

Future Trends and Implications

Objectives:

- 14.1 Demographics
- 14.2 Technology
- 14.3 Professionalism and accreditation
- 14.4 Academia
- 14.5 Improving the disaster recovery model in the United States

Demographics

- Rapid urbanization and migration from rural areas
 - Los Angeles (earthquake)
 - Miami (hurricane)
 - New Orleans (hurricane, flood)
- An eventual Hispanic majority
 - Language, culture, political factors
 - Political power
- Growing number of non-English speaking population

Demographics

- Growing elderly population
 - Hospitalized and infirmed
 - Disaster response and resident mobility
- Migration of individuals to high hazard areas
 - Coast
 - Urban-wildland interface
 - Earthquake-prone areas of the west coast
 - Floodplains
 - Steep-sloped areas (prone to landslides)
- Hazardous areas and quality of life

Technology

- Geographic Information Systems
 - Hazard identification and analysis
 - Identification of at-risk populations
 - Deployment of resources
 - Post-disaster assessments
- Remote sensing
 - Regional-level images
 - Impact area images

Technology

- Computer modeling
 - Simulation of hazard scenarios
 - Visualization and training
- Risk assessment tools
 - Challenges
 - Determining acceptable risk
 - Establishing comparable baseline data
 - Interpreting and disseminating the findings
 - Developing methods that can be used by various stakeholder groups
 - HAZUS-MH

Technology

- Computer-based communications
 - Internet
 - World Wide Web

Adapted from Disasters by Design: A Reassessment of Natural Hazards in the United States. 1999. Chapter 8: Innovative Paths and New Directions. pp.,. 241-265

Technological Issues and the Future of Recovery

- The use of data management techniques to aid in decision making
 - Gathering, analyzing and displaying information
 - Shrinking state and local budgets, increased federal expectations and rapid development in known hazard areas
 - Optimizing available resources
- Recognizing the balance between technology and the user
 - Capability
 - Accreditation
 - Shared governance
 - Developing alternatives

Technological Issues and the Future of Recovery

- Use of technology
 - Over reliance on technology
 - Using tools that exceed technical, fiscal or administrative capability
 - Sharing information
 - Interoperability

Professionalism and Accreditation

- The profession of emergency management
 - Lack of understanding among Congress, state legislators or locally-elected officials
 - Low pay relative to other municipal or state jobs
 - Response-oriented focus
 - Shift towards a more comprehensive set of duties
 - Adopting widely recognized standards

Emergency Management Accreditation Program

- 14 emergency management functions and 54 standards
- Developed by practitioners
- State and local government evaluation
 - Documentation

Emergency Management Accreditation Program

- Primary goals
 - Established structure for identifying areas of improvement
 - Method for strategic planning
 - Catalyst for improved interoperability and professionalism
 - Strengthened state, territorial and local preparedness

Emergency Management Accreditation Program

- Functional areas
 - Program management
 - Laws and authorities
 - Hazard identification and risk assessment
 - Hazard mitigation
 - Resource management
 - Planning
 - Direction, control and coordination
 - Communications and warning
 - Operations and procedures
 - Logistics and facilities
 - Training
 - Exercises, evaluations and corrective action
 - Crisis communications, public education and information
 - Finance and Administration

Emergency Management Accreditation Program and Sustainable Disaster Recovery

- Emphasis is placed on federal recovery programs
- Recovery planning
- Focus on existing documents rather than their use during an event

Accreditation and Accountability

- Agency autonomy and accountability
- Bridging the divide
- Identifying needed resources
- Rivals
- State capabilities
- Change in organizational culture
- Increasing state and local capability

Accreditation and Accountability

- Disaster-based funding is not enough
- Issue salience
- Over-reliance on federal funding
- Developing and sustaining a cadre of state and local experts

Academia in Recovery

- Training the next generation of emergency management practitioners and scholars
 - Critically analyzing complex systems
- Balancing scholarship and practice
 - Educators and practical experience
 - Field research, co-teaching courses with practitioners
 - Student internships
 - Improved scholarship and education
 - Technical training

Academia in Recovery

- Technology transfer
 - Research institutes
 - Providing user-friendly guides to research findings
 - Limited rewards
 - Increased emphasis and reward for applied research
- Role of the hazards research institute
 - Distributional networks

Adapted from a paper presented at the Higher Education Summer Conference: The 21st Century Emergency Manager. Smith, 2002.

