

Disaster Recovery Annotated Bibliography - Overview

This document was developed to provide information on the state of knowledge on disaster recovery. This document includes a list of articles collected in the Fall of 2018. To obtain relevant articles, a list of keywords was used to search Google Scholar and University Library Databases. These keywords were: “community disaster recovery”, “disaster recovery”, “post recovery planning”, “pre disaster planning”, and “national planning recovery”. An additional search of academic journals that are related to the planning field was then undertaken to ensure that articles from these journals were not overlooked. These journals included: *Journal of the American Planning Association*, *Journal of Planning Education and Research*, *Applied Geography*, *Land Use Policy*, *Environment and Planning A*, *Planning Theory*, *Progress in Planning*. After collecting articles, each article was then systematically reviewed to ensure relevance. The articles needed to address community level recovery (including issues related to housing, economic, infrastructure, planning, etc.) or note issues that affect recovery outcomes (e.g., differences in housing outcomes for rental versus owned housing). Next, we reviewed the reference list of identified articles to determine if any articles had been missed in the initial collection process. If there were additional articles that were missed, we collected the information and searched for the title of the article. After processing each article, the articles were then compiled into the Zotero software.

The Zotero bibliographic database is open to the public to view at:

<https://www.zotero.org/groups/2278263/recoveryguidancetamu/items>

Overviews

Articles that provide summaries or broad discussion of disaster recovery issues, activities, processes, or specific large disasters.

Aldrich, D. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. The University of Chicago: The University of Chicago Press.

<https://www.press.uchicago.edu/ucp/books/book/chicago/B/bo13601684.html>

Each year, natural disasters threaten the strength and stability of communities worldwide. Yet responses to the challenges of recovery vary greatly and in ways that aren't explained by the magnitude of the catastrophe or the amount of aid provided by national governments or the international community. The difference between resilience and disrepair, as Daniel P. Aldrich shows, lies in the depth of communities' social capital. *Building Resilience* highlights the critical role of social capital in the ability of a community to withstand disaster and rebuild both the infrastructure and the ties that are at the foundation of any community. Aldrich examines the post-disaster responses of four distinct communities—Tokyo following the 1923 earthquake, Kobe after the 1995 earthquake, Tamil Nadu after the 2004 Indian Ocean Tsunami, and New Orleans post-Katrina—and finds that those with robust social networks were better able to coordinate recovery. In addition to quickly disseminating information and financial and physical assistance, communities with an abundance of social capital were able to minimize the migration of people and valuable resources out of the area. With governments increasingly overstretched and natural

disasters likely to increase in frequency and intensity, a thorough understanding of what contributes to efficient reconstruction is more important than ever. Building Resilience underscores a critical component of an effective response.

Aldrich, D. P. (2010). *Fixing Recovery: Social Capital in Post-Crisis Resilience*, 16.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1599632

Disasters remain among the most critical events which impact residents and their neighborhoods; they have killed far more individuals than high salience issues such as terrorism. Unfortunately, disaster recovery programs run by the United States and foreign governments have not been updated to reflect a new understanding of the essential nature of social capital and networks. I call for a re-orientation of disaster preparedness and recovery programs at all levels away from the standard fixes focused on physical infrastructure towards ones targeting social infrastructure. The reservoirs of social capital and the trust (or lack thereof) between citizens in disaster-affected communities can help us understand why some neighborhoods in cities like Kobe, Japan, Tamil Nadu, India, and New Orleans, Louisiana displayed resilience while others stagnated. Social capital – the engine for recovery - can be deepened both through local initiatives and interventions from foreign agencies.

Arendt, L. A., & Alesch, D. J. (2015). *Long-term community recovery from natural disasters*. Boca Raton: CRC Press. <https://www.taylorfrancis.com/books/9781466593039>

Today, governmental efforts at long-term community recovery from a natural disaster consist primarily of rebuilding the physical artifact of the community. This entails reestablishing vital community services and infrastructure and creating housing to replace that which has been lost. While restoring the built environment of a disaster area is essential, alone it is not sufficient to achieve complete recovery. *Long-Term Community Recovery from Natural Disasters* presents what the authors have learned over two decades from more than two dozen community disasters in and outside the United States. Based on their experiences, they provide a set of practical, cost-effective steps for both reducing the consequences of extreme natural hazard events on communities and for facilitating community recovery. To achieve long-term recovery, it is essential that we understand how communities develop and/or decay in the absence of an extreme natural hazard event. Then, by recognizing how these events disrupt “normal” development and change, we can determine which parts of the community have to become reestablished or made more functional so that the community can achieve long-term viability. The authors explain how this appreciation of community dynamics and the consequences of extreme natural hazard events enables us to identify those critical points for policy intervention at appropriate levels of government. The combined practical and philosophical insight presented in this book will be valuable not only to policy makers but to scholars as well.

Awotona, A. (2016). *Planning for Community-based Disaster Resilience Worldwide: Learning from Case Studies in Six Continents*. Routledge.

<https://www.routledge.com/Planning-for-Community-based-Disaster-Resilience-Worldwide-Learning-from-Awotona/p/book/9781472468154>

We are witnessing an ever-increasing level and intensity of disasters from Ecuador to Ethiopia and beyond, devastating millions of ordinary lives and causing long-term misery for vulnerable populations. Bringing together 26 case studies from six continents, this volume provides a unique resource that discusses, in considerable depth, the multifaceted matrix of natural and human-made disasters. It examines their bearing on the loss of human and productive capital; the conduct of national policies and

the setting of national development priorities; and on the nature of international aid and bilateral assistance strategies and programs of donor countries. In order to ensure the efficacy and appropriateness of their support for disaster survivors, international agencies, humanitarian and disaster relief organizations, scholars, non-governmental organizations, and members of the global emergency management community need to have insight into best practices and lessons learned from various disasters across national and cultural boundaries. The evidence obtained from the numerous case studies in this volume serves to build a worldwide community that is better informed about the cultural and traditional contexts of such disasters and better enabled to prepare for, respond to, and finally rebuild sustainable communities after disasters in different environments. The main themes of the case studies include: • the need for community planning and emergency management to unite in order to achieve the mutual aim of creating a sustainable disaster-resilient community, coupled with the necessity to enact and implement appropriate laws, policies, and development regulations for disaster risk reduction; • the need to develop a clear set of urban planning and urban design principles for improving the built environment's capacities for disaster risk management through the integration of disaster risk reduction education into the curricula of colleges and universities; • the need to engage the whole community to build inclusive governance structures as prerequisites for addressing climate change vulnerability and fostering resilience and sustainability. Furthermore, the case studies explore the need to link the existence and value of scientific knowledge accumulated in various countries with decision-making in disaster risk management; and the relevance and transferability from one cultural context to another of the lessons learned in building institutional frameworks for whole community partnerships.

