

Urban Disasters And Resilience In Asia

Successful applications in the field of disaster risk reduction require interdisciplinary, coordinated action. Current literature focuses on comprehensive understandings of processes critical to risk reduction but lack in-depth discussions that put this accumulated knowledge into actionable tools for decision-making. Investing in Disaster Risk Reduction for Resilience is based on the third principle of the Sendai Framework. The UNISDR Sendai Framework for DRR (disaster risk reduction) 2015-2030 is a recently adopted global agreement focused on reducing disaster risk. The Sendai Framework emphasizes that the State holds the primary responsibility in reducing risk but argues for the additional involvement of relevant stakeholders to address challenges in the policy and practice of building resilience strategies. The framework has four key principles: Understanding disaster risk Strengthening disaster risk governance to manage disaster risk Investing in disaster risk reduction for resilience Enhancing disaster preparedness for effective response to "Build Back Better" in recovery, rehabilitation, and reconstruction This book discusses specific aspects of the third principle, including both public and private investment in disaster risk prevention/reduction through structural and non-structural measures. By presenting these multilevel investment strategies, the book offers methods for increasing the resilience of cultural landscapes and heritages for poor, migrating, or displaced populations during post humanitarian crises. This emphasis of increasing resilience of heritage and culture is unique compared to the current literature. Follows the global frameworks for disaster risk reduction and sustainability, specifically the UNISDR Sendai Framework for DRR, 2015-2030 Addresses ways to increase resilience in humanitarian crises after disasters Provides considerations for resilience of cultural landscapes and heritages Presents methodologies dealing with risk uncertainty, ambiguity, and complexity This book addresses unexpected disasters and shocks in cities and urban systems by providing quantitative and qualitative tools for impact analysis and disaster management. Including environmental catastrophes, political turbulence and economic shocks, Resilience and Urban Disasters explores a large range of tumultuous events and key case studies to thoroughly cover these core areas. In particular, the socio-economic impacts on urban systems that are subject to disasters are explored.

Worldwide, disasters and climate change pose a serious risk to sustainable urban development, resulting in escalating human and economic costs. Consequently, city authorities and other urban actors face the challenge of integrating risk reduction and adaptation strategies into their work. However, related knowledge and expertise are still scarce and fragmented. Cities, Disaster Risk and Adaptation explores ways in which resilient cities can be 'built' and sustainable urban transformations achieved. The book provides a comprehensive understanding of urban risk reduction and adaptation planning, exploring key theoretical concepts and analysing the complex interrelations between cities, disasters and climate change. Furthermore, it provides an overview of current risk reduction and adaptation approaches taken by both city authorities and city dwellers from diverse contexts in low, middle and high income nations. Finally, the book offers a planning framework for reducing and adapting to risk in urban areas by expanding on pre-existing positive actions and addressing current shortfalls in theory and practice. The importance of a distributed urban governance system, in which institutions' and citizens' adaptive capacities can support and complement each other, is highlighted. This book takes a holistic approach; it integrates perspectives and practice from risk reduction and climate change adaptation based on a specific urban viewpoint. The text is richly supplemented with boxed case studies written by renowned academics and practitioners in the field and 'test yourself' scenarios that integrate theory into practice. Each chapter contains learning objectives, end of chapter questions, suggested further reading and web resources, as well as a wealth of tables and figures. This book is

essential reading for undergraduate and postgraduate students of geography, urban studies and planning, architecture, environmental studies, international development, sociology and sustainability studies.

Resilience is increasingly discussed as a key concept across many fields of international policymaking from sustainable development and climate change, insecurity, conflict and terrorism to urban and rural planning, international aid provision and the prevention of and responses to natural and man-made disasters. Edited by leading academic authorities from a number of disciplines, this is the first handbook to deal with resilience as a new conceptual approach to understanding and addressing a range of interdependent global challenges. The Handbook is divided into nine sections: Introduction: contested paradigms of resilience; the challenges of resilience; governing uncertainty; resilience and neoliberalism; environmental concerns and climate change adaptation; urban planning; disaster risk reduction and response; international security and insecurity; the policy and practices of international development. Highlighting how resilience-thinking is increasingly transforming international policy-making and government and institutional practices, this book will be an indispensable source of information for students, academics and the wider public interested in resilience, international relations and international security.

