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Disaster Research Center
Personnel

Research Staff

Kathleen J. Tierney, Director
Benigno Aguirre, Senior Faculty Associate
Joanne M. Nigg, Faculty Affiliate
Russell R. Dynes, Professor Emeritus
E. L. Quarantelli, Professor Emeritus
James M. Kendra, Research Coordinator
Tricia Wachtendorf, Field Director

* * * *

Administrative Assistant                  Library Coordinator
Kimberly Habiger                          Susan Castelli

* * * *

Graduate Research Assistants

Victor Argothy
Rory Connell
Kathleen Curry
Teresa Fahs
Mike Kiley-Zufelt
Brian Monahan
Xuewen Sheng
Nicole Vadino
Tricia Wachtendorf

* * * *
Undergraduate Research Aides

Pamela Borkowski  
Jamie Cochran  
Elizabeth Curtis  
William Keefer  
Erin Mell-Taylor  
Annie Tanverdi  

Brittany Campbell  
Jill Cope  
Michael Edwards  
Karen Manship  
Susan Sullivan  
Edward Wykowski

***

Resource Collection Staff

Christine Bush  
Justin Logue

***
2001 Publications

Book

Tierney, Kathleen J., Michael K. Lindell, and Ronald W. Perry


Articles and Book Chapters

Aguirre, Benigno


Chang, Stephanie E., Adam Z. Rose, Masanobu Shinozuka, and Kathleen J. Tierney


Nigg, Joanne M. and Dennis Mileti


Quarantelli, E. L.


Technical Reports

Wachtendorf, Tricia and Kathleen J. Tierney

Disaster Resistant Communities Initiative: Local Community Representatives Share Their Views: Year 3 Focus. Newark, DE: University of Delaware, Disaster Research Center. Final Project Report No. 47.

Wachtendorf, Tricia, Rory Connell, and Kathleen J. Tierney with assistance from Kristy Kompanik

Kompanik, Kristy L.

“Implementation of Federal Programs at the Local Level: An Examination of Sara Title III Local Emergency Planning Committees and Project Impact.” Center for Energy and Environmental Policy, University of Delaware, Newark, DE.
Academic Presentations

Aguirre, Benigno


Connell, Rory

“Hospital Rehabilitation Impediments and Incentives.” Presentation at the Natural Hazards Workshop, Boulder, Co, July 18.

“Hospital Rehabilitation Impediments and Incentives.” Presentation at the MCEER Student Leadership Council Retreat, State College, PA, August 11.

Dynes, Russell R.


Kendra, James M.


Kendra, James M. and Tricia Wachtendorf

“Response and Resilience in the World Trade Center Attack.” Presentation at Rutgers University, New Brunswick, NJ, December.


Kiley-Zufelt, D. Michael

“Senate Bill 1953.” Presentation at the MCEER Student Leadership Council Retreat, State College, PA, August 11.
Quarantelli, E. L.


Tierney, Kathleen J.


Tierney, Kathleen J., Benigno Aguirre, James M. Kendra, and Tricia Wachtendorf

“Organizational and Community Resilience in the World Trade Center Disaster.” Invited presentation at the workshop Learning from Urban Disasters: National Science Foundation Response and Opportunities for Future Research sponsored by the National Science Foundation and the Institute for Civil Infrastructure Systems, December 12, New York, NY.

Wachtendorf, Tricia

“The Implementation of Community-Based Disaster Mitigation Initiatives: Findings From An Ongoing Assessment.” Presented at the Natural Hazards Research and Applications Workshop, July 17, Boulder CO.

“Building Community Partnerships Toward a National Mitigation Effort: Inter-organizational Collaboration in the Project Impact Initiative.” Presented at the Workshop for the Comparative Study on Urban Earthquake Disaster Management, Jan 18, Kobe, Japan.
Presentations to Governmental Bodies
And
Professional Organizations

Tierney, Kathleen J.


Disaster-Related Academic Activities

Aguirre, Benigno

Book Review Editor. *Natural Hazards Review*, American Society of Civil Engineers.


President. International Research Committee on Disasters.

Dynes, Russell R.

Proposal Review Panel. Memorial Institute for the Prevention of Terrorism, October 3-5, Washington, DC.

Discussant, on major transportation disasters, *The Most*, The History Channel, May 28th.


Quarantelli, E. L.


Tierney, Kathleen J.

Member. Editorial Board, *Natural Hazards Review*.

Member. Executive Committee, Multidisciplinary Center for Earthquake Engineering Research.

Member, Campus Disaster Planning Committee, University of Delaware.

Manuscript Reviewer, *Earthquake Spectra, Natural Hazards Review*.

Proposal Reviewer, National Science Foundation.
Member. Technical Advisory Committee, Project on Managing Catastrophic Risk, Wharton Risk Management and Decision Processes Center, University of Pennsylvania.