Berke, P. R., Godschalk, D. R., Kaiser, E. J., & Rodriguez, D. A. (2006). *Urban Land Use Planning* (5th ed.). <https://www.press.uillinois.edu/books/catalog/68wcc8wc9780252030796.html>

Divided into three sections, this edition of *Urban Land Use Planning* deftly balances an authoritative, up-to-date discussion of current practices with a vision of what land use planning should become. It explores the societal context of land use planning and proposes a model for understanding and reconciling the divergent priorities among competing stakeholders; it explains how to build planning support systems to assess future conditions, evaluate policy choices, create visions, and compare scenarios; and it sets forth a methodology for creating plans that will influence future land use change. Discussions new to the fifth edition include how to incorporate the three Es of sustainable development (economy, environment, and equity) into sustainable communities, methods for including livability objectives and techniques, the integration of transportation and land use, the use of digital media in planning support systems, and collective urban design based on analysis and public participation. “‘Incomparable’ is the only way to describe the fifth edition of this classic text. My fourth edition is worn from a decade of constant use, and I thought there was no way to make *Urban Land Use Planning* any better, but the fifth edition proves me wrong. It is not merely the best book on the subject; it is, as far as I am concerned, the only book.”--Dwight H. Merriam, FAICP, CRE, and past president of the American Institute of Certified Planners “This has always been the one definitive text and reference book for students and practitioners of local land use planning and the fifth edition continues that tradition.”--John Landis, chair of the city and regional planning department, University of California, Berkeley

Birch, E. L., & Wachter, S. M. (2006). *Rebuilding urban places after disaster: Lessons from Hurricane Katrina* (Vol. 73). University of Pennsylvania Press. <http://www.upenn.edu/pennpress/book/14268.html>

Disasters—natural ones, such as hurricanes, floods, or earthquakes, and unnatural ones such as terrorist attacks—are part of the American experience in the twenty-first century. The challenges of preparing for

these events, withstanding their impact, and rebuilding communities afterward require strategic responses from different levels of government in partnership with the private sector and in accordance with the public will. Disasters have a disproportionate effect on urban places. Dense by definition, cities and their environs suffer great damage to their complex, interdependent social, environmental, and economic systems. Social and medical services collapse. Long-standing problems in educational access and quality become especially acute. Local economies cease to function. Cultural resources disappear. The plight of New Orleans and several smaller Gulf Coast cities exemplifies this phenomenon. This volume examines the rebuilding of cities and their environs after a disaster and focuses on four major issues: making cities less vulnerable to disaster, reestablishing economic viability, responding to the permanent needs of the displaced, and recreating a sense of place. Success in these areas requires that priorities be set cooperatively, and this goal poses significant challenges for rebuilding efforts in a democratic, market-based society. Who sets priorities and how? Can participatory decision-making be organized under conditions requiring focused, strategic choices? How do issues of race and class intersect with these priorities? Should the purpose of rebuilding be restoration or reformation? Contributors address these and other questions related to environmental conditions, economic imperatives, social welfare concerns, and issues of planning and design in light of the lessons to be drawn from Hurricane Katrina.

Brinkley, D. (2007). *The Great Deluge: Hurricane Katrina, New Orleans, and the Mississippi Gulf Coast*. New York, NY: HarperCollins. <https://www.harpercollins.com/9780061148491/the-great-deluge/>

In the span of five violent hours on August 29, 2005, Hurricane Katrina destroyed major Gulf Coast cities and flattened 150 miles of coastline. Yet those wind-torn hours represented only the first stage of the relentless triple tragedy that Katrina brought to the entire Gulf Coast, from Louisiana to Mississippi to Alabama. First came the hurricane, one of the three strongest ever to make landfall in the United States -- 150-mile-per-hour winds, with gusts measuring more than 180 miles per hour ripping buildings to pieces. Second, the storm-surge flooding, which submerged a half million homes, creating the largest domestic refugee crisis since the Civil War. Eighty percent of New Orleans was under water, as debris and sewage coursed through the streets, and whole towns in south-eastern Louisiana ceased to exist. And third, the human tragedy of government mis-management, which proved as cruel as the natural disaster itself. Ray Nagin, the mayor of New Orleans, implemented an evacuation plan that favored the rich and healthy. Kathleen Blanco, governor of Louisiana, dithered in the most important aspect of her job: providing leadership in a time of fear and confusion. Michael C. Brown, the FEMA director, seemed more concerned with his sartorial splendor than the specter of death and horror that was taking New Orleans into its grip. In *The Great Deluge*, bestselling author Douglas Brinkley, a New Orleans resident and professor of history at Tulane University, rips the story of Katrina apart and relates what the Category 3 hurricane was like from every point of view. The book finds the true heroes -- such as Coast Guard officer Jimmy Duckworth and hurricane jock Tony Zumbado. Throughout the book, Brinkley lets the Katrina survivors tell their own stories, masterly allowing them to record the nightmare that was Katrina. *The Great Deluge* investigates the failure of government at every level and breaks important new stories. Packed with interviews and original research, it traces the character flaws, inexperience, and ulterior motives that allowed the Katrina disaster to devastate the Gulf Coast

Chandra, A., & Acosta, J. D. (2010). Disaster recovery also involves human recovery. *JAMA*, 304(14), 1608–1609. <https://doi.org/10.1001/jama.2010.1456>

With the cost of natural and manmade disasters questions begin to arise such as, how long does recovery take (physical, psychological, and social). The United States typically focuses on the infrastructure that

need replacing and seem to not learn from the disasters. This article looks at was to develop a systematic approach to human recovery.

Clifford E, O. (2011). *Catastrophic disaster planning and response*. Boca Raton: CRC Press.
<https://www.crcpress.com/Preparedness-and-Response-for-Catastrophic-Disasters/Bissell-Jensen-Feldman-Jensen/p/book/9781466511897>

Presenting cutting-edge domestic and international approaches, *Catastrophic Disaster Planning and Response* explains how to effectively plan for and manage the consequences of a catastrophe. Recognizing that a business-as-usual approach to preparing for and responding to such events is doomed to fail, the book fills a gap in emergency management education. It introduces the many considerations that influence how we plan for and respond to large-scale catastrophes and how it differs from preparing for smaller-scale emergencies. Written by a recognized expert in emergency management, this volume is a thorough study of the planning process and response procedures for catastrophic disasters. Topics discussed include: The history of catastrophic events, both in and outside the United States How catastrophes differ from disasters and emergencies and how they are all part of the emergency management continuum The varying definitions of catastrophes and their political and societal implications The main ethical and value dilemmas that one will likely face before, during, and after a catastrophe The legal framework associated with government response to catastrophes The post-catastrophic environment that an emergency manager might experience, with a focus on logistics, critical infrastructure, mass care, and mass evacuation Planning strategies and skills an emergency manager can employ to mitigate the effects of such an event The use of crisis leadership skills and how to lead and influence others in a catastrophic situation Recent major events provide valuable lessons that demonstrate the characteristics of a catastrophic disaster, the special issues of response and recovery, and the necessary preparation on international, national, and local levels. Offering best practices using recent real-world case studies, the book provides a foundation for continued study and critical reflection. *Catastrophic Disaster Planning and Response* is one of only two books utilized by the U.S. Coast Guard (USCG) in their elite 2010 Flag Office/SES Executive Change Leadership Program (ECL) curriculum. The ECL program develops the executive leadership skills of USCG Admiral-selects awaiting Senate confirmation, as well as members of the Department of Homeland Security's federal Senior Executive Service (SES), which in 2010 included representatives from the U.S. Secret Service, the Transportation Security Administration, Immigration and Customs Enforcement, the U.S. Border Patrol, Citizenship and Immigration Services, and FEMA. Readily adaptable for classroom use, this cutting-edge professional reference provides qualifying instructors with access to teaching materials and a test bank

Comfort, L. K. (1998). *Managing Disaster: Strategies and Policy Perspectives*. Duke University Press.
<https://www.dukeupress.edu/managing-disaster/?viewby=title>

This book reflects an important shift in society's definition of disaster. For centuries catastrophic events have been considered "acts of God" and therefore uncontrollable by definition. *Managing Disaster* is international in scope, covering such natural and man-made calamities as tornadoes in western Pennsylvania, earthquakes in Peru, flooding in the Netherlands, and toxic waste disasters. Centers for hazard studies have only recently examined the interrelated aspects of disastrous events and recognized the interaction between natural hazards and human systems. As society attempts to acquire the information and develop the skills to reduce the risks and damage from disaster, an increasingly professional public service is reconsidering its strategies and policy direction. *Managing Disaster*

addresses this problem and the need for a new approach to teaching this subject at the university level. Twenty-three professionals and scholars in public policy and administration; universities, government, and the private sector; examine the basic issues confronting managers and public agencies in the face of disaster.

