International Society for Integrated Disaster Risk Management



IDRiM Newsletter
Issue 14, August 2017

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1. IDRIM NEWS

8th International Conference of the International Society for Integrated Disaster Risk Management

Dimensions of Disaster Risk Reduction and Societal Resilience in a Complex World

23 – 25 August 2017 Reykjavík, Iceland

http://www.idrim2017.com/

The 8th Conference of the International Society for Integrated Disaster Risk Management (IDRiM 2017) will take place in Reykjavík, Iceland from 23 – 25 August 2017. The theme of the conference is "Dimensions of Disaster Risk Reduction and Societal Resilience in a Complex World." IDRiM 2017 will be hosted in cooperation with the University of Iceland, NORDRESS, the Nordic Centre of Excellence on Resilience and Societal Security.

IDRiM 2017 adopts an interdisciplinary approach, and encourages contributions from all realms of natural, social, health, humanitarian, and other sciences, to promote understanding of how best to manage the risk that natural hazards pose to societies. The interdisciplinary approach reflects that society's resilience rests on the personal preparedness, and physical and mental health of its individual members. The social fabric of communities enables individuals to prepare for, cope with and adapt to the consequences of natural hazards. Understanding natural hazard risk, robust disaster risk monitoring, crisis communication and critical lifeline management are elements fundamental to society's resilience. These in turn rest on institutions that provide the formal governance framework, necessary for efficient legal and political responsibility.

IDRiM2017 aims to provide a forum for fruitful exchange of expertise and opinions on every aspect of risk management. The programme will be

varied, from key note lectures and expert panel discussions to a wide selection of oral and poster presentations on various **topics**. Furthermore, the conference provides a special opportunity to young scientists (e.g. graduate students and postdoctoral researchers) through the "Young Scientists Session (YSS)", where all presenters are expected to give both an oral presentation and poster presentation, and get feed-back from participants of the conference. All YSS presentation participate in the YSS Best Presentation Competition.

Conference Topics:

I. Understanding and monitoring natural hazard risk

- Natural hazard modelling and forecasting
- Hazard monitoring and the use of smart technology
- Climate change and natural hazards
- Natural hazard vulnerability of different populations —e.g. urban, rural, remote, young, aging, transient and special needs populations
- Mental and physical health related impacts of natural disasters.

II. Risk and resilience

- Risk governance (risk management procedures)
- · Land use, land use planning and natural hazards
- Economics of disasters
- Insurance for enhancing community resilience
- Infrastructure resilience
- · Child-centred disaster risk reduction programs and strategies
- Community preparedness and response to disasters
- Post disaster recovery
- · Recovery and psycho-social support
- · Migration in anticipation of and following disasters
- Natech risks and critical infrastructure protection.

III. Community engagement and communication

- Risk communication
- Media influence on public perception and response
- Best practice engagement strategies
- Engaging with the disengaged.

IV. Presentation for Young Scientists Session

V. Other

About Iceland

Iceland is closer than you think and probably also far different from what you might have imagined. Where else can you witness such marvels of Mother Nature as glaciers, steaming geysers and volcanoes, raging rivers and magnificent waterfalls, a multitude of birds, cavorting whales just offshore and many other surprises.

The country was settled by Nordic people in the 9th century – tradition has it that the first permanent settler was a Norwegian Viking, named Ingolfur Arnarson, who made his home where Reykjavik is situated today. The Icelanders still speak a language close to that of the Vikings, although modern Icelanders also speak many foreign languages.

The island is conveniently located right between Europe and east coast of USA. Distance is about 5-6 hours by flight from USA and 2-4 hours from Europe. The size is 103.000 km2 (39,756 sq. miles), about one-third larger than Scotland or Ireland. It has a population of just over 300.000, almost two-thirds living in the capital Reykjavik and its neighbouring towns in the southwest.

Regardless of when you visit, be assured that the warmth shown by the Icelanders, their desire to share their culture and their efforts to make your stay as pleasant as possible will, like the spectacular landscape, not easily be forgotten.

Conference Website: http://www.idrim2017.com/

IDRiM Society Website: http://idrim.org

2. Other NEWS

The GAR Atlas Unveiling global disaster risk Published

Background:

"The GAR Atlas presents the output of a Global Risk Model (GRM) that can estimate the disaster risk associated with different kinds of hazard faced by national economies throughout the world. The model uses a state-of-the-art probabilistic approach analogous to that applied by the catastrophe modelling and insurance industry over recent decades. This model has been developed by a consortium of leading scientific and technical organisations, under the coordination of UNISDR. Initial results from the model have already been previewed in GAR13 and GAR15.