Member. National Institute of Building Sciences panel to develop a national methodology for assessing the costs and benefits of mitigation.
Other Disaster-Related Professional Activities

Aguirre, Benigno

Member. Lee Founders Award Committee, Society for the Study of Social Problems.

Member. Committee on Status of Racial and Ethnic Minorities, American Sociological Association.

Quarantelli, E. L.


Organizer. Session on “Disaster Research and Management: New Sociological and Other Perspectives.” 5th Conference of the European Sociological Association, Helsinki, Finland, August 29th.

Tierney, Kathleen J.

Member. Nominating Committee and Learning From Earthquakes Committee, Earthquake Engineering Research Institute.

Member. Working group to develop plan for coordinating federally-sponsored post-earthquake investigations.

Wachtendorf, Tricia

Contributor. Assessment of Natural Hazards and Disasters in Canada.

Interview. Discussed findings from research activities following the World Trade Center attack, Manitoba local radio program “Information Radio,” Canadian Broadcasting Corporation, October 26.

Interview. Discussed findings from research activities following the World Trade Center attack, Canadian national radio program “This Morning,” Canadian Broadcasting Corporation, December 7.
2001 Research Projects

Organizational and Community Resilience in the World Trade Center Disaster. This project focuses on the manner in which emergency management and crisis-relevant organizations in the City of New York coordinated with other responding organizations and jurisdictions to develop multi-organizational strategies for managing the World Trade Center Disaster. The project uses the World Trade Center attack and its aftermath as a case study to address longstanding issues in the disaster research literature, such as the relationship between planning, emergence, and improvisation in disaster response activities; how multi-organizational response networks develop and function, and how resilience is achieved in complex response networks. Research activities for this study consist of fieldwork and direct observation in settings in which response and recovery activities are coordinated; interviewing; and document collection and analysis. This study is being conducted with support from the National Science Foundation and the Multidisciplinary Center for Earthquake Engineering Research, and the Public Entity Risk Institute.

Evacuation and Vulnerability in Mexico. In 1999, major floods impacted the Mexican states of Veracruz and Puebla. In collaboration with investigators from Mexico City's Centro de Investigacion y Estudios de Anthropologia Social (CIESAS), the Disaster Research Center is conducting research in communities affected by the flooding in order to: (1) obtain data on the services at-risk populations received from public agencies charged with disaster mitigation and reduction responsibilities; (2) document the ethno-knowledge and customs used by these populations to minimize flood risks and impacts; and (3) explore the extent to which existing social science knowledge on disaster-related evacuation behavior most of which is based on studies conducted in the United States can be replicated in a Third-World context. Funding for this project has been provided by the National Science Foundation and the Federal Government of Mexico.

Mobilizing Support for Earthquake Loss Reduction: Lessons and Guidance for Seismic Safety Advocates. The objective of this project, which is being carried out in collaboration with social science investigators from the Mid-America Earthquake Center and the Pacific Earthquake Engineering Research Center, is to analyze findings from social science research in order to develop guidance for advocates of earthquake safety at state and local levels. DRC's research activities for this study consist of analyzing research findings on risk communication and on collective action strategies that can be applied to enhance earthquake loss-reduction efforts. This project is supported by the Federal Emergency Management Agency.

Perceptions of Earthquake Impacts and Loss-Reduction Policy Preferences Among Community Residents and Opinion Leaders. This study, which is being conducted under the National Science Foundation's US/Japan “Common Agenda” collaborative research program on urban earthquake hazards, focuses on public and stakeholder views of the potential consequences of major earthquakes, their support for loss-reduction policies, and their attitudes with respect to acceptable levels of risk. The study site for this project is Alameda County, in the eastern San Francisco Bay Area. In 1999, in the first phase of the study, DRC conducted a mail survey with a representative sample of over 700 households in Alameda County/ Oakland, California. In the second phase of the project, eight focus group discussions were carried out to obtain information on the risks perceptions and seismic policy views of members of four East Bay stakeholder groups: public officials, community residents, business owners, and practicing engineers. DRC is collaborating on this project with investigators from the Center for Disaster Reduction Systems at Kyoto University's Disaster Prevention Research Institute.

Multidisciplinary Center for Earthquake Engineering Research (MCEER). DRC is a core member of MCEER, a multi-university consortium that conducts research on earthquake loss reduction issues and strategies from a range of disciplinary perspectives. The MCEER consortium, based at the State University of New York at Buffalo, is funded by a 5-year, $10 million grant from the National Science Foundation. In addition to the World Trade Center study outlined above, other MCEER-sponsored projects conducted by DRC include the following:
1) **Loss Estimation Methodologies.** DRC’s extensive datasets on disaster-induced business losses, business interruption, and post-disaster business coping strategies were employed in a collaborative MCEER study aimed at improving earthquake loss-estimation methodologies. This study was undertaken in collaboration with other MCEER researchers who have been working on the development of a “seamless” loss estimation model that integrates seismic hazard analysis, analyses of direct earthquake damage, and indirect earthquake-induced losses within a single probabilistic model framework.