Daniels, R. J., Kettl, D. F., & Kunreuther, H. (2006). *On risk and disaster: lessons from Hurricane Katrina*. Philadelphia, PA: University of Pennsylvania Press.
<http://www.upenn.edu/pennpress/book/14002.html>

Hurricane Katrina not only devastated a large area of the nation's Gulf coast, it also raised fundamental questions about ways the nation can, and should, deal with the inevitable problems of economic risk and social responsibility. This volume gathers leading experts to examine lessons that Hurricane Katrina teaches us about better assessing, perceiving, and managing risks from future disasters. In the years ahead we will inevitably face more problems like those caused by Katrina, from fire, earthquake, or even a flu pandemic. America remains in the cross hairs of terrorists, while policy makers continue to grapple with important environmental and health risks. Each of these scenarios might, in itself, be relatively unlikely to occur. But it is statistically certain that we will confront such catastrophes, or perhaps one we have never imagined, and the nation and its citizenry must be prepared to act. That is the fundamental lesson of Katrina. The 20 contributors to this volume address questions of public and private roles in assessing, managing, and dealing with risk in American society and suggest strategies for moving ahead in rebuilding the Gulf coast.

Davis, I. (2006). *Learning from disaster recovery guidance for decision makers*.
https://www.unisdr.org/files/726_10110.pdf

The project fills a major gap in international knowledge through the careful analysis of recovery operations following a diverse range of natural disasters that have occurred during the past twenty years. The intention is to learn vital lessons by understanding what constitutes an effective recovery operation and what can impede the process. Thus, evidence has been assembled from the analysis of approximately 70 accounts of recovery. This has been augmented through the addition of first hand experiences gained from visits made by the author and a research field team drawn from the International Recovery Platform to review recovery lessons from flooding, earthquake and tsunami impact in Mozambique, Sri Lanka, Indonesia and Bangladesh. The results, summarized in this book, seek to provide practical help to key decision makers directing recovery actions to avoid them 're-inventing wheels'.

EPA. (2011). *Sustainable Recovery after Natural Disasters*.
https://www.epa.gov/sites/production/files/2015-08/documents/fs_sustainable_recovery_after_natural_disasters.pdf

EPA is assisting several community-led efforts to build energy efficiency and sustainability into post-disaster redevelopment plans. EPA is one of 16 federal agencies involved in the Federal Emergency Management Agency's (FEMA) Emergency Support Function (ESF) #14 (Long-Term Community Recovery) under the National Response Framework.

Garnett, J. D., & Moore, M. (2010). Enhancing disaster recovery: Lessons from exemplary international disaster management practices. *Journal of Homeland Security and Emergency Management*, 7(1), 1–20.
https://www.rand.org/pubs/external_publications/EP20100076.html

Long-term recovery from disasters presents a formidable challenge to affected communities, requiring sound strategies to restore the health and livelihoods of those affected. This paper examines exemplary practices related to long-term recovery and redevelopment from disasters in other countries, and identifies key themes and promising practices relevant to the United States and other countries. From the eight disasters examined, we find that successful recovery efforts emphasized local empowerment, organization and leadership, and planning for sustainability – three broad approaches that characterized the practices employed by other countries. We believe these practices offer examples that can help to inform disaster management within the U.S., whether contributing to the forthcoming legislatively mandated National Disaster Management Framework or to implement such policy once the document is released. The research suggest three ways to enhance disaster recovery: (1) incorporate long-term recovery goal; (2) expand the knowledge base; (3) develop outcomes towards disaster recovery planning.

Godschalk, D. R., Beatley, T., Berke, P. R., Deyle, R. E., French, S. P., Burby, R. J., ... Platt, R. H. (1999). Unleashing the power of planning to create disaster-resistant communities. *Journal of the American Planning Association*, 65(3), 247–258. <https://doi.org/10.1080/01944369908976055>

Human suffering and losses of lives and property in natural disasters can be reduced with appropriate planning for hazardous areas. Federal policies addressing these problems, however, have yet to recognize the importance of planning as the cornerstone of effective local hazard mitigation. In fact, federal programs make planning more difficult because they encourage the intensive use of hazardous land and shield local governments and private decision makers from financial losses in the disasters that inevitably follow. To unleash the power of planning for hazard mitigation, federal policies must be revised so that they help build local understanding of risk commitment to hazard mitigation, and support for planning. A number of actions can be taken now to begin moving in this direction. In the long term, however, new legislation is needed to reduce subsidies that sustain and encourage development in hazardous areas and to increase assistance for planning.

Godschalk, D. R., Brower, D. J., & Beatley, T. (1989). *Catastrophic Coastal Storms: Hazard Mitigation and Development Management*. Duke University Press.
<https://www.dukeupress.edu/catastrophic-coastal-storms>

As people cluster on the coast in increasing numbers, coastal populations become more vulnerable to severe damage from catastrophic coastal storms. The authors contented that current public policy has proved unable to cope with the growing problem, and in response they present a comprehensive analysis of coastal storm hazards, standard policy approaches, and promising new means of managing coastal growth. *Catastrophic Coastal Storms* offers a solution to the policy problem by proposing a merger of hazard mitigation with development management, basing this on extensive surveys of at-risk coastal locations and case studies of post-hurricane recovery. Starting with the local level of government and proceeding to state and federal levels, the authors propose a strategy for overcoming the formidable obstacles to safeguarding the shoreline population and its structures from hurricanes and other severe storms.

Kapucu, N. (2014). Collaborative Governance and Disaster Recovery: The National Disaster Recovery Framework (NDRF) in the U.S. In R. Shaw (Ed.), *Disaster Recovery* (pp. 41–59). Tokyo: Springer Japan.
https://s3.amazonaws.com/academia.edu.documents/39756727/Collaborative_governance_Disaster_Recovery-_Published.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1544821567&Sig

[nature=WPfQJYP1VESEGUosmSJUATlf31c%3D&response-content-disposition=inline%3B%20filename%3DCollaborative_governance_and_disaster_re.pdf](#)

Disasters impact communities and individuals and disrupt social-technical systems and community functions. Consequences of disasters can be minimized if communities and people reduce their vulnerabilities and increase their resilience. Disaster response received significant attention from the researchers and practitioners alike. In a sense it is easy to study short term disaster response. Investment in immediate disaster response also makes sense for policy makers. Unfortunately research on disaster recovery is very limited and it is considered the ignored phase of emergency management and existing knowledge and applied research of this phase is seriously lagging behind compared to what is required today. Disaster recovery is usually perceived and understood as a slow phase that begins after critical decisions and needs are met after a disaster. There is also a perceived notion that the government agencies at all levels have committed resources more to disaster response and relief efforts and less to recovery (and mitigation) efforts. Thus it is important to pay heed to this crucial phase of managing disasters. Recovery is a long process that offers ample opportunity to rebuild and redevelop resilient and sustainable communities. The chapter highlights that a shared effort to redevelop, restore, and rebuild a community requires effective intergovernmental and cross-sector collaboration and cooperation. Recent recovery experiences in the US, especially post-Katrina, have shown a considerable lack of coordination between different government agencies as well as political conflicts in planning and executing recovery efforts. The complex nature of recovery planning and efforts requires pre-disaster and post-disaster collaboration between different stakeholders including private, public, nonprofit organizations and citizens. This chapter focuses on collaborative governance principles applied to disaster recovery using the recent National Disaster Recovery Framework (NDRF) in the U.S. as an example. The development of NDRF is also included briefly in the chapter. This chapter is important to gauge the usefulness of a national level recovery framework. This framework may assist in altering the general perception about the Federal government's lack of effort and planning towards disaster recovery.