The GAR Atlas displays the risk associated with earthquakes, tsunamis, riverine flooding, cyclonic winds and storm surge with a global level of observation and a national level of resolution. By using the same methodology, arithmetic and exposure model to calculate the risk for all these hazards, the GAR Atlas provides globally comparable multi-hazard risk metrics and enables comparisons of risk levels between countries and regions and across hazard types. For example, the values associated with earthquake risk in Indonesia and flood risk in Colombia, and their relevance for national economies, can now be compared because they have been calculated using the same methodological framework. In this way, the GAR Atlas facilitates a better understanding of the global risk landscape, enabling the estimation of the order of magnitude of probable losses in each country, and taking into account the risk contributions from different hazards. The GAR Atlas is the first of its kind that is non-proprietary, completely open and with multi-hazard global coverage.

The GAR Atlas: Unveiling Global Disaster Risk is an augmented reality publication. It has been designed to be read and explored using an IOS or Android tablet. Most of the information contained in the GAR Atlas can only be accessed in this way." (Source: https://www.unisdr.org/we/inform/publications/53086)

Website: http://www.preventionweb.net/english/hyogo/gar/atlas/

Joint Research Center Published Major Report Science for Disaster Risk Management 2017 Knowing better and losing less

The JRC has recently released its report "Science for Disaster Risk Management 2017: Knowing Better and Losing Less". This 550-page report summarizes the state of science relevant to disaster risk management from a European perspective, with the aim to encourage potential synergies across disciplines, and to identify gaps in scientific knowledge for future research. The preparation of the report succeeded in pulling together a network of 273 contributors from 26 mostly European countries and 172 organizations. It has been endorsed by 11 European Commission Services and has been officially released at the Global Platform Reduction Disaster Risk in Mav The full report and the Executive Summary can be downloaded from here: http://drmkc.jrc.ec.europa.eu/knowledge/Challenges-Sharing

From the Preface:

"This report aims to provide reviews of scientific solutions and their practical use in various areas of DRM in Europe. It is comprehensive in scope but selective in topic and is written in a format that is intended to be accessible to all DRM actors. The reviews of the scientific evidence base are summaries of (1) recent advances/outcomes of EU research projects, (2) relevant national work and (3) relevant international work. The report aims to bridge science and policy as well as operation communities. The intended audience consists of practitioners and policy makers in addition to experts from different scientific disciplines. It seeks to understand the scientific issues of relevance to their work; specifically civil protection operations and disaster risk policy, but equally climate adaptation policy. The audience includes government officials at EU, national, regional and local levels interested in finding better ways to use science, and also scientists to help them understand work in other disciplines that would allow the identification of possible cross-sectoral synergies and needs from practitioners.

Understanding disaster risk to manage it is one of the main focus of Sendai Framework. This perspective already opens two big issues: understanding disaster risk with the focus on scientific evidence, and managing disaster risk with the focus on knowledge applied by different actors. In order to convey the DRMKC's mission of bridging science and the policy/operation community, the issue of communicating disaster risk has been introduced with a strong focus on how to successfully overcome barriers. The Disaster Risk Management Knowledge Centre has produced this flagship science report as a contribution to

the Science and Technology Roadmap of the Sendai Framework for Disaster Risk Reduction. This report is the result of the multi-sectorial and multi-disciplinary networking process and represents the combined effort of more than two hundred experts. It will support the integration of science into informed decision making through synthesizing and translating evidence for disaster risk management and strengthening the science policy and science-operation interface.

The scope of the report is divided conceptually into three distinct parts: understanding disaster risk, communicating disaster risk and managing disaster risk, forming the "bridge concept" of the report. The "Understanding disaster risk" part has been split into two chapters: Chapter 2, covering risk assessment methodology and examples in general, and Chapter 3 that provides a comprehensive overview of hazard related risk issues, the structure of which follows the Sendai taxonomy of hazard classification. Chapter 4 on "Communicating disaster risk" tackles many issues on communication in different phases of DRM among different actors. Chapter 5 "Managing disaster risk" addresses the governance issues of the full disaster risk cycle. The first and last chapter wrap the scope of the report into a whole. Chapter 1 "Current status of disaster risk management and policy framework" aims to explain why recent global and European initiatives are beginning to seek help to strengthen society's resilience by using science and technology. The final Chapter 6 "Future challenges of disaster risk management" aims to inform decision makers and practitioners of existing science that should find its way into legislative form and practice as well as tackling a much more challenging purpose: to recognise knowledge gaps that could serve as valuable reference based input for a call." Horizon2020 (From the Preface: Source: http://drmkc.jrc.ec.europa.eu/knowledge/Challenges-Sharing)

Website: http://drmkc.jrc.ec.europa.eu/knowledge/Challenges-Sharing

Global Risks Report 2017 Published

From the Press Release:

(Source: http://reports.weforum.org/global-risks-2017/press-releases/)

"Under-Employed, Under-Inclusive and Under Threat: the World in 2017

- Trends such as rising income inequality and societal polarization triggered political change in 2016 and could exacerbate global risks in 2017 if urgent action is not taken, according to the Global Risks Report 2017
- Key drivers of risks can be arrested or reversed through building more inclusive societies, for which international cooperation and long-term thinking will be vital
- Climate change ranks alongside income inequality and societal polarization as a top trend for 2017, with all five environmental risks featuring for the first time among the most likely and most impactful risks before the world

Economic inequality, societal polarization and intensifying environmental dangers are the top three trends that will shape global developments over the next 10 years, the World Economic Forum's *Global Risks Report 2017* found. Collaborative action by world leaders will be urgently needed to avert further hardship and volatility in the coming decade.

In this year's annual survey, some 750 experts assessed 30 global risks, as well as 13 underlying trends that could amplify them or alter the interconnections between them. Against a backdrop of mounting political disaffection and disruption across the world, three key findings emerged from the survey:

- Patterns persist. Rising income and wealth disparity and increasing
 polarization of societies were ranked first and third, respectively, among
 the underlying trends that will determine global developments in the next
 ten years. Similarly, the most interconnected pairing of risks in this year's
 survey is between high structural unemployment or underemployment and
 profound social instability.
- The environment dominates the global risks landscape. Climate change was the number two underlying trend this year. And for the first time, all five environmental risks in the survey were ranked both high-risk

- and high-likelihood, with *extreme weather events* emerging as the single most prominent global risk.
- Society is not keeping pace with technological change. Of the 12
 emerging technologies examined in the report, experts found artificial
 intelligence and robotics to have the greatest potential benefits, but also
 the greatest potential negative effects and the greatest need for better
 governance.

While the world can point to significant progress in the area of climate change in 2016, with a number of countries, including the US and China, ratifying the Paris Agreement, political change in Europe and North America puts this progress at risk. It also highlights the difficulty that leaders will face to agree on a course of action at the international level to tackle the most pressing economic and societal risks.

For the third year, the *Global Risks Report* also provides country-level data on how businesses perceive global risks in their countries. The *Global Risks Report 2017* has been developed with the support of Strategic Partners Marsh & McLennan Companies and Zurich Insurance Group. The report also benefited from the collaboration of its academic advisers: the Oxford Martin School (University of Oxford), the National University of Singapore, the Wharton Risk Management and Decision Processes Center (University of Pennsylvania), and the Advisory Board of the *Global Risks Report 2017*."

GLOBAL CLIMATE RISK INDEX 2017

Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2015 and 1996 to 2015

Source: Sönke Kreft, David Eckstein and Inga Melchior (2017), Germanwatch, Available at http://germanwatch.org/de/download/16411.pdf.

"The Germanwatch Global Climate Risk Index is an analysis based on one of the most reliable data sets available on the impacts of extreme weather events and associated socio-economic data. The Germanwatch Climate Risk Index 2017 is the 12th edition of the annual analysis. Its aim is to contextualize ongoing climate policy debates – especially the international climate discussions – with real-world impacts during the last year and the last 20 years.

Key messages

- According to the Germanwatch Global Climate Risk Index, Honduras, Myanmar and Haiti were the countries most affected by extreme weather events between 1996 and 2015.
- In 2015, Mozambique, Dominica as well as Malawi were at the top of the list of the most affected countries.
- Altogether, more than 528 000 people died as a direct result of nearly 11 000 extreme weather events; and losses between 1996 and 2015 amounted to around 3.08 trillion US\$ (in Purchasing Power Parities).
- The host region of the UN climate summit 2016 the continent of Africa is severely affected by climatic events with four countries ranking among the 10 countries worldwide most affected in 2015 Mozambique (1st), Malawi (3rd), Ghana and Madagascar (joint 8th position).
- Precipitation, floods and landslides were the major causes of damage in 2015.

 A high incidence of extreme precipitation supports the scientific expectations of accelerated hydrological cycles caused by climate warming.
- Most of the affected countries in the Bottom 10 of the long-term index have a high ranking due to exceptional catastrophes. Over the last few years another category of countries has been gaining relevance: Countries like the Philippines and Pakistan that are recurrently affected by catastrophes

- continuously rank among the most affected countries both in the long term index and in the index for the respective year for the last six years.
- Of the ten most affected countries (1996–2015), nine were developing countries in the low income or lower-middle income country group, while only one was classified as an upper-middle income country.
- The climate summit in Marrakesh is giving the "go-ahead" on developing the "rulebook" for the Paris Agreement, including the global adaptation goal, adaptation communication systems, and finance assessment systems for building resilience. A review of the UNFCCC's work on loss and damage provides the opportunity to better detail the next 5-year's work on loss and damage, in relation to the climate regime, as well as to better understand exactly how loss and damage should be taken up under the Paris Agreement"