The number of megacities worldwide is rapidly increasing and contemporary cities are also expanding fast. As a result, cities and their inhabitants are becoming increasingly vulnerable to the effects of catastrophic natural events such as extreme weather events (recently more frequent and intense as a result of the ongoing climate changes), earthquakes, tsunamis or man-induced events such as terrorist attacks or accidents. Furthermore, due to increasing technological complexity of urban areas, along with increasing population density, cities are becoming more and more risk attractors. The resilience of cities against catastrophic events is a major challenge of today. It requires city transformation processes to be rethought, to mitigate the effects of extreme events on the vital functions of cities and communities.

Redundancy and robustness of the components of the urban fabric are essential to restore the full efficiency of the city's vital functions after an extreme event has taken place. These items were addressed by an interdisciplinary and international selection of scientists during the 6th UN-World Urban Forum that was held in Naples, Italy in September 2012. This volume represents in six chapters the views from sociologists, economists and scientists working on natural risk and physical vulnerability on resilience and sustainability for future cities in relation to natural disasters.

Published with ProVention Consortium, UNDP and UN-Habitat 'This excellent book is essential reading for those concerned with urban risk and its reduction in Africa, the most rapidly urbanizing region of the world.' Professor Jo Beall, Development Studies Institute, London School of Economics 'At last a book that recognizes the impacts of disasters on Africa's 350 million urban dwellers, including the many disasters that get overlooked and go unrecorded. But also a book that, through careful case studies, shows what creates disaster risk and what local measures can be taken to address it.' David Satterthwaite, International Institute for Environment and Development (IIED). 'This innovative volume combines the latest conceptualisations of urban disaster risk and vulnerability with case studies from across the African continent on how existing and innovative information can inform efforts to address the problems. Coverage ranges from the major catastrophes of news headlines to small, everyday disasters with which poor urban residents have to cope in their survival strategies. Written by international authorities and local specialists, this extremely useful book should find a place in the hands of academics and practitioners alike.' Professor David Simon, Department of Geography, Royal Holloway, University of London This is a one-of-a-kind book packed with original research and offering an innovative way of thinking about the reduction of risk in rapidly urbanizing cities across the globe. It is a must-have for professionals, researchers and

policy makers. The book addresses four inter-related themes critical for urban risk reduction: environment; livelihood; urban governance and the generation of urban risks. Its focus is on Africa, the most rapidly urbanizing world region, but it illustrates global processes. Part one reviews development, urbanization and disaster risk in Africa as a whole, identifies state-of-the-art practices and policies for building urban resilience and provides a tool kit for urban risk reduction. It also presents a powerful conceptual framework to analyse and compare disaster risk and resilience in different cities and communities. Part two presents detailed case studies from Algeria, Ghana, Senegal, Kenya, Tanzania and South Africa illustrating vulnerability to hazards ranging from earthquake to shack fire, environmental health hazards, traffic hazards and flooding. Part three looks to the future and outlines a vision for a safer urban Africa based on achieving gains in human security through inclusive governance and investment in the creative capacities of Africa's urban dwellers. With foreword by Anna Tibaijuka, Executive Director, UN-HABITAT

This book includes selected papers presented at the international expert forum on "Mainstreaming Resilience and Disaster Risk Reduction in Education," held at the Asian Institute of Technology, Thailand on 1–2 December 2017. The journey towards disaster risk reduction and resilience requires the participation of a wide array of stakeholders ranging from academics to policymakers, to disaster managers. Given the multifaceted and interdependent nature of disasters, disaster risk reduction and resilience require a multidisciplinary problem-solving approach and evidence-based techniques from the natural, social, engineering, and other relevant sciences. Traditionally, hazard and disaster-related studies have been dominated by the engineering and social science fields. In this regard, the main purpose of this book is to capture the multidisciplinary and multisectoral nature of disaster risk reduction, and to gather existing data, research, conceptual work, and practical cases regarding risk reduction and its ties to sustainable development under a single "umbrella." Along with the sustainability aspect, the book also links disaster risk reduction with development, technology, governance, education, and climate change, and includes discussions on challenges, solutions, and best practices in the mainstreaming of disaster risk reduction.