Kim, K., & Olshansky, R. B. (2014). The Theory and Practice of Building Back Better. *Journal of the American Planning Association*, 80(4), 289–292. <https://doi.org/10.1080/01944363.2014.988597>

Our goal for this special issue of the Journal of the American Planning Association was to collect articles that could help us to better understand the post-disaster environment and provide insights to help planners operate more effectively in this world. How have planners found ways to address these unique circumstances, in which everything seems to move faster, information is constrained, money flows more freely, and new opportunities arise?

Lindell, M. K., & Meier, M. J. (1994). Planning Effectiveness: Effectiveness of Community Planning for Toxic Chemical Emergencies. *Journal of the American Planning Association*, 60(2), 222–234. <https://doi.org/10.1080/01944369408975575>

Recent studies have shown substantial variation within and between states in the levels of local planning for hazardous materials emergencies. To explain these variations, literature on strategic planning, disaster planning and team effectiveness was used to construct a model of Local Emergency Planning Committee (LEPC) effectiveness in developing emergency plans. Data from Michigan LEPCs showed that emergency planning outcomes (e.g., quality and degree of completion of critical planning tasks and submission of plans for approval) were correlated with internal factors such as member inputs, staffing and structure, and emergency planning resources. External factors such as community support and recent

hazard experience also affect success, possibly by endowing emergency planning with importance for LEPC members either directly (e.g., recent evacuation experience) or indirectly (community support arising from the high priority given emergency plans by others). These results suggest that community planners should take such strategic actions as developing community support and redesigning the LEPCs structure to be more effective in preparing for hazardous materials emergencies.

Lindell, Michael K., & Perry, R. W. (2008). *Emergency Planning: Improve Community Preparedness with these Basic Steps*.

<http://www.govtech.com/em/disaster/Emergency-Planning-Improve-Community.html>

Planning is an important avenue to community emergency preparedness. The practice of emergency response planning is best thought of as a process - a continuing sequence of analyses, plan development, and the acquisition by individuals and teams of performance skills achieved through training, drills, exercises and critiques. The process varies considerably among communities. In some communities, planning is formalized by a specific assignment of responsibility to an office having an identifiable budget. In other communities, planning is informal: Responsibility is poorly defined, and a limited budget is dispersed among many agencies. Similarly response plans and procedures may be mostly written or mostly unwritten. Such variability exists despite federal and state requirements for community emergency planning because local governments vary in their capacity (especially funding) and their commitment to emergency management. Thus, for many years, higher levels of government described their standards for emergency preparedness as "guidance." Over the years, researchers have identified eight fundamental principles of community emergency planning that can be used to increase a community's level of preparedness

Lindell, Michael K., Prater, C. S., & Perry, R. W. (2018). *Fundamentals of Emergency Management*. Emergency Management Institute. <https://doi.org/10.1016/j.progress.2009.09.001>

Fundamentals of Emergency Management has been written to provide comprehensive coverage of the major topics that prospective emergency managers should understand about the way human systems attempt to cope with extreme events in their physical and social environments. This book does not repeat the material in FEMA training courses or federal agency guidance nor provide step-by-step instructions on how to comply with state and federal requirements. Neither does this book provide a detailed review all of the disaster-related literature from any of the physical, biological, or social sciences or from architecture, engineering, or planning. Rather, it attempts to identify the essential information needed to become a competent emergency manager.

Mader, G. G., & Tyler, M. B. (1991). *Rebuilding After Earthquakes. Lessons from Planners*. Spangle (William) and Associates, Inc., Portola Valley, CA.

<https://www.tib.eu/en/search/id/ntis%3AAsid~oai%253Ads2%253Antis%252F531a134802b803781c0423c3/Rebuilding-After-Earthquakes-Lessons-from-Planners/>

The publication summarizes the outcomes of the International Symposium on Rebuilding After Earthquakes, sponsored by Stanford University in August 1990. Approximately 40 planners participated, including presenters from Yugoslavia, Armenia, Italy, Algeria, Mexico, and Nicaragua who illustrated parallels between their country's redevelopment experiences following major earthquakes. The document provides advice for planners who face rebuilding of residential and other properties: the need to work across traditional professional boundaries; advice on pre-earthquake steps, such as assuring consistency between plans and development regulations; and the importance of creating the legal authority, structure

and plans for future development. The presenters also stressed the value of regional planning and appropriate site planning considerations for temporary housing, and the worth of identifying geologic, seismic, and structural hazards before an earthquake hits. In addition, they addressed social considerations planners should take into account, particularly when confronted with historic preservation issues; homeowners' safety concerns; the disparate effects on small business owners within the older central business districts; and the reestablishment of neighborhoods following the catastrophe.

Marsh, G., Ahmed, I., Mulligan, M., Donovan, J., & Barton, S. (2018). *Community Engagement in Post-Disaster Recovery*. London: Routledge.

<https://www.routledge.com/Community-Engagement-in-Post-Disaster-Recovery/Marsh-Ahmed-Mulligan-Donovan-Barton/p/book/9781138691674>

Community Engagement in Post-Disaster Recovery reflects a wide array of practical experiences in working with disaster-affected communities internationally. It demonstrates that widely held assumptions about the benefits of community consultation and engagement in disaster recovery work need to be examined more critically because poorly conceived and hastily implemented community engagement strategies have sometimes exacerbated divisions within affected communities and/or resulted in ineffective use of aid funding. It is equally demonstrated that well-crafted, creative and thoughtful programming is possible. The wide collection of case studies of practical experience from around the world is presented to help establish ways of working with communities experiencing great challenges. The book offers practical suggestions on how to give more substance to the rhetoric of community consultation and engagement in these areas of work. It suggests the need to work with a dynamic understanding of community formation that is particularly relevant when people experience unforeseen challenges and traumatic experiences. This title interrogates the concept of community through an extensive review of the literature and explores the ways of working with communities in transition and particularly in their recovery phases through an array of case studies in a range of socioeconomic and political contexts. Focused on the concept of community in post-disaster recovery solutions—an aspect which has received little critical interrogation in the literature—this book will be a valuable resource to students and scholars in disaster management as well as humanitarian agencies.

Masterson, J. H., Peacock, W. G., Zandt, S. S. V., Grover, H., Schwarz, L. F., & Cooper, J. T. (2014). *Planning for Community Resilience : A Handbook for Reducing Vulnerability to Disasters*. Washington, D.C.: Island Press.

<https://islandpress.org/books/planning-community-resilience>

How can we plan and design stronger communities? From New Orleans to Galveston to the Jersey Shore, communities struck by natural disasters struggle to recover long after the first responders have left. Globally, the average annual number of natural disasters has more than doubled since 1980. These catastrophes are increasing in number as well as in magnitude, causing greater damage as we experience rising sea levels and other effects of climate change. Communities can reduce their vulnerability to disaster by becoming more resilient—to not only bounce back more readily from disasters but to grow stronger, more socially cohesive, and more environmentally responsible. To be truly resilient, disaster preparation and response must consider all populations in the community. By bringing together natural hazards planning and community planning to consider vulnerabilities, more resilient and equitable communities are achievable. In *Planning for Community Resilience* the authors describe an inclusive process for creating disaster-resilient communities. Based on their recovery work after Hurricane Ike in Galveston, Texas, they developed a process that relies on the Disaster Impacts Model. This handbook

guides any community through the process of determining their level of hazard exposure, physical vulnerability, and social vulnerability with the goal of determining the best planning strategy. Planning for Community Resilience will be invaluable to professionals working to protect their community from disturbance, including city planners, elected officials, floodplain managers, natural hazard managers, planning commissioners, local business leaders, and citizen organizers.

