

OIL SPILL: COLLABORATIVE RESEARCH OPPORTUNITIES

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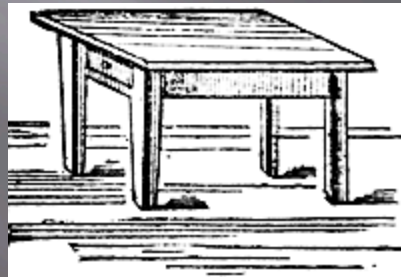


Scope

- ▣ Suggested goal of collaborative research efforts:
 - improving community and regional resilience to major impacts
 - ▣ Resilience defined by a community's ability to absorb disaster impacts and rapidly return to normal socioeconomic activity. (Lindell)
 - ▣ Major impacts are physical impacts and social impacts. The physical impacts are damage and casualties whereas the social impacts are psychosocial, demographic, economic, and political effects of the physical impacts.

Framework

- ▣ Collaborative topics should use a systems approach to disaster resilience, dependent upon four “legs”:



- Resilient Social systems (Comfort)
- Resilient Technical systems (Comfort)
- Resilient Political systems (Leavitt & Kiefer)
- Resilient Business systems

Potential Collaborative Research Opportunities:

- ▣ Will recognize that the creation of a disaster resilient region will involve require complex support systems (social, technical, policy and business)
- ▣ As a holistic system, there are critical interdependencies in the systems model
- ▣ Systems are often weakest where the sub-systems interface (e.g. socio-technical, policy-business, etc.) (Perrow's *Normal Accidents*)
- ▣ Interdisciplinary research teams to address complex problems are required

Examples of Collaborative Research Opportunities from Two Comparable Incidents:

- ▣ Technical systems were vulnerable in Valdez, were vulnerable in Gulf (engineers, psychologists)
- ▣ Failure to gauge the magnitude of the incident (intergovernmental/interagency communication)
- ▣ Lack of response planning; especially dispersants (emergency management, environmental scientists).
- ▣ Lack of pre-positioning of response assets slowed response, exacerbating impact (emergency management)
- ▣ Failure to follow procedures caused incidents (safety engineering)

Key Issues for Comparison

- ▣ Policy/Political systems were dysfunctional
 - No Presidential Disaster Declaration in either catastrophe (Sylves)
- ▣ Business systems were hit hard
 - Failure to ensure that recovery efforts involve those most adversely impacted in local communities
 - Severely curtailed business revenue impacts –
 - ▣ Cripples ability of local governments to continue to provide services, particularly community services
 - ▣ Causes layoffs of public officials, teachers
 - ▣ This, in-turn, has negative affect on social support services.

Conclusion

- ▣ Little is being done to effectively plan for some potentially catastrophic events. This was evident in the Valdez accident, Katrina (McCormick), and the Deepwater Horizon leak.
- ▣ Collaborative research must take an interdisciplinary, systems approach
- ▣ Highly technical catastrophes with low probability of occurrence but high consequences continue to present significant planning challenges (Perrow, Leavitt & Kiefer)

Questions?