Source: http://germanwatch.org/de/download/16411.pdf

3. Book Review

Natech Risk Assessment and Management Reducing the Risk of Natural-Hazard Impact on Hazardous Installations

Elisabeth Krausmann, Ana Maria Cruz and Ernesto Salzano Elsevier, 2017: 254 Pages

Effects of natural disaster events are usually separated into social, environmental and economic effects which can be further subdivided into direct and secondary effects. An important subcategory which receives increasing awareness are so-called Natech risks, i.e. risks of technological secondary effects, such as the release of hazardous materials, fires or explosions that are triggered by natural hazard events. The release can be chemical, biological or radiological in nature but Krausmann et al. especially focus on chemical releases. The book is much-needed and timely as it presents the whole spectrum of issues relevant for the assessment, management, as well as the reduction of Natech risks in a coherent way. It not only presents the current state-of-the-art of Natech risk assessment but also succeeds in presenting the ideas in a way so that it can be read by a broad audience including risk bearers from governments and industries, as well as risk practitioners and academia. In total, 15 chapters and a glossary give detailed information on the modeling and assessment, as well as on assessment methodologies, tools for Natech risks and corresponding risk reduction options.

The book can be seen as structured into three main sections. After a short introduction in chapter 1 into the issue and relevancy of Natech events, chapter 2 gives some general and 5 detailed examples of past Natech events, including major events such as the Tohoku Earthquake and Tsunami in 2011 in Japan, or Hurricanes Katrina and Rita in 2005 in the United States. Already in this chapter one can learn a great deal in the significance and unique characteristics of Natech events, as well as learn lessons which are discussed in more detail in chapter 3 focusing on different types of natural hazards. Chapter 4 ends the introduction to Natech risk by giving a detailed picture of current national approaches and

international activities to manage Natech risks. This ends the introductory section of the book.

While the first 4 chapters gave an overview of Natech risks, chapters 5 and 6 provide an engineering perspective to the problem. Chapter 5 focuses on natural hazard characterization, including its prediction and measurement, with a specific focus on earthquakes, tsunamis and floods. The methods discussed there are now standard in quantitative risk management of extreme events, however, the discussion serves well as a prerequisite and for a comparison with technological hazard characterization discussed afterwards in chapter 6. Both chapters can be seen as preliminaries for the discussion of Natech risk and its assessment which is comprehensively addressed in chapter 7. Especially the detailed discussion of the Natech risk-assessment process from a general perspective is rewarding. Afterwards, chapters 8, 9 and 10 discuss selected quantitative, qualitative and semi-quantitative Natech risk-analysis methodologies. Among others this includes the web-based software framework RAPID-N which was also used in chapter 10 for a detailed full case-study site application for earthquake impacts on a chemical installation housing flammable and toxic substances. Also a qualitative method called PANR is introduced to show how diagnostic tools at the community level can help to promote participation in the assessment process of local government officials and other risk bearers. Fully quantitative risk assessment tools are presented in chapter 9 including the so-called ARIPAR software tool which features a Natech module used for a case study analysis in chapter 11. Another software based application presented in chapter 12 is called RISKCURVES which focuses on a refinery on the Mediterranean coast. The case study chapters are especially rewarding as they show the full risk assessment circle from an applied perspective which includes the handling of uncertainties, as well as the required information necessary for performing such a task. This ends section 2 of the book.

Risk governance is a core issue now in disaster risk management and this is the same for Natech risks. Chapters 13 and 14 focus on both structural as well as organizational measures for reducing disaster risk and therefore avoid the usual lack of discussion on how to combine purely engineering and soft measures. Again in both chapters the more general discussions are supported by concrete examples which make the ideas of each prevention or mitigation measure better understandable. The call for Natech risk governance and especially the emphasis on the

interdependencies of different systems makes chapter 14 a link to all other chapters discussed before. The call for interdisciplinarity in the final chapter 15, mostly due to the fact that Natech is cutting across several disciplines and many different stakeholder groups are involved, is essential not only for Natech risks but it is true for disaster risk in general. The profound understanding of Natech risk assessment and the application of it by the authors explained in detail in this book, as well as the extensive references within each chapter will make the book a must have for all disaster risk experts in the field. It will also be beneficial to help finding better ways to integrate Natech risks within broader risk frameworks currently developed, especially under the light of the Sendai Framework for Disaster Risk Reduction.