Improving the Disaster Recovery Model in the United States

- Sustainable redevelopment and multi-objective planning
 - Encourage and reward sound pre and post-disaster recovery planning
 - Needs based funding
 - Reduced cost-share requirements
 - Recovery planning research

Improving the Disaster Recovery Model in the United States

- Take advantage of available resources
 - Array of post-disaster funding
 - Over-reliance on funding
- Build consensus through participatory planning
 - Consensus-building measures
 - Multi-objective planning

Improving the Disaster Recovery Model in the United States

- Disasters as opportunity
 - Solving pre and post-disaster problems
 - Recovery advocates and technical experts
 - Local needs and federal programs
 - Rethinking the reconstruction process

Improving the Disaster Recovery Model in the United States

- Building federal, state and local capability and commitment
 - Improving technical skills
 - National training program
 - Rethinking current recovery program implementation
 - Developing baseline recovery planning standards
 - Flexible planning approach
 - Evaluating post-disaster planning
 - Improvements based on past experience

Improving the Disaster Recovery Model in the United States

- Social learning: building on existing strengths and eliminating chronic weaknesses
 - After action reports
 - FEMA Disaster Recovery Task Force
 - President's Action Plans for Long-term Recovery and Redevelopment
 - Hazard mitigation success stories
 - Grant program emphasis
 - Institutional or programmatic changes

Improving the Disaster Recovery Model in the United States

- Facilitating the sharing of lessons learned
 - Emphasizing the stated role of EMAP to share lessons learned
 - Developing lessons learned across stakeholder groups
 - Improving the dissemination of findings

Improving the Disaster Recovery Model in the United States

- Sustainable disaster recovery – the forgotten side of emergency management
 - Disaster recovery is the most ill-defined and complex part of emergency management
 - Defining the process and steps associated with a comprehensive recovery
 - Focus on the administration of existing programs rather than assessing chronic problems facing the community

Improving the Disaster Recovery Model in the United States

- Disaster recovery is the most ill-defined and complex part of emergency management
 - Response focus of emergency managers
 - Stakeholders tasked with recovery
 - Limited coordination between planners and emergency managers
 - States, FEMA and recovery programs
 - State assistance
 - The evolving roles of federal and state officials in mitigation and recovery
 - Roots of the emergency management profession
 - New cadre of emergency managers

Improving the Disaster Recovery Model in the United States

- Improving the link between mitigation preparedness response and recovery
 - Role of pre-disaster recovery plans
 - Notify homeowners post-disaster about preparedness and mitigation measures
 - Pre-identify mitigation projects
 - Develop response plans that identify the tasks necessary to facilitate the transition from response to recovery

Improving the Disaster Recovery Model in the United States

- Improving the link between data and planned outcomes
 - Improvements in the assessment of hazard risk

Improving the Disaster Recovery Model in the United States

- Coordination and cooperation across organizations
 - No federal coordinating mechanism – where's the plan for recovery?
 - Federal recovery plan and local needs
 - Holding state's accountable
 - Federal programmatic constraints
 - » Inter-organizational task force
 - Involving local government officials and non-profits
 - Adaptive planning
 - Federal Response Plan
 - No planning framework

Improving the Disaster Recovery Model in the United States

- The role of hazards insurance
 - Revisiting hazards insurance
 - Subsidizing growth in high-hazard areas
 - Complacency among policyholders
 - Access to insurance
 - Risk-based premiums
 - Investing in high-risk properties
 - Spreading the risk
 - Increased federal insurance

Class Discussion

- Should the federal government provide all hazards insurance to willing policy holders?
 - Arguments against federal all-hazards insurance
 - Federal government should not subsidize high risk development
 - Program solvency
 - National Flood Insurance Program
 - Catastrophic disasters
 - Limiting housing options
 - Arguments for federal all-hazards insurance
 - Risk based premiums will reduce total exposure
 - Linking premiums to hazard mitigation
 - Federal sponsorship may increase legitimacy

