

# COMPARATIVE EMERGENCY MANAGEMENT

Examining Global and Regional  
Responses to Disasters

DeMond Shondell Miller • Jason David Rivera



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# Foreword: Insights on the Role of Regional Collaboration

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Disaster management has long been implemented and researched in silos and treated as national, internally handled issues. Events such as the Indian Ocean tsunami have started to make people realize that the silo approach is not working. Because hazards and disasters do not respect national borders, we must introduce bold initiatives that reduce barriers to building disaster-resistant regions. This is an increasingly difficult issue when you consider that 85% of natural hazards impact people in developing countries [United Nations International Strategy for Disaster Reduction (UNISDR) and Inter-Parliamentary Union Disaster Risk Reduction 2010]. As a result, the concepts of disaster reduction, risk reduction, and disaster mitigation have become popular topics. In the past ten years, direct disaster damage costs have risen from US\$75.5 billion in the 1960s to almost 1 trillion dollars [Munich Re 2002; *Centre for Research on the Epidemiology of Disasters (CRED)* 2009].

Although disaster risk reduction may be the topic *du jour*, we as scholars, practitioners, community leaders, and citizens must strive to work together to be more inclusive in addressing issues ranging from poverty to sustainable development to climate change. This can be accomplished through many collaborative avenues that work to improve construction, education, policy changes, economic development and stability, and social development. However, these collaboratives among disaster researchers and practitioners must also involve stakeholders at all levels of government and community. Regionalism is one of the tools that can be used to make this happen.

## The Importance of a Regional Collaborative Approach to Disaster Mitigation and Preparedness

Why is regional collaboration so important? It is so basic and straightforward. However, in reality, it is probably one of the most important questions we can ask. As the world continues to globalize and countries become more interdependent, it is essential that we start looking across and outside our borders (whatever they may be—city, district, state, country) to address the issues of risk.

We see it time and time again—disasters know no borders. The 2004 Indian Ocean tsunami directly impacted 13 countries on two continents and indirectly many, many more [AlertNet 2010]; Hurricane Katrina made a direct hit on four states in the United States but forced people in all 50 states to seek refuge; and the 2010 floods in China have impacted 28 provinces and more than 140 million people [China Daily 2010]. These events clearly illustrate the need for regional cooperation.

The key becomes defining “regional.” Is it a series of states within a single country? Or a series of countries that border each other? Possibly a series of countries that share a fault line or a tsunami potential? It may be all of these things in a single country, depending on the risk and the hazards. Or does it even have to be defined? And who should define it? I would offer that the concept is self-defined in any way needed to help protect people and their livelihoods. We need to get beyond the confines of definitions and look at the outcomes. These outcomes are what will protect people. If different methods reduce disaster risk and help to protect people (and not put others at risk), then we should consider them.

To make a determination on what is “good” mitigation, there needs to be solid research from which to pull from. The disaster researchers of the world need to unite and start to work together. There needs to be integration across disciplines in the name of good science. Social scientists need to be work with physical and natural scientists to develop research that considers all aspects of an event—the geophysical nature of the hazard and risk as well as how people make decisions and the socioeconomic and cultural influences. This is simple enough but is not being practiced across the board. The Integrated Research on Disaster Risk\* (IRDR) program is attempting to accomplish this by bringing together researchers from

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\* The IRDR program, established in Beijing, China, is cosponsored by the International Council for Science (ICSU), the International Social Sciences Council (ISSC), and the International Strategy for Disaster Reduction (ISDR). It is designed to address the impacts of disasters on regional and global scales and brings together the combined talents of the natural, socioeconomic, health, and engineering sciences from around the world. IRDR will focus on hazards related to geophysical, oceanographic, climate, and weather-triggered events—and even space weather and impact by near-Earth objects. The IRDR has three major research objectives: (1) to address the gaps in knowledge and methods for the effective identification of disaster risks; (2) to better understand just how decisions can contribute to hazards becoming disasters—or reduce their effects; and (3) to develop knowledge-based actions that will reduce risk and curb losses (for more information, see [www.irdrinternational.org](http://www.irdrinternational.org)).

various disciplines to study disaster risk reduction problems from an integrated approach through both research and consultative forums. This allows countries and regions to learn from each other as well as modify successful programs to fit their social and political context.

