EMERGENCY MANAGEMENT AND SUSTAINABILITY

ABOUT THE AUTHOR

Robert O. Schneider is a Professor of Public Administration at the University of North Carolina at Pembroke.

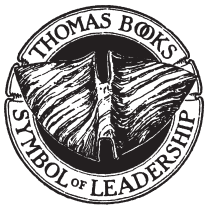
EMERGENCY MANAGEMENT AND SUSTAINABILITY

Defining a Profession

By

ROBERT O. SCHNEIDER, PH.D.

Department of Public Administration
University of North Carolina at Pembroke



CHARLES C THOMAS • PUBLISHER, LTD.
Springfield • Illinois • U.S.A.

Published and Distributed Throughout the World by

CHARLES C THOMAS • PUBLISHER, LTD.
2600 South First Street
Springfield, Illinois 62704

ISBN 978-0-398-08763-0 (paper)
ISBN 978-0-398-08764-7 (ebook)

Library of Congress Catalog Card Number: 2013022553

With THOMAS BOOKS *careful attention is given to all details of manufacturing and design. It is the Publisher's desire to present books that are satisfactory as to their physical qualities and artistic possibilities and appropriate for their particular use.* THOMAS BOOKS *will be true to those laws of quality that assure a good name and good will.*

Printed in the United States of America
SM-R-3

Library of Congress Cataloging-in-Publication Data

Schneider, Robert O.
Emergency management and sustainability : defining a profession / by Robert O. Schneider, Ph.D., Department of Public Administration, University of North Carolina at Pembroke.
pages cm
Includes bibliographical references and index.
ISBN 978-0-398-08763-0 (pbk.) -- ISBN 978-0-398-08764-7 (ebook)
1. Emergency management--United States. I. Title.

HV551.3.S376 2013
363.34'802373--dc23

2013022553

PROLOGUE: SOMETHING ELSE IS NEEDED

The footprints of disaster are bigger and costlier than ever. The past few years, if you think about them for any length of time, do make that impression. The first decade of the twenty-first century has presented a host of new or different challenges and made normally recurring challenges more complex. A seemingly unending series of more dramatic large-scale natural disasters, the worldwide terrorism threat, the possibility of international influenza pandemics, the threat of a worldwide cyber-failure, the potential impact of global climate change, the Haitian earthquake of 2010, the Fukushima nuclear disaster of 2011, Superstorm Sandy in the fall of 2012 dramatically impacting the densely populated American Northeast, and the environmental threats that are frequently posed by promising new technologies that frequently create new risks for humanity and threaten our natural resources (e.g., natural gas fracking, deep water oil drilling, etc.) are just a few of the recent experiences and concerns that may cause us to wonder whether we are living in an era in which disasters (natural and human-made) and the damages they cause might be beginning to exceed our capacities to manage effectively.

Six of the top ten natural disasters in the past one hundred years, as measured in terms of lives lost and property damage, have taken place since 2001 (i.e., listed in order of severity: Haiti Earthquake, 2010; Indian Ocean Earthquake/Tsunami, 2004; Cyclone Nargis, 2008; Japan Earthquake/Tsunami, 2011; Gujarat Earthquake, 2001; and Hurricane Katrina, 2005). Human-made hazards resulting in disasters have also made some more dramatic and historically significant appearances in the first decade of the twenty-first century (e.g., Al-Mishraq Sulfur Fire in Iraq, 2003; Jilin Chemical Plant Explosions in China, 2005; and the BP Oil Disaster in the Gulf of Mexico, 2010). Each dramatic event seems to invite renewed assessment of our ability to be resilient in the face of the array of natural and human-made hazard threats that hold the potential to bring bigger and more destructive disasters to our doorsteps. The rising costs associated with each event also invite our attention.

The number and costs of major natural disasters in the United States, for example, are on the rise. From 1980 through 2012, 144 natural disasters in the

United States caused damages in excess of $1 billion (Table 1). But 25 out of these 144 have occurred in the last two years, 2011 and 2012.

Table 1. 1980–2012 U.S. Natural Disasters Exceeding $1 Billion in Damages

Year	$Billion+ Disasters	Year	$Billion+ Disasters
1980	2	1997	3
1981	1	1998	9
1982	1	1999	5
1983	4	2000	2
1984	1	2001	2
1985	5	2002	3
1986	1	2003	5
1987	0	2004	5
1988	1	2005	5
1989	4	2006	6
1990	3	2007	5
1991	3	2008	9
1992	6	2009	6
1993	4	2010	4
1994	6	2011	14
1995	4	2012	11
1996	4	Total	144

Source. National Oceanic and Atmospheric Administration. http://ncdc.noaa.gov/billions/events/pdf

According to the National Oceanic and Atmospheric Administration, eleven extreme weather or climate-related events in 2012 caused damages exceeding $1 billion in the United States (Table 2). This is three fewer than in 2011, but the aggregate costs of the 2012 billion dollar events are expected to exceed those of 2011. The eleven billion dollar plus events of 2012 include seven triggered by severe weather or tornadoes, two hurricanes, and two others resulting from the impact of the extreme drought that gripped much of the nation throughout the year.