Book reviewed by Hochrainer-Stigler, S., IIASA, Austria

4. Conference Announcements

23 August – 25 August 2017 IDRiM 2017

The 8th Conference of the International Society for Integrated Disaster Risk Management (IDRiM 2017) will take place in Reykjavík, Iceland from 23 – 25 August 2017. The theme of the conference is "Dimensions of Disaster Risk Reduction and Societal Resilience in a Complex World." IDRiM 2017 will be hosted in cooperation with the University of Iceland, NORDRESS, the Nordic Centre of Excellence on Resilience and Societal Security.

Website: http://idrim2017.com/

27 September – 28 September 2017

<u>Disaster Risk Reduction Conference</u>

This conference will focus on disaster management actions and the importance of the basics in being able to effectively reduce disaster risk and increase resilience in South Africa and internationally. Topics could include critical thinking and creativity in disaster risk reduction, ecosystem-based disaster risk reduction, early warning systems, insurance industry roles in resilience, religious and cultural traditions in building resilience, and migration, refugees, and humanitarian action.

Website: http://disaster.co.za/conferences/

• 5 March – 6 March 2018

ICDEM 2018

20th International Conference on Disaster and Emergency Management aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Disaster and Emergency Management. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Disaster and Emergency Management.

Website: https://www.waset.org/conference/2018/03/rome/ICDEM

26 August – 30 August 2018 IDRC Davos 2018

The International Disaster and Risk Conferences (IDRC) - the world's leading conferences on integrative risk management. A unique community of business leaders, decision makers, practitioners, international organisations, NGO, and scientists committed to find solutions to the risks posed at societies and organisations today.

Website: https://idrc.info/

5. Internet Resource List

- Global Alliance of Disaster Research Institutes http://www.gadri.net/
- Tangible Earth, including ipad android version. http://www.tangible-earth.com/en/
- Emergency Events Database EM-DAT http://www.emdat.be/
- World Economic Forum Database http://reports.weforum.org/
- Global Assessment Report and UNISDR https://www.unisdr.org/we/inform/gar
- Munich NatCatService http://www.munichre.com/en/reinsurance/business/nonlife/natcatservice/index.html
- Disaster Resilient Australia Knowledge Hub http://www.emknowledge.gov.au/
- Global Disaster Watch http://globaldisasterwatch.blogspot.co.at/
- RSOE EDIS Emergency and Disaster Information Service http://hisz.rsoe.hu/alertmap/index2.php
- GDACS Global Disaster Alert and Coordination System http://www.gdacs.org/
- Pacific Disaster Center http://www.pdc.org/
- Global Assessment Report on Disaster Risk Reduction 2013: http://www.preventionweb.net/english/hyogo/gar/2013/en/home/index.html
- United Nations Office for Disaster Risk Reduction. Global Assessment Report (GAR): http://www.unisdr.org/we/inform/gar

• PreventionWeb: Serving the information needs of the disaster reduction community:

http://www.preventionweb.net/english/.

- Disaster Reduction Hyper base: Web based facility to compile appropriate disaster reduction technologies and knowledge. http://drh.edm.bosai.go.jp/
- MCEER: Collection of disaster management resources, including international, federal, state, local and non-profit organizations: http://mceer.buffalo.edu/infoservice/reference_services/disasterManagementRes ources.asp
- Staffordshire Raynet: Disaster and Emergency Management on the Internet.
 Long list of websites for various disasters and databases.
 http://www.keele.ac.uk/depts/por/disaster.htm
- Internet Resources for Disaster Studies: University of Delaware Library http://www2.lib.udel.edu/subj/disasters/internet.htm
- FEMA Federal Emergency Management Agency: Focus is on the US http://www.fema.gov/index.shtm
- EDEN Extension Disaster Education Network: Reducing the Impact of Disasters Through Education http://eden.lsu.edu/EDENCourses/Pages/default.aspx
- Disaster Handbook: University of Florida. http://disaster.ifas.ufl.edu/links.htm
- Disaster Management: Royal Roads University.
 http://libguides.royalroads.ca/content.php?pid=64941&sid=480216
- Natural Hazards and Disaster Information Resources: University of Colorado at Boulder (including newsletter).
 http://www.colorado.edu/hazards/resources/
- Center for Excellence in Disaster Management and Humanitarian Assistance https://www.cfe-dmha.org/
- Humanitarian Library http://www.humanitarianlibrary.org/
- UNHCR: Emergency Handbook https://emergency.unhcr.org/

ProVention Consortium: Working in Partnership to Build Safer Co Reduce Disaster Risk	mmunities and
http://www.proventionconsortium.net/?pageid=29	
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6. (New) Journals

• Journal of Integrated Disaster Risk Management, IDRIM Journal:

- **Objective:** The main objective of IDRiM is to provide an integrated and implementable approach to the growing demand for disaster risk reduction and management by offering reliable, affordable and effective solutions for minimizing the loss of life, property damage, and social and economic disruption. IDRiM also explores implementation science for disaster reduction. IDRiM intends to provide a set of solutions for the all types of: environmental and natural hazards (earthquakes, flood, drought, windstorms, landslides, etc.) and manmade hazards. It also includes the development of methods and tools for modeling and assessment of disaster risks, hazard zonation and hazard mapping; geotechnical zonation, vulnerability analysis, strengthening design of structures, disaster risk evaluation and mapping; and various types of risk management methods such as innovative risk transfer, risk reduction policy; socio-economic studies, human and economic loss estimation, practical loss-control measures, catastrophic risk insurance, public awareness, programming; and solutions for risk reduction in buildings, lifelines, infrastructures, industry, oil-chemical facilities, offshore structures and urban system. IDRiM also covers the governance of disaster risks, design of institutional schemes, participatory approach, etc.
- **Website:** http://idrimjournal.com/index.php/idrim

Economics of Disasters and Climate Change

Objective: Economics of Disasters and Climate Change is a peer-reviewed, international journal designed to foster and disseminate innovative and original research and policy analysis on the economic and financial aspects of climate change and disasters (separately, and the interactions between climate and disasters). The journal aims to provide a central 'meeting point' for all economists working on these topics and enhance the quality and quantity of analysis as it pertains to our knowledge of these phenomena and their policy implications. The journal serves researchers, policy-makers, practitioners, and educators, who are interested in the theoretical and applied (quantitative) aspects of our understanding of the economics and finance of climate change and of disasters. The topics addressed in the journal include, but are not limited to: The economic and financial impacts of climate change and disasters

- The analysis of climate mitigation policy (emissions trading platforms, carbon taxes, etc.)
- Climate change adaptation in developing and developed countries
- The impacts of specific forecasted changes such as sea-level rise
- Climate insurance mechanisms (drought insurance, index insurance, barriers to insurance uptake)
- Other financial mechanism to deal with mitigation and adaptation
- The Green Climate Fund and the Warsaw Loss and Damage Mechanism
- The fiscal and monetary impacts of disasters (including spatial analysis)
- Migration and displacement as caused by climate change and by disasters
- The impact of climate and extreme events on households and communities in developing countries (both rural and urban)
- Risk sharing and risk transfer mechanisms to deal with disaster risk (e.g. earthquake insurance)
- The political economy of climate policy and disaster risk reduction
- · Economic determinants of vulnerability and resilience
- Future projected damages and losses associated with disasters and climatic changes
- The role of development institutions and other multilaterals in climate policy and disaster risk reduction
 - Website: http://www.springer.com/economics/environmental/journal/41885

Journal of Extreme Events:

- Objective: The objective of the Journal of Extreme Events is to provide a forum for analysis of the occurrence, impact, and significance of extreme events on natural and human systems. The Journal will provide a range of opportunities for manuscripts including original research papers, review assessments, and science-policy statements. Readership for the journal will come from a range of academic disciplines as well as research-oriented practitioner and stakeholder professions.

Journal content, although not exclusively, will focus on extreme weather and climate events and their connections with natural and human system processes. The study of other types of extreme events will be examined as they relate to and inform understanding of local and global environmental changes and their implications. Main thematic areas of the Journal will include: Conditions, drivers and impacts of extreme events on the natural systems and human systems; Conditions, drivers and impacts of extreme events on coupled human and natural systems; Extreme events as surprises and associated uncertainty; Indicators and monitoring of extreme events and early warning systems; Scalar aspects of extreme events - local,

regional, and global dimensions; Risk analysis and social learning from extreme events in the context of climate non-stationarity; Exposure and vulnerability to extreme events; Extreme events and system transitions; and, Resilience to extreme events, and sustainability and transformation.

- Website: http://www.worldscientific.com/worldscinet/joee

Weather and Climate Extremes

- Objective: Weather and Climate Extremes provides academics, decision international development agencies, nongovernmental organizations and civil society with publications on different aspects of research in weather and climate extremes, monitoring and early warning systems, assessment of vulnerability and impacts, developing and implementing intervention policies, effective risk management and adaptation practices to address local and regional needs and circumstances, engagement of local communities in the adoption of practices to cope with extremes, and information and communication strategies. The journal encourages the submission of original research papers, comprehensive review articles, and short communications which address the following: Weather and Climate Extremes •Types of extremes •Quality and quantity of data and data analysis •Frequency, intensity, spatial extent, duration, and timing of extreme events •Observed and projected changes in weather and climate extremes Research Approaches •Atmospheric science (processes and modeling) •Short- and medium-range forecasts of weather extremes •Seasonal forecasts of climate extremes •Monitoring and early warning systems •Modelling impacts of weather and climate extremes •Statistical aspects of extremes Vulnerability and Impacts of Weather and Climate Extremes •Natural physical environment •Human systems eg., coastal settlements, mountain settlements, urbanization etc., •Ecosystems •Temporal and spatial dynamics of exposure and vulnerability •Observed and projected impacts in different sociosectors Managing Weather economic and Climate Extremes •Traditional knowledge •Preparedness planning •Risk Management •Information and communication strategies •Policies and practices for adaptation to weather and climate extremes •Resilience to adverse impacts of extremes •Issues and opportunities at the local, national and international levels •Technological innovations and improved practices •Reducing societal vulnerability to weather and climate extremes •Case **Studies**