The collaboration among researchers also allows comprehensive findings to be shared with practitioners who subsequently can implement merited approaches to help protect people. To better facilitate this process, the research community needs to do a better job of transferring their knowledge and findings to the practitioner community in language and formats that are more easily understood. This will allow for good mitigation and preparedness to be implemented, improved upon, and shared. We need to start doing a better work together to improve disaster risk reduction. This means across borders, disciplines, and sectors.

## **The Role That Regional Partnerships Play in Disaster Mitigation and Preparedness**

Regional partnerships play a key role in disaster mitigation and preparedness. A flood can cross a border—why shouldn't the solution to the flood? The recovery and mitigation need to be done in cross-border collaboration as to not increase risk to those downstream or on the other side of the border. Communities are often living and working on both sides of a given border. Because few communities exist in isolation, mitigation efforts need to be designed in ways that do not view communities as such.

The goals must be self-defined. Sitting in my office in Beijing, I cannot tell you what a regional collaboration should look like for the Andean ridge countries of South America. They must define that within the context of their political and social needs. But what we need to be doing is sharing information. LA RED does just that in Latin America and works in conjunction with organizations throughout the region; other regional organizations include Centro de Coordinación para la Prevención de los Desastres Naturales en América Central (CEPREDENAC) and the Comité Andino para la Prevención y Atención de Desastres (CAPRADE). Each region has its own unique issues, concerns, and vulnerabilities to natural hazards; however, where stakeholders have similar goals and common interests, sharing what works and what does not work can become a common practice.

We need to stop arbitrarily trying to set goals and plans for other countries and recognize that knowledge comes from multiple sources. At the end of the day, what works well in Asia may not work in Africa or Europe. We must allow for unique differences while still practicing good mitigative techniques. We cannot “impose” our “best practices” on others. Personally, I do not like the term “best practices.” How do we determine what is best? Everything is filtered through our personal cultural, educational, and political background. Who can single out any one practice and say it is better than something else? If it is helping to protect the people and

the property from disaster, then *it is* a “best practice.” There are many local and regional emergency management strategies, and all have been modified to fit the contexts and culture in which they are used. However, for the most part, we fail to disseminate and promote these successes. Disaster researchers and practitioners need to get better at capturing the successes and promoting them in all arenas.

Moreover, when we use the term *lessons learned*, it begs the question, have we really *learned* any lessons? If we have, then why are we still making the same mistakes? Why do losses from natural disasters continue to rise? Capturing what works (and does not work) as well as a better understanding *why* things are working (or not) is key. Through the FORIN\* initiative, the IRDR is trying to do just that. Through various research techniques, scholars and practitioners will be able to trace back the origins of the disaster and the fundamental causes by probing more deeply into the complex and underlying causes of growing disaster losses. Such efforts will require a new commitment than previous research conceptualized, new institutional arrangements, and broader interdisciplinary teams [Burton 2010].

## Sustaining Regional Collaborations

Regional collaborations can be sustained over time—if the stakeholders have invested the time to develop positive relationships. To just sign a partnership agreement is not saying much other than “we like how you think” or “that seems like a good idea that we can work with.” It becomes a matter of taking steps beyond that to make the regional collaboration work. The agreement needs to be specific in what each organization can do and how they can work together. It is much like a seed a farmer plants. The seed will not grow without water, sunlight, and nurturing. Regional collaborations are the same way. The partnership agreements are nothing more than the seed planted in the ground.

It is important to recognize that many countries have acknowledged these issues and ideas and have begun to address them. Worldwide, more than 60 countries have developed National Platforms for Disaster Risk Reduction. Disaster risk reduction works. The Multi-Hazard Mitigation Council found that, for every dollar spent on mitigation, it saves four dollars next time. This is demonstrated by China’s effort to reduce the impacts of flood. They have spent US\$3.15 averting losses estimated at US\$ 12 billion [Department of International Development (DFID) 2004].