Estimates at the beginning of 2013 are that 2012 will be the second most costly year for natural disasters (2005 is number one) in the United States in the 1980–2012 timeframe. The two events that were the biggest drivers of costs in 2012 were Superstorm Sandy (60+ billion) and the yearlong drought (40+ billion). The 2012 drought conditions were the worst in the United States since the 1930s. They impacted more than half the country for a majority of the year. Many experts are predicting that billion dollar weather or climate events will become the norm in the years to come.

Table 2. Billion+ Dollar Natural Disasters in 2012 in the United States

Date	Event	Cost Estimates ($)*
March 2–3, 2012	Southeast/Ohio Valley tornadoes	4+ billion
April 2–3, 2012	Texas tornadoes	1.3 billion
April 13–14, 2012	Midwest tornadoes	1.75 billion
April 28–May 1, 2012	Midwest/Ohio Valley severe weather	3+ billion
May 25–30, 2012	Southern Plains/Midwest/Northeast severe weather	2.5 billion
June 6–12, 2012	Rockies/Southwest severe weather	1.6 billion
June 29–July 2, 2012	Plain/East/Northeast severe weather	3.75 billion
August 26–31, 2012	Hurricane Isaac	3 billion
Summer–Fall 2012	Western wildfires	na
October 29–31, 2012	Superstorm Sandy	60–65 billion
Throughout 2012	U.S. drought/heat wave	40+ billion

Source. National Oceanic and Atmospheric Administration.
http://ncdc.noaa.gov/billions/events/pdf
*damage estimates are derived from a variety of public sources, and some estimates are preliminary.

The United States and countries around the world have, of course, extensive experience with natural and industrial disasters. They have made significant and expanding efforts over time and committed significant resources to disaster preparedness, disaster response, disaster recovery, and disaster mitigation. But for all of these efforts and all that has been learned and done, for all of the progress made, recent events have begun to suggest that adequate risk reduction measures (i.e., mitigation) and disaster preparedness (i.e., capacity to respond) are, if not in fact declining, at least lagging behind. Economic and insured losses from natural disasters have increased steadily over the years, and they show every indication of continuing to escalate. This is due not only to the occurrence of damaging natural events, which are variable from year to year but are by many indications intensifying in severity, but also to some basic demographic factors. Over half of the U.S. population, for example, now resides in coastal counties (30% on coastlines bordering the ocean or associated water bodies). This number has risen steadily and is expected to continue rising. This shift places more people and more expensive development in high-risk areas and, inevitably, increases the impact and economic and insurance losses associated with tropical events. It must also be noted that the anthropogenic or human-made hazards that are inevitably the result of technological and industrial development are always an ever-present threat to be managed and that these too seem to be expanding with our continued progress.

Changing natural hazard patterns, development strategies and policies, changing demographics, and changing economic conditions contribute to changing risk and vulnerability profiles in relation to hazard threats and potential disaster impacts. It can be difficult to keep up with hazard risks and disaster-related concerns. Emergency managers are faced with natural and human-made problems that are constantly evolving and changing the footprints of disaster. The complexity of these problems is more than matched by the complexity of the physical and social systems that emergency managers are expected to understand as they offer solutions for the recurring disaster problems that are presented to them in the normal course of their work. The technical skills and capacities that emergency managers have developed over time as they have plied their trade are impressive and increasingly effective. But they are not nearly enough to keep pace with or manage hazard risks and disasters. Something else is needed.

During the 1990s, the themes of hazard mitigation, hazard resilience, and sustainability became prominent in the emergency management literature. The need to assess and manage risks and vulnerabilities and to take steps to promote hazard resilience, the connectivity of risk assessment and risk management to environmental sustainability, and the urgent need for new thinking about human communities and the ever-changing threats to their environmental, economic, structural, and social sustainability were all emphasized and to some extent represented the "something else" that was needed to successfully manage risks and reduce the negative impacts of disasters. But a synthesis never really developed to establish this growing awareness as a centerpiece for defining the broader role of emergency management and the work of its practitioners.

