between the development process and the recovery/ transformation of post earthquake Haiti
- Defining conceptual framework for understanding feedback loop between different development *processes and disaster cycle...contextualizing recovery* in time/ history
- Contextualizing recovery in terms of grassroots needs and expressed definition of recovery..linking technical issues to social issues