Mayunga, J. S. (2007). *Understanding and Applying the Concept of Community Disaster Resilience: A capital-based approach*.

https://www.ucursos.cl/usuario/3b514b53bcb4025aaf9a6781047e4a66/mi_blog/r/11._Joseph_S._Mayunga.pdf

Despite the recent popularity and frequent use of the disaster resilience concept in the academic, research, and policy programs, there is a limited theoretical understanding of this concept. For instance, it is not clear how this concept should be operationalized and what its determinant factors are or how they can be measured. Although the recent literatures on hazard and disaster frequently refer to resilience concept as a guiding principle behind an effective hazard risk management, making it operational for policies raises critical challenges in terms of its assessment. This paper is an attempt to develop a conceptual and methodological framework for the analysis, measurement, and mapping of community disaster resilience. The paper specifically intends to archive three objectives. Firstly, it examines the general definitional issues of the concept of resilience with a focus on community disaster resilience. Secondly, it reviews the frameworks that are currently used to measure community resilience. Thirdly, it evaluates the existing methods that are used to develop resilience indices, and based on this review, a methodology on how to measure community disaster resilience is proposed. Finally, it summarizes the limitations and recommendations for further improvement of the methodology.

McEntire, D. A. (2015). *Disaster Response and Recovery*.

<https://www.amazon.com/Disaster-Response-Recovery-Strategies-Resilience/dp/1118673026>

Provides an overview of the various types of disasters that may occur - the myriad of actors that are involved in emergency management - and the diverse theoretical frameworks from which post-disaster activities may be approached. - Includes updated chapters keeping the material fresh and accessible while incorporating recent changes in policy and new research - Highlights lessons learned from such incidents and catastrophes as: Hurricane Katrina - Earthquake in Haiti - Parking lot collapse in Miami - West Texas industrial explosion - Train wreck in Spain - Aurora movie shooting - Times Square bombing - etc. - Examines typical challenges to be expected during response efforts along with tools and techniques to enhance the ability to protect lives - reduce property damage and minimize disruption - Includes an instructor package which contains: Sample Syllabus - Teaching Suggestions - Test bank - and PowerPoints

Meyer, M. A. (2018). Social Capital in Disaster Research. In H. Rodríguez, W. Donner, & J. E. Trainor (Eds.), *Handbook of Disaster Research* (pp. 263–286). Cham: Springer International Publishing.

https://doi.org/10.1007/978-3-319-63254-4_14

Disaster scholars' interest in social capital has grown dramatically, due in part because social capital gets at the heart of collective action, cooperation, and the therapeutic community that occurs during emergencies. While social capital has been highlighted as a positive factor for communities under extreme events, questions remain. This chapter reviews how social capital is conceptualized and operationalized in disaster research and the current state of knowledge on this topic. The chapter begins with social capital

theory. Next, the relevant research on social capital in disaster is reviewed. This research is categorized by unit of analysis (individual or collective) and the phase of disaster (mitigation, preparedness, response, and recovery). Finally, this chapter concludes with a critical assessment of the use of social capital by disaster scholars and offers implications for future research.

Moral, R. del, & Walker, L. R. (2007). *Environmental disasters, natural recovery and human responses*. Cambridge: Cambridge University.

<https://www.cambridge.org/vi/academic/subjects/life-sciences/ecology-and-conservation/environmental-disasters-natural-recovery-and-human-responses?format=HB>

Natural disasters destroy more property and kill more people with each passing year. Volcanic eruptions, earthquakes, hurricanes, tsunamis, floods, landslides, fires and other natural events are becoming more frequent and their consequences more devastating. Del Moral and Walker provide a comprehensive summary of the diverse ways in which natural disasters disrupt humanity and how humans cope. Burgeoning human numbers, shrinking resources and intensification of the consequences of natural disasters have produced a crisis of unparalleled proportions. Through this detailed study, the authors provide a template for improving restoration to show how relatively simple approaches can enhance both human well-being and that of the other species on the planet. This book will appeal to ecologists, land managers as well as anyone curious about the natural world and natural disasters.

Nigg, J. M. (1995). *Disaster recovery as a social process* (p. 31). Newark, DE: Disaster Research Center, University of Delaware. <http://udspace.udel.edu/handle/19716/625>

This paper takes the perspective that recovery from disaster is not merely concerned with the reestablishment of the physical or built environment; that is, community recovery should not be conceptualized as an outcome, but rather as a social process that begins before a disaster occurs and encompasses decision-making concerning emergency response, restoration, and reconstruction activities following the disaster. Put another way, reconstruction is less a technical problem than it is a social one. In order for successful post-disaster decisions to be made, however, there must be an awareness of the pre-disaster conditions that create situations of social and structural vulnerability, putting some segments of the society at greater risk in the event of an earthquake than others. From this perspective, what becomes important is how those decisions are made, who is involved in the decision-making, what consequences those decisions have on the social groups within the disaster-stricken communities, and who benefits from these decisions and who does not.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. *American Journal of Community Psychology*, 41(1–2), 127–150. <https://doi.org/10.1007/s10464-007-9156-6>

Communities have the potential to function effectively and adapt successfully in the aftermath of disasters. Drawing upon literatures in several disciplines, we present a theory of resilience that encompasses contemporary understandings of stress, adaptation, wellness, and resource dynamics. Community resilience is a process linking a network of adaptive capacities (resources with dynamic attributes) to adaptation after a disturbance or adversity. Community adaptation is manifest in population wellness, defined as high and non-disparate levels of mental and behavioral health, functioning, and quality of life. Community resilience emerges from four primary sets of adaptive capacities—Economic Development, Social Capital, Information and Communication, and Community Competence—that together provide a strategy for disaster readiness. To build collective resilience, communities must reduce

risk and resource inequities, engage local people in mitigation, create organizational linkages, boost and protect social supports, and plan for not having a plan, which requires flexibility, decision-making skills, and trusted sources of information that function in the face of unknowns.

Olshansky, R. B., Hopkins, L. D., & Johnson, L. A. (2012). Disaster and Recovery: Processes Compressed in Time. *Natural Hazards Review*, 13(3), 173–178.
[https://doi.org/doi:10.1061/\(ASCE\)NH.1527-6996.0000077](https://doi.org/doi:10.1061/(ASCE)NH.1527-6996.0000077)

We posit that the key characteristic that distinguishes postdisaster conditions from normal times is time compression. Stated simply, the postdisaster environment consists of a compression of urban development activities in time and in a limited space, a phenomenon we refer to as time compression. Furthermore, time compression affects different aspects of recovery processes in different ways, thereby changing their relationships compared to normal times. For example, processes of physical construction, financial transactions, social capital formation, and institution building compress unequally in time. The place of disaster thus becomes different from other places in new ways.

Olshansky, R., & Chang, S. (2009). Planning for disaster recovery: Emerging research needs and challenges. *Progress in Planning*, 72(4), 200–209.
https://www.researchgate.net/publication/284047944_Planning_for_disaster_recovery_Emerging_research_needs_and_challenges

Disasters disrupt the physical stock of cities, infrastructure systems, social and economic systems, and the lives of residents. 8 In an instant, a disaster demolishes much of what urban planners strive to accomplish: systems that support the lives of residents. Despite our best efforts, disasters will continue to occur, and urban planners have a critical role to play in guiding the recovery of what has been destroyed. Successful application of planning policies can serve to reduce the long-term effects of disasters. Planning and management of post-disaster recovery processes is emerging as an important new area of planning research. The lingering problems of recent catastrophes, as well as heightened concern that disasters will become more frequent and costly, have raised the salience of this issue in policy and research agendas.