The discussion of hazard resilience and its relationship to sustainability actually invites the integration or mainstreaming of emergency management into the sustainability framework as a necessary component. But to capitalize on that invitation, it is first necessary to have a conceptualization of emergency management that goes beyond its technical skills and specific functions. There is a need, in other words, for a worldview that is built on the connections among hazard threats, disaster or hazard resilience, and sustainability. This worldview must begin with the broad realization that a sustainable development framework requires a clear prescription and a practical application of disaster management and the effort to reduce disaster risks.

The purpose of this book is to define emergency management as a profession, something that has been discussed much in recent years but not brought to a satisfactory completion. The linkage of emergency management to sustainability, the defining of it as a sustainability profession, is presented herein as the necessary ingredient that holds the potential to orient all of the professional skill development and the work of the "trade" and to transform it into

a "profession." This transformation, the "something else" if you will, is a necessity to assure ourselves that disasters (natural and human-made) will never exceed our capacities to manage effectively. This transformation, which if successfully completed better enables whole communities to take responsibility for disasters, is needed to promote hazard resilience in particular and sustainable communities in general.

An examination of the functions and strategies that occupy emergency management practitioners on a daily basis suggests broadly to academics and practitioners alike that they are aligned instrumentally to the concepts of sustainability and sustainable development. But that alignment has never served as the foundation for what emergency managers do, as the definition of their role if you will. The connection of emergency management to sustainability and the importance of sustainable risk management are not new themes. They are themes that have stimulated ongoing analysis and discussion in the emergency management literature. They are themes that grow more important by the day in fact, so much so that the time has come to define emergency management as a sustainability profession.

ACKNOWLEDGMENTS

Several important people have played a role in assisting (and lessening the burdens for) this author during the past several months. First, I must acknowledge my graduate assistant, Samantha ("Sam") Cornwell. Her assistance in performing the varied tasks assigned to her in connection to this effort has made me remarkably more efficient and productive. Second, a special thank you is owed to my administrative assistant, Amelia K. Elk, who likewise expedited progress on this manuscript by good naturedly and efficiently incorporating into her duties a number of tasks regarded as "urgent" by a harried author and that paved the way for me to be efficient in this project. Finally, and most important, I would like to acknowledge my wife, Doris. Her confidence and support, her considerable skill as a proofreader, her honest input, her enthusiasm for the subject matter, and her saintly patience with a preoccupied and somewhat distracted husband were essential contributions without which this manuscript could not have been completed.

CONTENTS

EMERGENCY MANAGEMENT AND SUSTAINABILITY

Chapter 1

EMERGENCY MANAGEMENT: TRADE OR PROFESSION

INTRODUCTION

Every emergency management practitioner and scholar has heard or told a variation of the same joke. Asked by a county commissioner to describe what emergency managers do, the county Director of Emergency Management says, "My job is to tell you things you don't want to hear, asking you to spend money you don't have, for something you don't believe will ever happen" (Whitaker, 2007). This humorous description generally produces a friendly chuckle or two, but it should also produce more than just a little concern within the emergency management community.

For all the work emergency managers do (preparing their communities for disasters, organizing the response to them, mitigating disaster impacts, or assisting in the recovery from them), few in the communities they serve know much about who they are and what they do, including, unfortunately, many elected officials. But when a disaster is imminent, when the spam is ready to hit the fan so to speak, everyone is generally pleased that emergency managers (whatever the heck they are) are on the job. This is due in part to the fact that most people do not think about disasters, natural, industrial, or any other, until they are happening or just about to happen. Unless it is imminent, a disaster is of low salience to most people most of the time. When their attention is elevated, the immediate impact and response phase grabs their attention, and that is often assumed to be the primary job of emergency

managers. This misperception, of course, is common. First response, while a technical and important function, should not be confused with what is meant by emergency management. Common misperceptions aside, there is perhaps a more significant reason that people do not quite recognize what emergency management is or what its practitioners do. This has to do with what might be called, for lack of better terminology, its lack of professional standing.