Improving the Disaster Recovery Model in the United States

- Crafting policy in the pre and post-disaster environment: the role of participatory planning, negotiation and policy dialogue
 - Failure to involve all relevant stakeholders
 - Participatory planning is contentious
 - Role of advocate, mediator or facilitator
 - Obtaining information post-disaster
 - Negotiation and recovery
 - Policy making skills
 - Prerequisite of emergency managers
 - Mandating negotiation to resolve policy conflicts

Improving the Disaster Recovery Model in the United States

- Crafting policy in the pre and post-disaster environment: the role of participatory planning, negotiation and policy dialogue
 - Institutional change
 - Agreement of parties to use negotiation as a problem solving technique
 - Involvement of decision makers
 - Clearly define issues
 - Dispute resolution principles and policy formulation
 - Variations in state and federal policy
 - Bargaining position

Improving the Disaster Recovery Model in the United States

- The role of adaptive planning and innovation: rewarding success
 - Recovery planning literature
 - Adaptive planning
 - Improvisation and innovation
 - Rewarding innovation
 - Reducing inefficiency
 - Modifying outdated organizational cultures
 - Facilitating change among organizations reluctant to alter the status quo

Improving the Disaster Recovery Model in the United States

- Rewards
 - Public recognition
 - Mentoring program
 - Increased autonomy
 - Reduction in cost-sharing requirements

Improving the Disaster Recovery Model in the United States

- Breaking the cycles of federal paternalism: enhancing state and local capability
 - Current system encourages paternalism
 - Episodic periods of federal assistance
 - States and local governments are not held accountable for their actions
 - Improving state and local capability
 - Identifying non-federal funding
 - Linking pro-active pre-disaster planning to incentives and penalties
 - » Disaster Mitigation Act of 2000

Improving the Disaster Recovery Model in the United States

- Creating a sustainable disaster recovery ethic
 - Educating local decision makers and elected officials
 - Integrating sustainable recovery principles into day-to-day decision making and the operations of local government agencies and stakeholder groups
 - Land use, hazards management and sustainable recovery

Improving the Disaster Recovery Model in the United States

- Educating citizens and the media: creating a less vulnerable society
 - The media and the dissemination of information
 - Harnessing the resource
 - Underutilizing the media
 - Negative reporting
 - Role of government
 - Reactionary approach
 - Standardized messages
 - Conveying preparedness and mitigation messages

Improving the Disaster Recovery Model in the United States

- The Disaster Recovery Act
 - Linking plans to tangible benefits
 - Pre-disaster funding
 - Reducing federal dependence
 - Developing a meaningful federal recovery plan
 - Creation of a national-level risk assessment
 - Federal capability assessment
 - Recovery planning agenda
 - Creation of specific goals, objectives and actions

Improving the Disaster Recovery Model in the United States

- Increased reliance on measurable outcomes/indicators
 - Improved decision making among stakeholders
 - Local, state and federal policy makers
 - Elected officials
 - Disaster victims
 - Measurable indicators
 - Achievement or accreditation
 - Reduced hazard vulnerability
 - Effectiveness of mitigation measures

Improving the Disaster Recovery Model in the United States

- Increased reliance on measurable outcomes/indicators
 - Use of measurable indicators
 - Provide defensible rationale for organizations
 - Wise use of public expenditures
 - Indicators of recovery planning benefits have not been quantitatively assessed
 - Future research
 - Pre-disaster planning versus adaptive planning
 - Quantitative benefits of dispute resolution
 - Quantitative benefits of multi-party recovery committees
 - Quantitative benefits of sharing lessons learned

Improving the Disaster Recovery Model in the United States

- Class discussion
 - The instructor and students should review Recommendations for Further Traditional Research in *Disasters by Design: A Reassessment of Natural Hazards in the United States*. Based on the course readings, class assignments and role playing exercises, students should discuss areas that may need further research.