- Website:

http://www.journals.elsevier.com/weather-and-climate-extremes/

Climate Risk Management

Objective: Welcome to the online submission and editorial system for Climate Risk Management Climate Risk Management publishes original scientific contributions, state-of-the-art reviews and reports of practical experience on all aspects of the production and use of climate and climate-related information in decision and policy making from the near- to long-term. Therefore, the scope of the journal covers: Historical, current, and future climate conditions across multiple space and time scales; Risk assessment and risk management approaches for climate-sensitive sectors such as agriculture, forestry and fire management, health, mining, natural resources management, water management, the built environment, and tourism; and Analysis of relevant institutional developments and arrangements. Topics of interest include, but are not limited to: The application of seasonal forecasting and regional climate change projections; Capacity Management and systematic Infrastructure design; building; reduction of climate-induced hazards and disasters: Protection of lives, livelihoods and property; Mitigation of environmental damage; Sustainable resource use and production; Impacts, vulnerability and at individual, community and institutional Regulatory risks associated with climate change; and Climatesensitive interactions between economic, environmental and social systems. Research papers should consider the practical application of the thesis advanced through case studies, experiments, or systematic comparisons with existing approaches. Special issues devoted to topics of particular interest will be published on an occasional basis, and proposals for such issues are invited. Submission of multi- and interdisciplinary studies, particularly those involving economics and the social sciences, is encouraged.

- Website: http://ees.elsevier.com/clrm/

Journal of Geography & Natural Disasters

Objective: Geography is the study of earth and its land and water features, inhabitants and phenomena. Geography has been called "the world discipline". Geography is divided into two main branches-Human geography and Physical geography. A Natural Disaster may be defined as the effect of Natural hazards which leads to human, environmental or financial losses. The journal includes a wide range of fields in its discipline to create a platform for the authors to make their contribution towards the journal and the editorial office promises a peer review process for the submitted manuscripts for the quality of publishing. Journal of Geography and Natural Disasters is an Open Access journal

and aims to publish most complete and reliable source of information on the discoveries and current developments in the mode of original articles, review articles, case reports, short communications, etc. in all areas of the field and making them freely available through online without any restrictions or any other subscriptions to researchers worldwide. The journal is using Editorial Tracking System for quality in review process. Editorial Tracking is an online manuscript submission, review and tracking systems. Review processing is performed by the editorial board members of Journal of Geography and Natural Disasters or outside experts; at least two independent reviewers approval followed by editor approval is required for acceptance of any citable manuscript. Authors may submit manuscripts and track their progress through the system, hopefully to publication. Reviewers can download manuscripts and submit their opinions to the editor. Editors can manage the whole submission/review/revise/publish process.

- **Website**: http://www.omicsgroup.org/journals/jgndhome.php

Disaster Health

- **Objective:** Disaster Health focuses on the intersection of disaster mental and behavioral health and disaster public health. As a rapidpublication, peer-reviewed scientific journal, Disaster Health prioritizes the publication of well-designed and well-executed studies, around the globe, across the complete spectrum of natural, human-generated and hybrid disasters as well as humanitarian crises and complex emergencies (including exposure to terrorism and military conflicts). Disaster Health seeks manuscripts that contain strong research designs and demonstrate the effectiveness and efficacy of programs and interventions. Disaster Health examines the linkage between exposure to physical forces of harm in a disaster and the unique "signature" of mental and physical health impact. Disaster Health solicits articles that also focus on disaster responders, including dimensions of personal, team and organizational preparedness and execution of disaster response duties. Regarding individual response to disaster threat and impact, Disaster Health examines the full range of human response from personal mental health, wellness and resilience to psychological distress and psychopathology. At the community level, Disaster Health explores community disaster prevention, risk reduction and resilience. Across all themes, Disaster Health champions the evolution of the scientific evidence base.
- Website: http://www.landesbioscience.com/journals/disasterhealth/

International Journal of Disaster Risk Reduction (IJDRR)