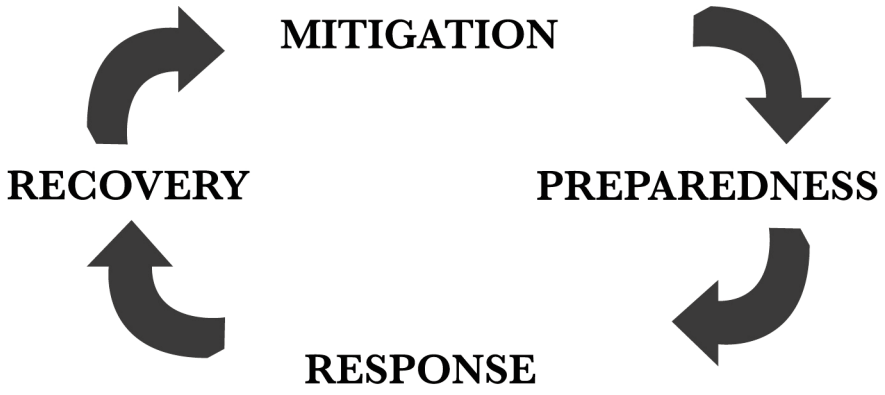
A "profession" is, generally, understood by a broader public because it has recognizable characteristics that everyone more or less comprehends. A profession typically has credentialing and certification requirements. These include things such as advanced education requirements and licensure. A profession controls its "professional standing" by setting and enforcing standards that guide individual performance and govern professional advancement. Formal accreditation is frequently a method by which such standards are enforced. But emergency management has not yet evolved to where these characteristics have been fully developed. While some efforts are being made to advance emergency management toward a profession (i.e., through initial discussions and important first steps promoting educational requirements or training, and progress toward accreditation and certification), it is not there yet.

Discussions in the emergency management literature make the case for emergency management as a profession (Crews, 2001), discuss its potential to become a profession (Lindell, Prater, and Perry, 2007), and analyze the ongoing efforts at professionalizing it (Oyola-Yemaiel and Wilson, 2005). There are many more discussions about what it should become or what its future should be with respect to education and training or its autonomy as a profession (Clement, 2011; Cwiak, 2011; Haddow and Bullock, 2005; Moore, 2010). These discussions, which have been ongoing for the past two decades, suggest that emergency management is evolving toward something but has not yet fully traversed the distance required to close the gap between trade and profession. But to truly understand where it is and where it needs to go, we might benefit from first briefly looking at where emergency management has been.

THE EARLY DAYS OF EMERGENCY MANAGEMENT

Emergency management as it is discussed and understood today consists of the work related to four disaster phases: disaster preparedness, disaster response, disaster recovery, and disaster or hazard mitigation.

THE FOUR PHASES OF EMERGENCY MANAGEMENT



Preparedness: Any set of activities that prepares for, such as creating plans, capacities, and technologies/equipment to respond to disasters (natural, technological, etc.) that a community may reasonably expect to experience on a recurring basis.
Response: Actions (i.e., the implementation of preparedness plans) taken in response to a disaster occurrence to save lives, assist victims, prevent further damage, and reduce the effects of the disaster.
Recovery: Actions taken to return to a normal or an even safer situation following the crisis.
Mitigation: Actions taken to reduce the impact or decrease the likelihood of serious losses in a future disaster scenario or, in some cases, to reduce the likelihood of disaster occurrence.

Most public attention is focused on disaster response and recovery. This is due to the fact that, once again, most people give little thought to natural or human-made disasters until they happen. But emergency management has evolved into something far beyond disaster response,

although that may be said to be where it began.

An examination of the emergency management literature suggests that, until the mid-1990s, the strategic motivation of what might theretofore have been implied by the label emergency management in the United States arose mostly from the challenges of responding or reacting to specific and immediate disasters. Local communities have of course always had to deal with the impact of recurring natural disasters (floods, wild fires, tropical storms, etc.), and over time and repeated experiences, the development of both capacities and equipment to respond to these events has evolved accordingly, albeit inconsistently, across the country. The federal role in emergency management evolved beginning in the 1930s when the Reconstruction Finance Corporation was authorized to make disaster loans for the repair and reconstruction of public facilities after disaster occurrences, the Bureau of Public Roads was authorized to fund the repair of highways damaged by national disasters, and the U.S. Army Corps of Engineers was given greater authority to implement flood control projects. During the 1950s and the early 1960s, the height of the Cold War, national security and civil defense concerns dominated the emergency management agenda of the federal government and of the general public as well. This time period included the creation and implementation of federal grant initiatives and incentives to promote civil defense preparedness as a priority at the state and local levels. By the late 1960s and the 1970s, however, massive and more frequently occurring natural disasters began to result in major increases in federal disaster relief and recovery operations to assist states and localities (Federal Emergency Management Agency [FEMA]). This would lead to a necessary consolidation and restructuring of national efforts.

As federal disaster assistance expanded, and as hazards associated with the transportation of hazardous materials and nuclear power plants were added to the federal role in natural disaster planning, relief, and assistance, more than 100 federal agencies were soon involved in some capacity in the federal role in relation to natural and industrial disasters. At the urging of the nation's governors, who reasonably objected to the maze of different agencies they had to interact with to access federal assistance, President Jimmy Carter consolidated federal emergency functions with an executive order creating FEMA. FEMA absorbed the various federal disaster assistance and relief functions, along with civil defense responsibilities, and developed an Integrated