

**ND Energy Faculty Luncheon Seminar
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**"Building Community Resilience: Practical Lessons for a Changing Climate"
Tracy Kijewski-Correa**

Brief Recap

Most disasters are measured based on frequency, magnitude, and increasing migration. Studies must involve engineering, social science, and policy. The U.S. is good at forecasting, evacuation, and displacement. The "Billion Dollar Disaster" means a climate change event that causes a billion dollars in losses. This is the new moniker due to the increased number of natural disasters since 2005. Most losses are driven by hurricanes.

Resilience is the ability of a system to resist, absorb, accommodate, adapt, etc. In other words, the ability to take the punch and come back! Sometimes, communities never recover, or it can take decades. "Build Back Better" is today's panacea. When you ask communities what matters to them in terms of measuring progress and recovery, the following are the services that should remain intact or return to their pre-event infrastructures: Public Services, Local Economy, Housing, Healthcare, Education, and Non-profit Services. We must make an effort to learn and then use the micro and macro models to make decisions, especially in making policy changes. The group, StEER, meaning Structural Emergency Event Reconnaissance, is studying the lifecycle of affected communities, starting with field observations – go see it and study it within the first 24 hours, research and development, and research translation.

The current Engineering standards are focused on 'building for survival' and not 'to build for resilience'. These standards have not changed because there is no 'policy will'. DYK: there are no building codes across the Deep South. There is a much higher cost to 'design for tomorrow', than there is to continue to 'build for efficiency'. We need to rethink how we are doing things, e.g., HDP Nexus = Humanitarian Response, Development, and Peace Building. HDP Nexus will be implemented this summer through Keough School's I-Lab in countries that are most vulnerable and have fewer resources.

Lessons Learned

- Lesson 1: Build systems, not houses, well before the storm. To support self-recovery, we need to rebuild organically and not through handouts.
- Lesson 2: Message today's co-benefits, not tomorrow's consequences. Create incentives and align benefits and cost timelines.
- Lesson 3: The past no longer predicts the future. There are no models to follow; everything is historic, even human behavior.
- Lesson 4: Innovate local knowledge rather than importing solutions. Enhance vernacular construction and find nature-based solutions.
- Lesson 5: Leverage local cooperatives to root adaptive practices.
- Lesson 6: Know when it is time to hide, and when it is time to run. Allow things to break to preserve more of the community.
- Lesson 7: Build resilience today to prevent compounding tomorrow. The complexity of compounding disasters creates less of a likelihood for recovery.

Q&A: The two biggest priorities are (1) housing – fighting for it to be part of the infrastructure, and (2) Claims System – have it based on seasons and not individual events, due to compounding events that make it impossible to separate damages. Building energy efficiency/sustainability with resiliency gives people a '2 for 1' and will help them move.