2) **Impediments and Incentives for the Rehabilitation of Critical Facilities.** This study, which began in 1998, focuses on how administrators and other decision makers in hospitals evaluate the seismic vulnerability of their facilities, assess ways of lessening that vulnerability, and decide whether to undertake mitigation measures for their facilities. Data are being collected through focus group discussions with decision makers in twelve hospitals located in high, moderate, and low-risk areas of the country. In addition to conducting focus groups, DRC is also reviewing the literature on the adoption and implementation of safety and loss-reduction measures to better understand barriers, facilitating factors, and strategies for enhancing hospital seismic safety.

3) **Use of New Technologies in Emergency Management.** It is commonly assumed that advances in information technology have revolutionized operations in both public and private sector emergency management organizations. However, in the disaster field, little is known about the extent to which promising technologies are actually being employed to manage hazards and disasters, and to what effect. The study, which began in 1999, attempts to learn more about how local emergency management agencies use technology for hazard assessment, planning and training, and emergency response management. Data for the project are being collected through focus group discussions with emergency personnel in six communities around the US.

4) **Measures of Community Resilience.** Over approximately the last ten years, recognition has grown that rather than responding and recovering when disasters strike, communities should be paying much more attention to pre-event mitigation that is, to activities designed to lessen the impact of disasters. While the concept of “disaster resistant community” is gaining widespread acceptance, more research is needed to better define and operationalize that concept. The “Measures of Resilience” project attempts to develop measures or indicators of disaster resistance that span engineering and societal definitions of resilience as well as all phases in the disaster cycle. When developed, this comprehensive set of measures will make it possible to assess the extent to which communities are moving toward higher levels of disaster resistance.

**Disaster Resistant Communities Initiative: Process Evaluation of FEMA’s Project Impact.** In 1997, the Federal Emergency Management Agency began the pilot stage of Project Impact, a program designed to encourage local communities to step up their efforts to contain future disaster losses. The goals of the program are to mobilize resources, stimulate the development of partnerships, spur mitigation activities, and enable communities to cope more effectively when disasters occur, so as to reduce long-term losses. Using face-to-face and telephone interviews, focus group discussions, and other data collection methods, DRC has been charting the progress of Project Impact, first in the seven pilot communities in which the program was initiated, and later in an additional ten communities that joined Project Impact in subsequent years. In the next stage of this study, DRC is conducting fieldwork in ten communities (matched on hazards and sociodemographic characteristics) that do not have Project Impact programs, to determine whether such programs have a discernable effect on community loss-reduction activities. This study is being conducted under the sponsorship of the Federal Emergency Management Agency.
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<td>March 8</td>
<td>New York, New York</td>
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<tr>
<td>May 7-13</td>
<td>Oakland, California</td>
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<td>June 16-21</td>
<td>Memphis, Tennessee</td>
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<td>August 3</td>
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<td>November 11-16</td>
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## Visitors to DRC

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<tr>
<td>Austria</td>
<td>International Institute for Applied Systems Analysis</td>
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| Japan    | Kyoto University  
Disaster Prevention Research Institute, Research Center for Disaster Reduction Systems  
Tokyo University  
Department of Media and Communication |
| Iceland  | University of Iceland  
Earthquake Engineering Research Center |
| U.S.A.   | Princeton University  
New Jersey Institute of Technology  
Institute for Special Populations Research at National Development and Research  
John Hopkins University  
Center for Civilian Biodefense Studies |
Texas A&M University
Hazard Reduction & Recovery Center

Companeros de las Americas

Mayor’s Office of Emergency Management- New York
New Preliminary Papers

Aguirre, Benigno

“Sustainable Development as Collective Surge.”

“Can Sustainable Development Sustain Us?”


“A Test of Culture of Opposition’s Power Grid.”

“Testing Shibutani’s Prediction of Information Seeking Behavior in Rumor.”

Bruneau, Michel and Kathleen J. Tierney

“Market-Focused and Open-Systems Approaches to Earthquake Loss-Reduction: Contextualizing the Role of Engineering Research.”

Connell, Rory

“Collective Behavior in the September 11, 2001 Evacuation of the World Trade Center.”

Kendra, James M.


Kendra, James M. and Tricia Wachtendorf

“Rebel Food…Renegade Supplies: Convergence After the World Trade Center Attack.”

“Elements of Community Resilience in the World Trade Center Attack.”

Monahan, Brian and Carol Gregory

“From Ground Zero to Ground Hero: Status Appropriation and the FDNY.”
Tierney, Kathleen J.

“Strength of a City: A Disaster Research Perspective on the World Trade Center Attack.”

Tierney, Kathleen J. and Gary R. Webb

“Business Vulnerability to Earthquakes and Other Disasters”

Wachtendorf, Tricia

“Suggestions for Canadian Inter-Organizational Collaboration in Disaster Mitigation.”