Opdyke, A., Javernick-Will, A., & Koschmann, M. (2017). Infrastructure hazard resilience trends: an analysis of 25 years of research. *Natural Hazards*, 87(2), 773–789.
<https://doi.org/10.1007/s11069-017-2792-8>

Hazard research has made significant strides over the last several decades, answering critical questions surrounding vulnerability and recovery. Recently, resilience has come to the forefront of scholarly debates and practitioner strategies, yet there remain challenges implementing resilience in practice, the result of a complex web of research that spread across numerous fields of study. As a result, there is a need to analyze and reflect on the current state of resilience literature. We reviewed 241 journal articles from the Web of Science and Engineering Village databases from 1990 to 2015 to analyze research trends in geographic location of studies, methods employed, units of analysis, and resilience dimensions studied, as well as correlations between each of these categories. The majority of the studies analyzed were conducted in North America, used quantitative methods, focused on infrastructure and community units of analysis, and studied governance, infrastructure, and economic dimensions of resilience. This analysis points to the need to: (1) conduct studies in developing country contexts, where resilience is particularly important; (2) employ mixed-methods for additional depth to quantitative studies; (3) connect units of

analysis, such as infrastructure and community; and (4) expand on the measurement and study of environmental and social dimensions of resilience.

Peacock, W. G., Morrow, B. H., & Gladwin, H. (1997). *Hurricane Andrew: Ethnicity, Gender and the Sociology of Disaster*. New York: Routledge.

http://scholar.google.com/scholar_url?url=https://content.taylorfrancis.com/books/download%3Fdac%3DC2004-0-25232-0%26isbn%3D9781135108205%26format%3DgooglePreviewPdf&hl=en&sa=X&scisig=AAGBfm1vep_nlGmul2u8Lmb_yPOGFD0Qtw&nossl=1&oi=scholar

Hurricane Andrew has proved to be the most costly natural disaster in US history. This book documents how Miami prepared for, coped with and responded to the hurricane, which slammed into one of the largest and most ethnically diverse metropolitan areas of the United States - Miami. With sustained winds of 145 mph, the infrastructure in the southern metropolitan area was laid to waste - nearly all public buildings were severely damaged or destroyed. Approximately 49,000 private homes were rendered uninhabitable, leaving more than 180,000 people homeless. Total losses were in excess of \$28 billion. This book explores how social, economic and political factors set the stage for Hurricane Andrew by influencing who was prepared, who was hit the hardest, and who was most likely to recover. Disasters are often seen as natural physical phenomena that impact our communities in impartial ways. As a result, the damage they inflict and the difficulties experienced in recovering are simply seen as a function of the strength of the agent itself and where it happens to hit the hardest. But disasters are inherently social events. The nature of our communities how they are organized, how they exploit and use the natural environment and how scarce resources such as housing are distributed - is a critical factor for understanding disaster impact and recovery. Employing data they collected over three years using qualitative and quantitative techniques, the authors of Hurricane Andrew analyze the consequences of conflict and competition, especially those associated with race, ethnicity and gender, on preparation, response and recovery.

Pelling, M. (2012). *The Vulnerability of Cities : Natural Disasters and Social Resilience*. Routledge.

<http://public.eblib.com/choice/publicfullrecord.aspx?p=982107>

When disaster strikes in cities the effects can be catastrophic compared to other environments. But what factors actually determine the vulnerability or resilience of cities? The Vulnerability of Cities fills a vital gap in disaster studies by examining the too-often overlooked impact of disasters on cities, the conditions leading to high losses from urban disasters and why some households and communities withstand disaster more effectively than others. Mark Pelling takes a fresh look at the literature on disasters and urbanization in light of recent catastrophes. He presents three detailed studies of cities in the global South, drawn from countries with contrasting political and developmental contexts: Bridgetown, Barbados - a liberal democracy; Georgetown, Guyana - a post socialist-state; and Santo Domingo, Dominican Republic - an authoritarian state in democratic transition. This book demonstrates that strengthening local capacity - through appropriate housing, disaster-preparedness, infrastructure and livelihoods - is crucial to improving civic resilience to disasters. Equally important are strong partnerships between local community-based organizations, external non-governmental and governmental organizations, public and private sectors and between city and national government. The author highlights and discusses these best practices for handling urban disasters. With rapid urbanization across the globe, this book is a must-read for professionals, policy-makers, students and researchers in disaster management, urban development and planning, transport planning, architecture, social studies and earth sciences.

Perry, R. W., Lindell, M. K., & Tierney, K. J. (2000). *Facing the unexpected: Disaster preparedness and response in the United States*. Joseph Henry Press.
https://www.researchgate.net/publication/248555778_Facing_the_Unexpected_Disaster_Preparedness_and_Response_in_the_United_States

This book is one in a series of volumes that survey and assess research on hazards and disasters. It is part of a large-scale project that reviews both the state-of-the-art and the state of practice in the fields of disaster research and hazards management.

Phillips, B. D. (2015). *Disaster Recovery* (2nd ed.). CRC Press.
<https://www.crcpress.com/Disaster-Recovery/Phillips/p/book/9781466583849>

Since the publication of the first edition of *Disaster Recovery*, a number of important new studies and guides have become available. Now revised, updated, and expanded, this second edition meets the high standards for providing evidence-based best practices in a user-friendly textbook set by its predecessor. It is also more international in scope, incorporating case studies from around the world, including coverage of the Haiti earthquake of 2010, the Japanese tsunami of 2011, and overseas recovery practices.

Phillips, B. D., Thomas, D. S. K., Fothergill, A., & Blinn-Pike, L. (2009). *Social Vulnerability to Disasters*. Boca Raton, FL: CRC Press. <https://www.taylorfrancis.com/books/9781420078572>

In recent years, the world has watched in horror as tsunamis, earthquakes, and hurricanes have wrought havoc across countries and continents. While these events have different circumstances, they share a common factor: the overwhelming majority of victims are women, children, elderly, disadvantaged, or disabled.

Quarantelli, E. L. (1999). *The disaster recovery process: What we know and do not know from research* (p. 19). Newark, DE: Disaster Research Center, University of Delaware.
<http://dspace.udel.edu/bitstream/handle/19716/309/PP%20286.pdf?sequence=1&isAllowed=y>

We discuss five general topics. First, there are various referents for the term “recovery.” We note that what seems a simple enough term or word, namely “recovery” covers a variety of very complex activities that need to be addressed in any practical and/or theoretical discussion about the issue. What a process is called, can make a significant difference in consequences. Second, we consider the policy implications of what might constitute success or failure in disaster recovery. These are related to the goals and levels of recovery, the size of the recovering unit, different perspectives on the process, the secondary or ripple effects of disasters on recovery, and differences in recovery in disasters compared to catastrophes. Third, we highlight and summarize ten general themes from the research literature about what is known about those individuals and households who are assisted in the recovery effort after disasters. There are substantial differences regarding, for instance, the sources of aid, the kinds of help provided, and the effects of the assistance given to victims in the recovery process. Fourth, we discuss what the research literature says about those who give or provide disaster assistance to individuals and households in the aftermath of a disaster. The givers or providers, usually organizations, have more complex problems than usually is recognized. Fifth, we note two poorly studied questions. How do different cultural values affect the process (as illustrated by corruption)? What role do political considerations play in the process? These and other factors suggest some of the limits of the observations we have drawn from the existing research base.

Richardson, H. W., Peter Gordon, & James Moore. (2008). *Natural Disaster Analysis after Hurricane Katrina: Risk Assessment, Economic Impacts and Social Implications*. Chltenham, U.K.: Edward Elgar. <https://www.e-elgar.com/shop/natural-disaster-analysis-after-hurricane-katrina>

This influential book explores the key policy implications arising from Hurricane Katrina. Leading scholars from fields as diverse as decision analysis, risk management, economics, engineering, transportation, urban planning and sociology investigate the policy issues associated with insurance, flood control and rebuilding levees, housing, tourism, utility lifelines recovery and resilience, evacuation and relocation and racial inferences. By assessing the disruption of life in New Orleans, as well as the inter-regional economic impacts of the disaster, the authors suggest steps that can be taken to minimize future risks, not only in New Orleans but all locations threatened by natural disasters.

