

Natural Hazard Mitigation

RECASTING DISASTER POLICY AND PLANNING



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Recasting Disaster Policy and Planning

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Natural Hazard Mitigation

Preface

This book is the outcome of a collaborative study by the authors and members of our project advisory panel. These practitioners and experts brought the real world of day-to-day mitigation into our deliberations, ensuring that this would not be simply an ivory tower research project. We are deeply indebted to the panel members:

Donna Dannels, Chief, Program Delivery Branch, Mitigation Directorate,
Federal Emergency Management Agency, Washington, D.C.

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Richard Thibedeau, State Hazard Mitigation Officer, Massachusetts De-
partment of Environmental Management, Boston, Massachusetts

In addition, we are indebted to mitigation practitioners across the country who freely shared their knowledge, data, and experience with us. We learned a great deal from them. Many are acknowledged by name in the chapters describing our case studies. But many others contributed by responding to our telephone surveys and our requests to FEMA headquarters and regions for information, as well as by offering valuable suggestions regarding our preliminary presentations of research findings. We specifically appreciate the continued support and feedback from FEMA's Mitigation Directorate.

This study could not have been carried out without the support of Dr. William Anderson of the National Science Foundation. His dedication to improving natural hazards research has been critical in raising the level of knowledge in this field.

Study coinvestigators David R. Godschalk, Philip Berke, David J. Brower, and Edward J. Kaiser are faculty members of the Department of City and Regional Planning at the University of North Carolina at Chapel Hill. They constitute the Natural Hazards Working Group of the University's Center for Urban and Regional Studies. They were joined on this project by Timothy Beatley, a faculty member of the Department of Urban and Environmental Planning at the University of Virginia at Charlottesville. This team has worked together on hazard mitigation planning and research during the past two decades.

A number of capable research assistants from the graduate program in City and Regional Planning at the University of North Carolina contributed to this study. Charles C. Bohl, R. Matthew Goebel, Mark Healey, and Kevin Young coauthored chapters of the original project report. Karl Fulmer and Susan Hass, along with other team members, worked on the evaluation of the state hazard mitigation plans. Sara Hinkley assisted in editing the book manuscript, and Junko Peterson helped edit the project report.

We appreciate the logistical support of the staff of the Center for Urban and Regional Studies at the University of North Carolina at Chapel Hill, including Carroll Cyphert, David Hardt, Carolyn Jones, Holly McBane, Mary Beth Powell, and Bill Rohe. We were fortunate in being able to draw on the long-standing contributions to knowledge of natural hazards generated by the center's past research projects.

Assessing the state of the art in hazard mitigation planning and implementation and its evolution over some eight years since enactment of the Stafford Act has been an ambitious undertaking. If our findings and recommendations help to strengthen natural hazard mitigation policy and practice, we will be well rewarded.

Acknowledgment

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PART I

***Coping with Floods
Earthquakes, and
Hurricanes: U.S. Hazard
Mitigation Policy***

Mitigating Natural Hazards: A National Challenge

Screaming headlines announce another presidential declaration of disaster as the latest flood, hurricane, or earthquake strikes a populated area. Television airs images of devastated homes and freeways. Governors demand federal disaster relief funds. Hearts go out to unfortunate victims huddled in shelters. The Federal Emergency Management Agency rushes in with recovery and rebuilding programs. This frenzied scenario has been repeated many times, with each new disaster seemingly bigger than the last. In fact, the first half of the 1990s saw the largest and most costly floods, hurricanes, and earthquakes in U.S. history.

Why are these disaster damages growing so large? Do we simply have to bite the bullet and keep rebuilding our disaster-stricken communities? Is something wrong with our national disaster policy? Could some of the damage and suffering from natural disasters be prevented?

To answer these questions, this book digs into the decisions and programs behind the headlines. It is the first complete analysis of the outcomes of the Stafford Act, the basic U.S. disaster law, to examine how natural hazard mitigation—the technical term for prevention of future harm from disasters—has worked over time and how it can be made to work more effectively in the future. Its authors are the first to study how federal hazard mitigation funds have actually been spent since the Stafford Act was adopted in 1988, what is actually contained in state hazard mitigation plans required by the Stafford Act, what goes on in mitigation decision making following a major disaster, how government mitigation officials rate the effectiveness of the mitigation system, and what changes are