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Collaborations for Effective Disaster Resistant Universities

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A Collaborative Approach for Building Internal Disaster Resilience Capacity: A Case Study of the University of New Orleans Disaster Resistant University Project

PART TWO: LESSONS LEARNED FROM A DISASTER-RESILIANT COMMUNITY – POST DISASTER!

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Building Disaster Resilience at UNO Pre-Katrina

- Obtained DRU Grant from FEMA in 2004
- Formed an interdisciplinary project team
  - Urban policy and planning faculty
  - Environmental sociology faculty
  - Civil engineering faculty
  - Facilities administrator
- Formed an advisory team
  - Key administrative unit leadership

Building Disaster Resilience at UNO Pre-Katrina (con't)

- Obtained top-level support *
- Used a collaborative model *
  - Obtained broad stakeholder support
- Unique capacity-building approach *
  - developed in-house expertise in development of disaster resilience *(a good idea!)*
- Completed Plan in August 2005 – it was a good, holistic plan
- Did not fully implement the plan *(big mistake!)*

What Katrina Did

- 1/3 of university flooded
- Significant looting and vandalism to buildings
- Extensive damage to residence halls (flood)
- Water damage to all buildings (wind, roof)
- Mold problems in all buildings (see above)
- Adversely impacted ability to communicate with faculty, staff and students (hampered recovery)

What We Think We Did Right

- Made Herculean effort to re-establish communications with university community *
- Established an off-site HQ *
- Created an alternate email server
- Got faculty and staff involved in regional recovery effort *
- Designated alternate class meeting locations
  - Physical and distance learning

What We Think We Did Right (con't)

- Focused on business continuity (research, teaching and outreach) *
  - Conducted classes within 6 weeks of impact (first university in New Orleans to do so)
  - Established student, faculty and staff housing -- FEMA trailer compounds *
  - These were a critically important steps in retaining our student population, encouraging students to return to the City, and contributing to the regional workforce.

What We Think We Did Right (con't)

- Created some degree of financial independence by reopening revenue producing activities *
  - Arena, fitness center, food outlets
  - Reduces need for financial dependency upon State and Federal resources

What We Could Have Done Better

- Implemented our mitigation plan *
  - Moved students *(pre-K plan was a lot like N.O.!)*
    - Personal plans, pets, resources, sites, cultural sensitivity
- Had alternative communications networks *
  - Email addresses
  - Servers
- Had a hardened site on campus for operations and police
  - On-site observation of rising floodwaters; policing of looters; coordination of evacuees

What We Could Have Done Better (con't)

- Mold is a hazard – both from rising water and building leaks
  - Have a mold remediation plan
  - Very dependent upon access to campus
    - Plan to house, feed recovery personnel

What We Could Have Done Better (con't)

- Adopted a broader definition of "off-site"
  - For catastrophic, regional disasters, especially hurricanes, "off-site" means hundreds of miles away.
    - University database recovery
    - People out of harm's way
- Developed a community mutual assistance plan *
  - Student, faculty, staff sheltering
  - Academic/Research continuity – sites, distance learning adaptability
  - Lesson learned for other communities? Expand the "sister city" concept?

What We Could Have Done Better (con't)

- Better understand our community's dependence upon critical infrastructure…i.e. electricity, water, telecom, transportation *
- Conduct an aggressive outreach program that is updated, inclusive, and continuously improved. *
  - More student involvement
  - More community involvement

A Reassessment of UNO's Disaster Resiliency Post Katrina

- Additional data points re vulnerability – *capture them!*
- Re-prioritize vulnerabilities
  - Looting, vandalism and long-term flooding move upward
- IMPLEMENT, IMPLEMENT, IMPLEMENT

Lessons *Re*-Learned for Building Disaster Resilience

- Protecting the lives and health of the students, faculty and staff remain paramount.
- Reducing the exposure of the community's existing and future buildings, contents, utilities, and infrastructure to damage by natural and human-caused hazards is important.
  - We need to do a better job of this by addressing a broader range of mitigation strategies.
  - This will improve our ability to resume our core business of conducting research, educating students, and participating in community outreach.

Lessons *Re*-Learned for Building Disaster Resilience (con't)

- We need to do an even better job of mitigating the vulnerabilities of certain special resources in the community that are critical to our mission -- the Library, student housing, and university records. i.e. "selective resiliency"
- We need to ensure that outreach and education regarding disasters is a continuous process that includes all stakeholders.
- We must have the necessary emergency response facilities, equipment, staff, and procedures in place to minimize the danger and damage to people and property during a disaster, with minimal reliance on outside sources of assistance.

Lessons *Re*-Learned for Building Disaster Resilience (con't)

- And finally…
  - We need to take a "Total Quality Management" approach to ensuring disaster resilience…we must adopt paradigms of "continuous improvement," and develop the community as a "learning organization."

Emerging Issues

- Utility of an all-hazards based mitigation plan when based on event probability?
  - Hurricane #1 vulnerability (emphasis on wind, storm surge that results in short-term floodwaters)
  - Levee failure #14 vulnerability (long-term flooding very different problems)
    - *All you can do is rely on past data OR is there something problematic with using all-hazards for low-probability, high consequence events?…Is this a Type I error, theory? Type II error, implementation? (YES, in this case). Other examples: New Madras, 9/11?*
- What should be the role of a public university within a larger community when disaster strikes?
  - Moral/ethical/legal issues, “good neighbor”
  - Just how “attractive” to do you want to make your campus?