Rubin, C. B., & Barbee, D. G. (1985). Disaster Recovery and Hazard Mitigation: Bridging the Intergovernmental Gap. *Public Administration Review*, 45, 57–63. <https://doi.org/10.2307/3134998>

The focus of this article is on communities recovering from a major disaster, i.e., an event that is large and damaging enough to warrant receiving a presidential declaration.... The role of local officials in shaping the value dimensions of community recovery will be described.

Rubin, C. B., Saperstein, M. D., & Barbee, D. G. (1985). Community recovery from a major natural disaster. *FMHI Publications*, 298. http://scholarcommons.usf.edu/fmhi_pub/87

A disaster, by definition, is an unscheduled, overwhelming event that causes death, injury, and extensive property damage. Nevertheless, there are things that are known about disasters and their impacts, even when the knowledge of when and where a disaster will hit is not known. Given this knowledge, there are actions that can be taken before, during, and after a disaster to reduce human hardship and property damage. The premise of this project is that by looking at community recovery in an organized way, human hardships can be minimized.

Schwab, J. C. (2014). *Planning for Post-Disaster Recovery: Next Generation* (Vol. PAS Report 576). Washington, DC: American Planning Association. <https://www.planning.org/publications/report/9026899/>

In 1998, the American Planning Association published the first guidebook for local planners confronting all types of natural disasters: flood, earthquake, tornado, wildfire, and hurricane. Now APA has issued a report with the latest policies and procedures. The updated manual offers a no-nonsense explanation of the benefits — and limitations — of planning for unpredictable events. Case studies from big cities and smaller towns show what it takes to come back stronger from a natural disaster.

Shaw, R. (2014). *Disaster Recovery: Used Or Misused Development Opportunity*. Springer Science & Business Media. <https://link.springer.com/book/10.1007/978-4-431-54255-1#about>

This book explains key lessons learned from diverse disaster situations and analyzes them within the framework of governance, education, and technology, providing a framework for disaster recovery as a development opportunity. In post-disaster situations, different types of resources are put into the affected region, varying according to technical, financial, intellectual, and community resources. If properly implemented, disaster recovery can change the context of risk-reduction approaches; if not, it can create additional hazards. In some countries, the post-disaster recovery process has even changed the

socio-economic and political context of the affected region and country. The book has 21 chapters and is divided into four parts: governance and institutional issues (five chapters), education and learning issues (four chapters), technology and innovation issues (five chapters), and cross-cutting issues (five chapters). The final chapter provides an analysis of the key topics. The primary target groups for this book are students and researchers in the fields of environment, disaster risk reduction, and climate change studies. The book provides them with a good idea of the current research trends in the field and furnishes basic knowledge about these vital topics. Another target group comprises practitioners and policy makers, who will be able to apply the knowledge collected here to policy and decision making.

Smith, G. (2014). Involving land use planners in pre-event planning for post-disaster recovery. *Journal of the American Planning Association*, 80(4), 306–307. <https://doi.org/10.1080/01944363.2014.990789>

Disasters often uncover longstanding problems in a community, including the failure to have planned for recovery. After a disaster, the lack of advance planning may undermine a community's ability to distribute assistance in an equitable and timely manner and to balance the speed of decision making with a more deliberative approach that includes hazard mitigation and climate change adaptation measures, involves the public and other stakeholders in the decision-making process, and links preexisting plans and policies to recovery goals. The disaster recovery process can be highly contentious, as programs and policies often fail to address local needs, communities struggle to administer the influx of post-disaster financial assistance, jurisdictions compete for aid and public attention, and decisions are made to adopt new construction standards or convert developed land to open space that alter human settlement patterns (G. Smith, 2011). The failure to plan can hinder the ability of communities to create a larger vision of their future in the aftermath of extreme events, or restrict the identification of options, thereby missing opportunities to achieve complementary goals and objectives such as reducing hazards exposure while achieving smart growth and sustainable development policies (Eadie et al., 2001; R. Smith & Deyle, 1998; G. Smith & Wenger, 2006), including those that advance resilience and climate change adaptation (Glavovic & Smith 2014). The failure to develop and adopt good pre-event plans can also lead to postdisaster opportunism, including redevelopment that is unsustainable, inequitable, and vulnerable to future losses, thereby compromising the public good (Freudenberg, Gramling, Laska, & Erickson, 2009; Klein, 2007; Peacock, Morrow, & Gladwin, 1997).

Smith, G. P., & Wenger, D. (2007). Sustainable Disaster Recovery: Operationalizing An Existing Agenda. In *Handbook of Disaster Research* (pp. 234–257). New York, NY: Springer New York. http://link.springer.com/10.1007/978-0-387-32353-4_14

Disaster recovery represents the least understood aspect of emergency management, from the standpoint of both the research community and practitioners (Berke, Kartez, & Wenger, 1993; Rubin, 1991). When compared to the other widely recognized phases of emergency management, that is, preparedness, response, and mitigation, scholars have yet to address fundamental questions, while practitioners have failed to establish an integrated policy framework or utilize readily available tools to improve disaster recovery outcomes (Berke et al., 1993; May and Williams, 1986; Mileti, 1999). Since the 1990s the concept of sustainability has been adopted by hazards researchers and applied to mitigation (Berke, 1995a; Burby, 1998; Godschalk, et. al., 1999; Mileti, 1999), recovery (Becker, 1994a; Berke, Kartez, & Wenger, 1993; Eadie et al., 2001; Oliver-Smith, 1990; Smith, 2004; United States Department of Energy, 1998), and to a lesser extent preparedness and response (Tierney, Lindell, & Perry, 2001). While recognized as a meaningful paradigm among scholars and a limited number of practitioners, achieving sustainable recovery following disasters is not a widespread phenomenon in the United States, owing in

large part to the current recovery model in practice today. It is therefore the intent of this chapter to describe an improved policy implementation framework focused on achieving sustainable recovery. Emphasis is placed on the analysis of the United States model of recovery and the development of specific recommendations to improve the process. Key issues and research questions are identified in order to advance this agenda, including the need to develop a theory of recovery that emphasizes specific factors that facilitate or hinder this approach. Next, a review of the literature highlights the fact that while past research has addressed several recognized dimensions of sustainable recovery, the research has not been linked to a unifying theory that helps to clarify our understanding of how sustainable recovery can be achieved.

Smith, Gavin. (2012). *Planning for Post-Disaster Recovery: A Review of the United States Disaster Assistance Framework*. <https://islandpress.org/books/planning-post-disaster-recovery>

The failure to plan for disaster recovery results in a process of rebuilding that often presages the next disaster. It also limits the collective maximization of governmental, nonprofit, and private resources, including those resources that are available at the community level. As individuals, groups, communities, and organizations routinely struggle to recover from disasters, they are beset by a duplication of efforts, poor interorganizational coordination, the development and implementation of policies that are not shaped by local needs, and the spread of misinformation. Yet investment in pre-event planning for post-disaster recovery remains low. Although researchers pointed to this problem at least twenty-five years ago, an unfortunate reality remains: disaster recovery is the least understood aspect of emergency management among both scholars and practitioners. In addition, the body of knowledge that does exist has not been effectively disseminated to those who engage in disaster recovery activities. *Planning for Post-Disaster Recovery* blends what we know about disaster recovery from the research literature with an analysis of existing practice to uncover problems and recommend solutions. It is intended for hazard scholars, practitioners, and others who have not assimilated or acted upon the existing body of knowledge, or who are unexpectedly drawn into the recovery process following a disaster.