As you read through the chapters looking at emergency management around the world, I encourage you to think about this fact and what could be done in terms of additional mitigation and development if money were better spent. According to the World Bank and the U.S. Geological Survey, if US\$40 billion were invested in mitigation and preparedness, the worldwide economic losses from disasters could

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\* The Forensic Disaster Investigations are one of the research initiatives of the IRDR [see Burton 2010, p. 36].

be reduced by US\$280 billion [DFID 2004]. Now think, if the \$280 billion saved were reinvested in mitigation, it would amount to a savings of over \$1,960 billion worldwide. The economics alone demonstrate that we must shift the focus from response to mitigation. This book provides insights into topics of disaster and hazard management that emphasize regional approaches that continue to be salient. Each section focuses on issues that influence the development of regional collaborations within different geographic regions of the world in order to illustrate the dynamics at play across different communities, cultures, nations, and international relations. I challenge each of you to reflect upon the examples provided throughout this book so that we, as a global community, may move away from a responsive culture of emergency management policies and practices and toward regional-collaborative (however you define *regional*) mitigation strategies and policies that reduce disaster and hazard risk.

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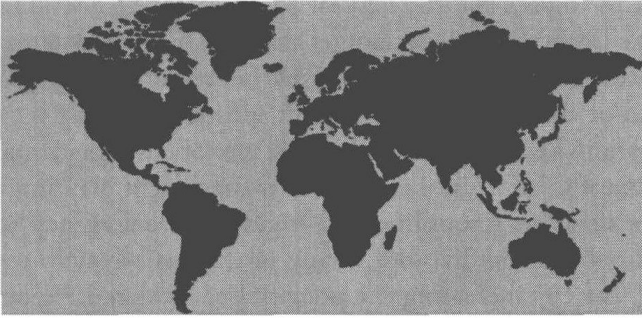
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# Preface

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The twenty-first century has witnessed some of the most devastating disasters in recent history. More striking than in the past is the impact that these events have on the global human society as opposed to just local populations. Although local communities tend to suffer the brunt and initial consequences of disaster, many disasters today have spillover effects that are detrimental to regional government structures, nations, and even a host of nations that inhabit a geographical region. Researchers have acknowledged the fact that disasters, natural as well as technological, are occurring with greater frequency and magnitude throughout the world. In addition to these types of disaster, the world continues to be plagued by human-induced tragedies such as political and social violence, which are in some cases just as devastating to the natural and urban environment as severe natural phenomena. When we observe some of the most recent devastating events to impact entire regions, such as the Deepwater Horizon BP oil spill in the Gulf of Mexico, the Indian Ocean tsunami, Hurricane Katrina, the recent 7.0 magnitude earthquake in Haiti, and flooding in West Africa the notion of developing

better emergency management policies, procedures, and cooperation becomes all the more relevant. In the aftermath of these events, this book serves as a call to action. It is a call for citizens of the twenty-first century to recognize and act to reduce regional infrastructure vulnerability while building secure interdependent networks sustained by trust among regional stakeholders evidenced by informal and formal agreements to work to resolve problems.

Although the costs of these events are initially measured in lives taken, or the number of people missing, there are other less tangible impacts that have the ability to result in subsequent disasters for individual communities, subnational regions, nations, and even international relations. Changes in economy, international or internally displaced persons, political destabilization, violence, and a whole host of other issues affect the manner in which populations and societies recover from disaster, but also the success of that recovery. At the point where these external pressures begin to impact the recovery of societies, it is sometimes too late and difficult to make impactful policy changes that will have short-term advantageous results for disaster-affected populations. For this reason, changes must be made at the other end of the disaster management spectrum, during the disaster management, mitigation, and response-planning stages of emergency management. By placing more time and effort into emergency management planning, and focusing on mechanisms that can streamline and standardize emergency mitigation and response across political subdivisions, many of these subsequent disaster impacts can be avoided, thereby increasing the potential of local and regional societies to recover from disasters.