The urban poor living in slums are at particularly high risk from the impacts of climate change and natural hazards. This study analyzes key issues affecting their vulnerability, with evidence from a number of cities in the developing world.

This handbook is a resource for enhancing disaster resilience in urban areas. It summarizes the guiding principles, tools, and practices in key economic sectors that can facilitate incorporation of resilience concepts into decisions about infrastructure investments and urban management that are integral to reducing disaster and climate risks.

Research Paper (postgraduate) from the year 2016 in the subject Geography / Earth Science - Demographics, Urban Management, Planning, University College London, language: English, abstract: This research seeks to enhance the disaster resilience of cities within the EAC by: (a) developing a data base of acute disasters that are common and likely to occur in cities within the EAC, (b) measuring the resilience of major cities within the EAC to these disasters, and (c) developing a framework for enhancing their resilience to potential hazards. It is important to conduct this study now because the present and projected demographic and geographic changes point to a future of continued: (a) rapid urbanization in developing countries – like the EAC - and (b) escalation in the number of urban disasters. Document review and descriptive research will be used in the study with a sample size of 104 participants being selected from the cities of Dar es Salaam, Nairobi, Kampala, Kigali, and Mombasa. The collected data will be tested for inter-rater reliability, triangulated and instruments checked for content validity. Both measures of central tendency and measures of variability about the mean will be performed on the collected data.

This book is part of a six-volume series on Disaster Risk Reduction and Resilience. The series

aims to fill in gaps in theory and practice in the Sendai Framework, and provides additional resources, methodologies and communication strategies to enhance the plan for action and targets proposed by the Sendai Framework. The series will appeal to a broad range of researchers, academics, students, policy makers and practitioners in engineering, environmental science and geography, geoscience, emergency management, finance, community adaptation, atmospheric science and information technology. This volume discusses how to measure and build disaster resilience at society's capacity, drawing upon individual, institutional and collective resources to cope with and adapt to the demands and challenges of natural disaster occurrences. The book will serve as a guide, outlining the key indicators of disaster resilience in urban and rural settings, and the resources and strategies needed to build resilient communities in accordance with the targets of the Sendai Framework. Readers will learn about multi-risk reduction approaches using computational methods, data mining techniques, and System Thinking at various scales, as well as institutional and infrastructure resilience strategies based on several case studies.

The Routledge Handbook of Urban Disaster Resilience emphasizes the intersection of urban planning and hazard mitigation as critical for community resilience, considering the interaction of social, environmental, and physical systems with disasters. The Handbook introduces and discusses the phases of disaster – mitigation, preparedness/response, and recovery – as well as each of the federal, state, and local players that address these phases from a planning and policy perspective. Part I provides an overview of hazard vulnerability that begins with an explanation of what it means to be vulnerable to hazards, especially for socially vulnerable population segments. Part II discusses the politics of hazard mitigation; the failures of smart growth placed in hazardous areas; the wide range of land development policies and their associated risk; the connection between hazards and climate adaptation; and the role of structural and non-structural mitigation in planning for disasters. Part III covers emergency preparedness and response planning, the unmet needs people experience and community service planning; evacuation planning; and increasing community capacity and emergency response in developing countries. Part IV addresses recovery from and adaptation to disasters, with topics such as the National Disaster Recovery Framework, long-term housing recovery; population displacement; business recovery; and designs in disasters. Finally, Part V demonstrates how disaster research is interpreted in practice – how to incorporate mitigation into the comprehensive planning process; how states respond to recovery; how cities undertake recovery planning; and how to effectively engage the whole community in disaster planning. The Routledge Handbook of Urban Disaster Resilience offers the most authoritative and comprehensive coverage of cutting-edge research at the intersection of urban planning and disasters from a U.S. perspective. This book serves as an invaluable guide for undergraduate and postgraduate students, future professionals, and practitioners interested in urban planning, sustainability, development response planning, emergency planning, recovery planning, hazard mitigation planning, land use planning, housing and community development as well as urban sociology, sociology of the community, public administration, homeland security, climate change, and related fields.