Smith, Gavin, & Birkland, T. (2012). Building a Theory of Recovery: Institutional Dimensions. *International Journal of Mass Emergencies & Disasters*, 30(2), 147–170.
<http://www.ijmed.org/articles/598/>

This article discusses the institutional arrangements that influence pre-disaster planning for recovery, and, more importantly, post-disaster recovery outcomes. The importance and value of planning for disaster recovery is well known in the disaster literature, although not often practiced as well as it could be. A theory of disaster recovery must therefore account for the institutional environment referred to here as the disaster recovery assistance framework. Describing the underlying dimensions of this network will help to clarify the process of recovery, uncover ways to improve recovery outcomes, and define the factors that influence the achievement of improved outcomes. Part of the challenge will be in defining these improved outcomes, which could include increased levels of disaster resilience or achieving a more sustainable disaster recovery.

Steinberg, T. (2000). *Acts of God: The unnatural history of natural disaster in America* (2nd ed.). New York, NY: Oxford University Press.
<https://global.oup.com/academic/product/acts-of-god-9780195309683?cc=ca&lang=en&#>

As the waters of the Mississippi River and Lake Pontchartrain began to pour into New Orleans, people began asking the big question--could any of this have been avoided? How much of the damage from

Hurricane Katrina was bad luck, and how much was poor city planning? Steinberg's *Acts of God* is a provocative history of natural disasters in the United States. This revised edition features a new chapter analyzing the failed response to Hurricane Katrina, a disaster Steinberg warned could happen when the book first was published. Focusing on America's worst natural disasters, Steinberg argues that it is wrong to see these tragedies as random outbursts of nature's violence or expressions of divine judgment. He reveals how the decisions of business leaders and government officials have paved the way for the greater losses of life and property, especially among those least able to withstand such blows--America's poor, elderly, and minorities. Seeing nature or God as the primary culprit, Steinberg explains, has helped to hide the fact that some Americans are simply better able to protect themselves from the violence of nature than others. In the face of revelations about how the federal government mishandled the Katrina calamity, this book is a must-read before further wind and water sweep away more lives. *Acts of God* is a call to action that needs desperately to be heard.

Tierney, K., & Oliver-Smith, A. (2012). Social Dimensions of Disaster Recovery. *International Journal of Mass Emergencies & Disasters*, 30(2), 123–146. <http://www.ijmed.org/articles/597/>

Research on disaster recovery has moved beyond earlier uni-dimensional, stage-oriented, and linear conceptualizations and toward approaches that recognize variability, social inequality and diversity, and disparities in recovery processes and outcomes. Theory development has been hampered by the lack of a systematic comparative focus and a failure to contextualize recovery within broader global and societal conditions and trends. Recovery theories should take into account a range of factors that include (1) pre-disaster factors that shape vulnerabilities and exposures at multiple scales, such as indicators of social and economic well-being and governmental capacity; (2) disaster impacts and their implications for recovery; (3) immediate post-impact responses; and (4) post-disaster variables such as the quality of governance systems; institutional capacity; civil society-state relationships; systems of social provision; the appropriateness, coverage, and equity of recovery aid; and post-disaster conditions, trends and events that occur independently of disasters but that also shape recovery processes and outcomes.

Vale, L., & Campanella, T. (2005). *The Resilient City: How Modern Cities Recover from Disaster*. Oxford, New York: Oxford University Press.

<https://dusp.mit.edu/publication/resilient-city-how-modern-cities-recover-disaster>

Throughout history, cities have been sacked, burned, torched, bombed, flooded, besieged, and leveled. And yet they almost always rise from the ashes to rebuild. Revealing how traumatized city-dwellers consistently develop narratives of resilience and how the pragmatic process of urban recovery is always fueled by highly symbolic actions, *The Resilient City* offers a deeply informative and unsentimental tribute to the dogged persistence of the city, and indeed of the human spirit.

Vale, L. J. (2014). The politics of resilient cities: Whose resilience and whose city? *Building Research & Information*, 42(2), 191–201. <https://doi.org/10.1080/09613218.2014.850602>

It is vital to acknowledge the socio-political complexity of the deployment of the term “resilience” and to develop a more unified set of expectations for the professions and disciplines that use it. Applied to cities, resilience is particularly problematic, yet also retains promise. Like resilience, the term city is also subject to multiple contending definitions, depending on the scale and on whether the focus is on physical spaces or social communities. Due to cities and city-regions being organized in ways that both produce and reflect underlying socio-economic disparities, some parts are much more resilient than others and therefore vulnerability is often linked to both topography and income. Uneven resilience threatens the

ability of cities as a whole to function economically, socially and politically. Resilience can only remain useful as a concept and as progressive practice if it is explicitly associated with the need to improve the life prospects of disadvantaged groups. This dimension is often lost in definitions of resilience drawn from engineering and ecology, but remains central to conceptualizations linked to social psychology. To improve the prospects of cities proactively (and reactively), there is a need to unify the insights from the multiple professions and disciplines that use “resilience”.

Walker, J., Kopel, D., Howley, K., Bailey, R., Taylor, J. A., & Sullum, J. (2005, December). After the storm: Hurricane Katrina and the failure of public policy.

<https://reason.com/archives/2005/12/01/after-the-storm>

After Hurricane Katrina hit New Orleans, the federal government did a poor job of handling the crisis. Six authors cite various lessons from the experience.

Winkworth, G. (2007). *Disaster recovery: a review of the literature* (Disaster Recovery) (p. 115). Institute of Child Protection Studies, ACU National.

<https://core.ac.uk/download/pdf/74305334.pdf>

This literature review addresses four key questions: What is a disaster? What are the effects of disasters? What is recovery? What are the key messages for successful disaster recovery? The disaster recovery literature of the past five years is the primary focus of the review. The review canvasses contemporary definitions of disasters which generally conclude that it is the situation created by major events rather than the event itself, and especially the social, economic, developmental and political consequences of events which is the key defining aspect of disasters. A disaster exceeds the capacity of the ‘community’ to respond and requires a coordinated response by the State and other entities to help the community recover. Disasters are also events which are shared by a group of people who develop an identity that together they have been affected by major catastrophe.

Wisner, B., Piers Blaikie, Terry Cannon, & Ian Davis. (2004). *At risk: natural hazards, people's vulnerability and disasters* (Combined Literature Review). Research Institute For Mindanao Culture: Xavier University. <https://www.amazon.com/At-Risk-Natural-Vulnerability-Disasters/dp/0415252164>

The term “natural disaster” is often used to refer to natural events such as earthquakes, hurricanes or floods. However, the phrase “natural disaster” suggests an uncritical acceptance of a deeply engrained ideological and cultural myth. At Risk questions this myth and argues that extreme natural events are not disasters until a vulnerable group of people is exposed. The updated new edition confronts a further ten years of ever more expensive and deadly disasters and discusses disaster not as an aberration, but as a signal failure of mainstream “development”. Two analytical models are provided as tools for understanding vulnerability. One links remote and distant “root causes” to “unsafe conditions” in a “progression of vulnerability”. The other uses the concepts of “access” and “livelihood” to understand why some households are more vulnerable than others. Examining key natural events and incorporating strategies to create a safer world, this revised edition is an important resource for those involved in the fields of environment and development studies.

Zakour, M. J. (1997). Disaster Research in Social Work. *Journal of Social Service Research*, 22(1–2), 7–25. https://doi.org/10.1300/J079v22n01_02

Disaster research in social work has deep roots in the profession's history of disaster relief, social work's mission to create resources and make them accessible to people, and the profession's service to vulnerable populations. Social workers have important and unique contributions to make to disaster research through their expertise in ecological approaches, prevention, stress and coping, and promoting change in micro and macro systems. Disaster research in social work borrows primarily from psychology and sociology, and is conducted in clinical, organizational, and community contexts. Further social work research on disaster promises improved theory, measurement, and practice in situations of collective stress.