This volume contains the work of researchers investigating ways in which societies experiencing regional environmental threats have been forced to find new ways of regionally coping with vulnerabilities to disaster events, and have entered into new ways of developing emergency management policies at the subnational and international levels. We, along with the contributors, offer this research as an opportunity for thinking creatively in hopes that these lessons are integrated into new development projects in an equitable manner that not only is advantageous for specific geographic populations, but for all human society. Furthermore, we bring forth this work as a way to foster dialogue that will serve as a catalyst for the reduction of social vulnerability and build local and regional capacities to withstand environmental assaults. In doing so, we believe this book will contribute to the establishment of a subfield of regional disaster interdisciplinary study to combine sociology, public policy, economics, disaster studies, history, business, emergency management, critical infrastructure, tourism, and peace studies to address, among other things, social, financial, and physical vulnerabilities, risks, organizational resilience, war, and ethnic conflict as contributing externalities to regional security.

We express our sincere appreciation to all the contributors for their tireless work and continued research in the disaster research field. It is through this forum, *Comparative Emergency Management: Examining Global and Regional Responses to*

*Disasters*, that we share unique, independent yet related case studies that serve to inform, make important recommendations, and empower societies to become more prepared for the challenges in humanity's future.

**Jason D. Rivera**  
**DeMond S. Miller**

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# The Editors

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**DeMond Shondell Miller** is a professor of sociology and environmental studies and director of the Liberal Arts and Sciences Institute for Research and Community Service at Rowan University, Glassboro, New Jersey. He has worked as principal investigator to facilitate research projects involving natural and technological disasters, environmental issues, and community satisfaction. His primary area of specialization is environmental sociology (disaster studies and the study of the social construction of place), community development and community organizing, and social impact assessment. Dr. Miller has presented and published several professional papers; recent examples of such work can be found in *Space and Culture: An International Journal of Social Spaces*, *Journal of Black Studies*, *The Journal of Public Management and Social Policy*, *Sociological Spectrum*, and *The International Journal of Culture, Tourism and Hospitality Research*. Recently, he has contributed to several edited volumes including *Through the Eye of Katrina: Social Justice in the United States* and *The Sociology of Katrina: Perspectives on a Modern Catastrophe*; he is the coauthor of *Hurricane Katrina and the Redefinition of Landscape* with Jason D. Rivera (2007) and coeditor of *African American and Community Engagement in Higher Education: Community Service, Service Learning and Community-Based Research* with S. Evans, C. Taylor, and M. Dunlap (2008) and a coeditor of *How Ethnically Marginalized Americans Cope with Catastrophic Disasters: Studies in Suffering and Resiliency* (2010) and *Community Disaster Recovery and Resiliency: Exploring Global Opportunities and Challenges* (2010), with Jason D. Rivera. He is currently engaged in research on international environmental policy, coastal and maritime sustainable tourism, and the ongoing social impacts of climate change in the Mediterranean, Hurricane Katrina and the Deepwater Horizon Oil Spill.

**Jason David Rivera** is a research associate in the William J. Hughes Center for Public Policy at The Richard Stockton College of New Jersey. His research focuses on social vulnerability to natural and manmade disasters with an emphasis on minority experiences. Additionally, his research highlights institutional structures that have historically perpetuated social vulnerability within minority and low-income communities. His research findings have been incorporated into policy

recommendations that make mitigation, response, and recovery more efficient and effective. Examples of his work can be found in the *Journal of Black Studies*, *Journal of Applied Security Research: Prevention and Response in Asset Protection, Terrorism and Violence*, the *Journal of Public Management and Social Policy*, *Sociological Spectrum*, *The Journal for the Study of Radicalism*, *Space and Culture*, *The Sociology of Katrina: Perspectives on a Modern Catastrophe*, *Through the Eye of the Storm: Social Justice in the United States*, and *Dangers in the Incommensurability of Globalization: Socio-Political Volatilities*. He is a coauthor of *Hurricane Katrina and the Redefinition of Landscape*, with DeMond S. Miller (2007) and a coeditor of *How Ethnically Marginalized Americans Cope with Catastrophic Disasters: Studies in Suffering and Resiliency* (2010) and *Community Disaster Recovery and Resiliency: Exploring Global Opportunities and Challenges* (2010), with DeMond S. Miller.

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