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.

Disasters undermine societal well-being, causing loss of lives and damage to social and economic infrastructures. Disaster resilience is central to achieving the 2030 Sustainable Development Goals, especially in regions where extreme inequality combines with the increasing frequency and intensity of natural disasters. Disaster risk reduction and resilience requires participation of wide array of stakeholders ranging from academicians to policy makers to disaster managers. *Disaster Resilient Cities: Adaptation for Sustainable Development* offers evidence-based, problem-solving techniques from social, natural, engineering and other disciplinary perspectives. It connects data, research, conceptual work with practical cases on disaster risk management, capturing the multi-sectoral aspects of disaster resilience, adaptation strategy and sustainability. The book links disaster risk management with sustainable development under a common umbrella, showing that effective disaster resilience strategies and practices lead to achieving broader sustainable development goals. Provides foundational knowledge on integrated disaster risk reduction and management to show how resilience and its associated concept such as adaptive and transformative strategies can foster sustainable development Brings together disaster risk reduction and resilience scientists, policy-makers and practitioners from different disciplines Case studies on disaster risk management from natural science, social science, engineering and other relevant disciplinary perspectives

As cities continue to grow, so the inevitability of more urban disasters increases. More and better aid assistance will be needed. Yet the current humanitarian response system that was developed for rural areas is ill-suited for working in urban environments. What then needs to change and what needs to be done differently? Do we assume business as usual or do we need to rethink our approaches? This book focuses on emerging approaches for effective post-disaster relief and recovery in cities; a necessity given that for the greater part of this century at least, disaster response will no longer involve working in the field, but rather in the neighbourhood. This book argues that aid responders themselves need to urbanise, to take account of the complexities, contradictions and opportunities cities afford. Above all, urban responders need to rethink their relationship with those affected by disaster and to see them not as helpless victims but as experts in recovery. Part one of the book explores who the responders are: what drives them and what they want. Part two examines the nature of urban disasters what causes them, what are the challenges and assumptions, and why are they different to rural disasters. Section three presents actions that have proven to work when agencies prioritise people, including uses of cash, working with markets, engaging with other actors and dealing with issues of shelter, housing and land."

This book will fill the gaps that hamper the effective utilization of the resilience and sustainability concepts within emergency planning: one concerns the lack of a comprehensive review of this multi-level concept; the second relates to its multi-level nature. Specifically, the text identifies a need for the systematic integration of these different levels in a manner that illustrates the holistic contribution of the resilience concept to emergency planning. By integrating these different levels in a manner that illustrates the holistic contribution of the resilience concept to emergency planning, a comprehensive working model of disaster

resilience and sustainability can be developed. The text discusses the resources and strategies required at each level to facilitate resilience and how they can be integrated to develop a sustained capacity to adapt to nature (and other) hazard consequences. The nature and implications of these inter-relationships will be developed throughout the text and will lead towards the development of a comprehensive, integrated model of community resilience. A key focus of the text will thus be its articulating the inter-relationships between these levels. The importance of basing emergency planning on the holistic application of the concept will also be discussed. By representing resilience in a holistic manner, the text will also constitute a resource capable of assisting assessment of the community implications of any shortfall of resilience resources for emergency planning and for community recovery planning. The book brings together contributions from international experts in core areas. It includes chapters that provide an overarching framework within which the need for inter-relationships between levels to be developed is discussed. It also includes sections that link chapters to progressively develop a holistic multi-level model, and a chapter that describes the final comprehensive model and its implications for contemporary emergency management. It will be useful to those researching or teaching courses in emergency management, disaster management, community development, environmental planning, urban development, sociology, and applied psychology, as well as to emergency management agencies, risk management agencies, engineers and consultants, planners, emergency and law enforcement agencies, and social and welfare agencies.

