National Hazard Readiness

Lecture Objectives:

- compare 1975 and 2000 states of hazard readiness
- awareness of future directions
- understand concept of sustainability
First U.S. Hazard Assessment

*National report by Gilbert White (geographer) and Eugene Haas (sociologist)*


**Main Findings - 1975**

- dominated by technical/science fields
- efforts are sporadic (event-based)
- unorganized, lacking funding programs
- lacking baseline information
We must learn something that no nation or group of nations yet has mastered: the art of helping others to improve their lot even as differences between them grow. In a world increasingly organized on principles of individual and national equality, this will be a staggering test of sensitive understanding, cooperation, and communication. - Gilbert F. White
1975 Assessment Accomplishments (direct and indirect)
- created a single hazard agency (FEMA) by Pres. Carter

- provided awareness of hazards and needs, prevention and mitigation

- began process of communication across disciplines, social and scientific

- developed a clearinghouse of disaster information NHRAIC (http://www.colorado.edu/hazards/)

- many of the hundreds of recommendations (152 in research alone) now standard
1975 Assessment Failures

- no creation of specific post-disaster audits
- no comprehensive longitudinal studies
- state-level disaster agencies - not funded, not involved
- no congressional committee overseeing hazards
- political action tends to focus on short-sighted, provincial agendas
- reliance on technology to remain safe, recover
What’s Missing from Assessments?
  - Litigation, liability issues
  - Resource allocation: how much is a human life worth?
  - Is true "multidisciplinary" research possible?
  - Do academic, government systems help or hinder crossover work?
  - Weakest link? Communication - always.

- why are disaster losses increasing?
- what is sustainable mitigation?
- strategies for improved mitigation?

Some changes have impacted hazards study independent of any recommendations:
- computers
- Internet
- environmental, physical, chemical models
Mileti (1999) - what is sustainable mitigation?
- maintain and enhance environmental quality (ecosystem)
- maintain and enhance quality of life (social needs)
- foster local resiliency and responsibility (protection)
- foster vibrant local economies (mitigation does not hinder livelihoods)
- ensure social equity (both across current divisions, and future generations)
- adopt local consensus building (full participation)
Mileti (1999) - Proposed tools for improvements

- **Warning Systems**: technology increased detection, but not dissemination; more baseline data, more technology, integrate with specific needs (warning times, levels of danger)

- **Insurance**: take a more active role (incentives); data on cost-effectiveness (mitigation vs insurance repair), scenario modeling, measures of insurance capacity to respond

- **Technology**: computers, GIS, satellites
Mileti (1999) - proposed tools
-Engineering
  -Codes: adapted with experience, but need assessment, social impacts, monitoring
  -Research: more technology wanted
  -Hazard-specific: more technology, dissemination, integration with specific needs

-Preparation/Recovery:
territorial issues, training,
understanding of social response to hazards, long-term action

-Economics: assessments of cost vs benefits for people, structures, resources

Economics and Science Building, National University, San Salvador, following 1986 earthquake.
What’s missing from evaluations?

- Litigation, liability issues

- Resource allocation: how much is a human life worth?

- Is true "multidisciplinary" research possible?

- Do academic, government systems help or hinder crossover work (timeframe resolution of studies)?
WASHINGTON, DC—Over 87 percent of Americans are unprepared to protect themselves from even the most basic world-ending scenarios, according to a study released Monday by the nonpartisan doomsday think-tank The Malthusian Institute.

Despite "more than ample warning" for the most likely means of worldwide destruction, less than one million American households have taken even the simplest precautions against nuclear shockwaves, asteroid impact, or a host of angels bearing swords of fire, the study concluded.

"All in all, America gets an 'F' for end-of-the-world preparedness."
U.S. Apocalyptic Vulnerabilities

- Mountain West insufficiently shielded against direct comet strike
- Direct solar gamma-ray burst would destroy non-reflective portions of Eastern Seaboard
- California mentally unfit to withstand sub-50° temperatures of Global Ice Age
- Meat-dependent Midwest would almost certainly starve in event of pan-species extinction
- Texas actually fairly well-prepared for anything that can be shot at or run over by a truck
- Over-preparedness for Rapture in Deep South has led to shortage of nuclear-winter supplies