Climate change and natural disasters have always been hot topics of discussion and debate from the living rooms of citizens to meetings at the UN's General Assembly. The consensus from the scientific and academic community on the threat of climate change clashes with the lack of consensus from business and government leaders, while citizens question the scientific data on climate change and if it really affects their cities. Many cities have stepped up to provide united experience-backed testimonies explaining this threat and how climate change contributes to natural disasters, habitat destruction, and food shortage. This book brings together lucid essays and case studies from both scholars and individuals on the front lines who manage international collaborations, lead local communities, provide services for people impacted by disasters, and drive policy change that will lead to a sustainable future.

How do urban communities in Asian cities experience the impacts of urbanisation and climate change? This key issue forms the discussion point for this book. Particular reference is made to cities in India, and the capability of such urban communities of responding to climate-related disasters.

"We have to adapt to the impacts that, unfortunately, we can no longer avoid", said President Obama at the UN Climate Summit in September 2014. Adaptation and resilience are now a must in both academic research and international bodies. A fashionable concept, resilience's polysemy sparks many debates on its uses and operational relevance. This book bridges the increasing divide between academic research and the latest planning innovations, offering practical and conceptual insights for practitioners, researchers and students. Magali Reghezza-Zitt and Samuel Rufat present a cross-disciplinary, state-of-the-art debate and critical analysis of the social, spatial, practical and political implications of resilience. Offers a critical approach of resilience, based on a wide range of case studies Provides insights ranging from the most recent theoretical issues to the most practical engineering innovations Links the latest cross-disciplinary academic insights with the up-to-date, practical innovations

This Workbook offers a step-by-step guide for city officials to proactively plan for natural disasters and climate change impacts. It is based on learning from three cities in Vietnam that developed Local Resilience Action Plans (LRAPs) containing a set of prioritized actions related to infrastructure, policy, and socioeconomic actions.

"Design for Flooding contains considerable useful information for practitioners and students.

Watson and Adams fill the void for new thinking...and they advance our ability to create more sustainable, regenerative, and resilient places.” —Landscape Architecture Magazine

Whilst it is impossible to make resistant urban growth, resilience is becoming more widely accepted and urban systems must be resilient enough to cope with the climate related hazards. This book highlights the issues of resilience through regional, national, city and community-based studies.

This book presents a comprehensive framework and indicators that can be used to assess a city's degree of resilience. Based on surveys using bottom-up assessment tools, it proposes the concept, framework and indicators of a resilient policy model (including some participatory approaches). It also presents case studies of this and similar tools applied to Japanese and Asian cities, the highlights including information not previously available in English. Today, the term “resilience” is prevalent in the context of sustainable societies. The IPCC AR5 published in 2014 again stressed the impact of climate change on natural disasters, while in March 2015 at the World Conference on Disaster Risk Reduction, the United Nations International Strategy of Disaster Reduction (UNISDR) published the Sendai Framework for Disaster Risk Reduction Action 2015-2030 , which serves as a guideline for local governments. Offering transdisciplinary perspectives from fields such as policy science, urban planning, environmental science, social psychology, management development and geography, this book discusses the lessons learned from Asian case studies, explaining the challenges and the effectiveness of the tools, and offering transdisciplinary insights for policymakers.

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.

Resilience has become a very topical issue transcending many spheres and sectors of sustainable urban development. This book presents a resilience

framework for sustainable cities and towns in Africa. The rise in informal settlements is due to the urban planning practices in most African cities that rarely reflect the realities of urban life and environment for urban development. Aspects of places, people and process are central to the concept of urban resilience and sustainable urban growth. It stems from the observation that urban vulnerability is on the increase in Zimbabwe and beyond. In history, disasters have adversely affected nations across the world, inflicting wide ranging losses on one hand while on the other hand creating development opportunities for urban communities. Cooperation in disaster management is a strategy for minimising losses and uplifting the affected urban settlements. The significance of urban planning and design in the growth and development of sustainable urban centres is well documented. Urbanisation has brought with it challenges that most developing countries such as Zimbabwe are not equipped to handle. This has been accompanied by problems such as overpopulation, overcrowding, shortages of resources and the growth of slum settlements. There need is to seriously consider urban planning and design in order to come up with contemporary designs that are resilient to current urban challenges. There are major gaps in urban resilience building for instance in Harare and the local authority needs to prioritise investment in resilient urban infrastructure. ?

This book is on urban resilience – how to design and operate cities that can withstand major threats such as natural disasters and economic downturns and how to recover from them. It is a collection of latest research results from two separate but collaborating research groups, namely, researchers in urban design and those on general resilience theory. The book systematically deals with the core aspects of urban resilience: systems, management issues and populations. The taxonomy can be broken down into threats, systems, resilience cycles and recovery types in the context of urban resilience. It starts with a discussion of systems resilience models, focusing on the central idea that resilience is a moving average of costs (a set of trajectories in a two-player game paradigm). The second section explores management issues, including planning, operating and emergency response in cities with specific examples such as land-use planning and carbon-neutral scenarios for urban planning. The next section focuses on urban dwellers and specific people-related issues in the context of resilience. Agent-based simulation of behaviour and perception-based resilience, as well as brand crisis management are representative examples of the topics discussed. A further section examines systems like public utilities – including managing power supplies, cyber-security issues and models for pandemics. It concludes with a discussion of the future challenges and risks facing complex systems, for example in resilient power grids, making it essential reading for a wide range of researchers and policymakers.

This book presents practical approaches for tackling the threats from climate change and disasters to urban growth in Pacific island countries and Asian nations. With chapters written by leading scholars and practitioners, Urbanisation

at Risk presents research and case studies from island countries across the Pacific, Cambodia, Nepal and the Philippines. The book explores and presents the theory, policy and practice of how governments, civil society, aid organisations and people themselves prepare for, withstand and recover better from urban disasters including windstorms, floods, earthquakes and fires, and the effects of climate change. This book is written for urban policy makers, researchers, humanitarian aid and development workers, and anyone interested in urbanisation, participatory approaches, disasters, resilience and climate change adaptation.

This book outlines the geospatial technologies and analytical tools needed for safeguarding built infrastructure assets from natural disasters, and preparing for disaster resilience and risk reduction. It takes a whole life approach to infrastructure destruction and the related cost of natural disaster. It reviews weather related natural disasters exacerbated by climate change, deforestation, agricultural loss and public health risk, and commercial loss, and discusses the significance of infrastructure and urban growth on disaster risk. Topics include infrastructure resilience management, critical lifeline infrastructure performance, and recovery and mitigation. Several real world examples are presented. Throughout it applies the tools of computational modeling, remote sensing, risk mapping, and other spatial technologies.

This book presents key lessons from community-based risk-reduction practices in Japan, a country that is often hit by disasters and that also has shown strong resilience in coping with those disasters. Japan has a strong governance system for disaster risk reduction. However, the Kobe earthquake of 1995 showed the importance of community involvement in disaster response as well as recovery. With several examples from different parts of Japan, the book elaborates on the importance of community-based risk reduction and the innovations required for sustaining some of the community approaches. The book has 13 chapters and is divided into three parts: (1) Evolution of community-based risk reduction in Japan; (2) Community-based risk-reduction issues; and (3) Case studies. 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.

Urban Disasters and Resilience in Asia presents the latest information on the intensity and frequency of disasters. Specifically, the fact that, in urban areas, more than 50% of the world's population is living on just 2% of the land surface, with most of these cities located in Asia and developing countries that have high vulnerability and intensification. The book offers an in-depth and multidisciplinary approach to reducing the impact of disasters by examining specific evidence from events in these areas that can be used to develop best practices and increase

urban resilience worldwide. As urban resilience is largely a function of resilient and resourceful citizens, building cities which are more resilient internally and externally can lead to more productive economic returns. In an era of rapid urbanization and increasing disaster risks and vulnerabilities in Asian cities, *Urban Disasters and Resilience in Asia* is an invaluable tool for policy makers, researchers, and practitioners working in both public and private sectors. Explores a broad range of aspects of disaster and urban resiliency, including environmental, economic, architectural, and engineering factors Bridges the gap between urban resilience and rural areas and community building Provides evidence-based data that can lead to improved disaster resiliency in urban Asia Focuses on Asian cities, some of the most densely populated areas on the planet, where disasters are particularly devastating

Urban Disasters and Resilience in Asia Butterworth-Heinemann

This book presents water insecurity issues in urban areas while developing a water security index and explores the innovative approaches to water development and management with examples from Asian cities. The urban water crisis is a global phenomenon, but it is more obvious in the megacities of the developing world. Urban drought, although not a familiar term, will pose a significant threat to humankind in the near future, especially in the context of increasing population in cities. Many cities are already unable to provide safe, clean water for their citizens. Some of the world's largest cities depend heavily on groundwater for their water supply. It is unlikely that dependence on aquifers, which take many years to recharge, will be sustainable. As urban populations grow, water use will need to shift from agriculture to municipal and industrial uses, making decisions about allocating between different sectors difficult. Inefficient water-use practices by households and industries, fragmented management of water between sectors and institutions, climate-induced water shortages, environmental degradation of water sources, and inadequate use of alternate sources are also issues of major concern. Despite recent advances in the literature, there exists a considerable gap in attempting an integrated water-resource management approach. Covering all aspects of urban drought and water insecurity, this book is a valuable resource for students, researchers, academics, policy makers, and development practitioners.

How do urban communities in Asian cities experience the impacts of urbanisation and climate change? This book throws light on the ongoing processes of rapid urban transformation in many cities in developing countries, with particular reference to cities such as Chennai in India. Due to increasing demands on infrastructures and urban services, cities in developing countries are often pushed to the edge of collapse even when not in times of disaster. While such cities try to implement measures to safeguard the well-being of their citizens, looming impacts of climate change such as increasingly frequent and intense natural hazards pose new and additional challenges to their urban communities. This book connects critical issues relating to the general functioning of cities with climate-related disasters with the concept of resilience. Furthermore, this research takes a pro-solution stance, and demonstrates that individuals can form collective power to deliver added value before, during and after a disaster.

The concept of resilience is applied to determine whether an urban community would be affected or damaged during a climate-related disaster, and to what extent.

International contributors from academia, research, policy and practice use their experience and knowledge to explore on-going efforts to improve spatial resilience across the globe and predict future trends.

Accelerating urbanization worldwide means more urban-centered disasters. Floods, earthquakes, storms and conflicts affecting densely populated areas produce significant losses in lives, livelihoods and the built environment, especially in comparison to rural areas. Poor urban dwellers, almost always the most vulnerable, too often bear the brunt. Aid agencies and urban professionals have been slowly adapting to these new conditions, but older models and practices hinder the most effective engagements. Drawing directly from the experiences of urban disasters in the Philippines, Chile, India, Thailand, Iraq, Haiti and Nepal, among other countries, *Urban Disaster Resilience* brings to light new collaborations and techniques for addressing the challenges of urban disasters in the coming years. Chapters range from country-specific case studies to more synthetic frameworks in order to promote innovative thinking and practical solutions. Edited by David Sanderson, Jerold S. Kayden and Julia Leis, this book is a crucial read for humanitarian and disaster specialists, urban planners and designers, architects, landscape architects, housing and economic development professionals, real estate developers, private business managers and students interested in the subject, whether based in non-governmental organizations, local, state or national governments, international agencies, private firms, or the academy.

In 1871, the city of Chicago was almost entirely destroyed by what became known as The Great Fire. Thirty-five years later, San Francisco lay in smoldering ruins after the catastrophic earthquake of 1906. Or consider the case of the Jerusalem, the greatest site of physical destruction and renewal in history, which, over three millennia, has suffered wars, earthquakes, fires, twenty sieges, eighteen reconstructions, and at least eleven transitions from one religious faith to another. Yet this ancient city has regenerated itself time and again, and still endures. Throughout history, cities have been sacked, burned, torched, bombed, flooded, besieged, and leveled. And yet they almost always rise from the ashes to rebuild. Viewing a wide array of urban disasters in global historical perspective, *The Resilient City* traces the aftermath of such cataclysms as: --the British invasion of Washington in 1814 --the devastation wrought on Berlin, Warsaw, and Tokyo during World War II --the late-20th century earthquakes that shattered Mexico City and the Chinese city of Tangshan --Los Angeles after the 1992 riots --the Oklahoma City bombing --the destruction of the World Trade Center. 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.

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