Objective: The International Journal of Disaster Risk Reduction (IJDRR) is the journal for researchers, policymakers and practitioners across diverse disciplines: Earth Sciences in its entirety; Environmental Sciences; Civil Engineering; Urban Studies; Geography; Sociology. The International Journal of Disaster Risk Reduction (IJDRR) publishes fundamental and applied research, critical reviews, policy papers and case studies focusing on multidisciplinary research aiming to reduce the impact of natural and technological disasters. The International Journal of Disaster Risk Reduction (IJDRR) stimulates exchange of ideas and knowledge transfer on disaster research, mitigation and risk reduction at all geographic scales: local, national and international. Key topics: Multifaceted disaster and cascade disasters. The spatial and temporal monitoring, analysis and zoning of regional hazard risk. The development of disaster risk reduction strategies and techniques. Discussion and development of effective warning and educational systems for risk resilience at all levels. Climate Change and its implications in sudden disasters . The journal particularly encourages papers which approach risk from a multidisciplinary perspective.

- Website:

http://www.elsevier.com/wps/find/journaldescription.cws_home/727506/description#description

Already listed journals in back issues:

- **Journal of Contingencies and Crisis Management** http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291468-5973
- Australasian Journal of Disaster and Trauma Studies http://www.massey.ac.nz/~trauma/welcome.shtml
- Jàmbá: Journal of Disaster Risk Studies http://www.jamba.org.za/index.php/jamba/index
- Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards

http://www.tandf.co.uk/journals/journal.asp?issn=17499518&linktype=1

• Current Opinion in Environmental Sustainability: http://www.elsevier.com/wps/find/journaldescription.cws_home/718675/description#description

• International Journal of Risk Management (IJRM):

http://www.serialspublications.com/journals1.asp?jid=583

• International Journal of Safety and Security Engineering:

http://journals.witpress.com/jsse.asp

• Global Environmental Change:

 $http://www.elsevier.com/wps/find/journal description.cws_home/30425/description\#description$

• Journal of Homeland Security and Emergency Management:

http://www.bepress.com/jhsem/about.html

• Journal of Emergency Management:

http://www.pnpco.com/pn06001.html

• International Journal of Disaster Resilience in the Built Environment:

http://www.emeraldinsight.com/products/journals/journals.htm?id=IJDRBE

• Regional Environmental Change:

http://www.springer.com/environment/global+change+-+climate+change/journal/10113

• Natural Hazards Review:

http://ascelibrary.org/nho/

• Journal of Risk Analysis and Crisis Response

http://www.atlantis-press.com/publications/jracr/index.html

• Environmental Hazards:

http://www.earthscan.co.uk/?tabid=37213

• International Journal of Climate Change Strategies and Management (IJCCSM):

www.emeraldinsight.com/products/journals/journals.htm?id=ijccsm

• Journal of Natural Disaster Science:

http://wwwsoc.nii.ac.jp/jsnds/contents/jnds/about.html

• Disasters:

http://www.wiley.com/bw/journal.asp?ref=0361-3666&site=1

• **Environmental Hazards:** http://www.earthscan.co.uk/?tabid=37213

• Natural Hazards:

www.springer.com/earth+sciences+and+geography/hydrogeology/journal/11069

• Mitigation and Adaptation Strategies for Global Environmental Change

 $http://www.springer.com/earth+sciences+and+geography/meteorology+\%\,26+climatolog\,y/journal/1\,1027$

Extremes

http://www.springer.com/statistics/journal/10687

• International Journal of Disaster Resilience in the Built Environment

http://www.disaster-resilience.salford.ac.uk/international-journal-of-disaster-resilience

• Journal of Disaster Research

http://www.fujipress.jp/JDR/JDR_about.html

• Asian Journal of Environment and Disaster Management (AJEDM)

http://rpsonline.com.sg/journals/101-ajedm/ajedm.html

• International Journal of Disaster Risk Science

http://www.springer.com/13753

• Disaster Advances

http://www.disasterjournal.net/

• International Journal of Mass Emergencies & Disasters

http://www.ijmed.org/

• International Journal of Disaster Recovery and Business Continuity

http://www.sersc.org/journals/IJDRBC/

• Disaster Prevention and Management

http://www.emeraldinsight.com/products/journals/journals.htm?id=dpm

• Risk Analysis

http://www.blackwellpublishing.com/journal.asp?ref=0272-4332&site=1

• Journal of Risk Research

http://www.tandf.co.uk/journals/journal.asp?issn=13669877&linktype=1

• International Journal of Risk Assessment and Management (IJRAM)

http://www.inderscience.com/browse/index.php?journalID=24

7. New Books

First book on Natech risk assessment and management published:

Authors: Elisabeth Krausmann Ana Cruz Ernesto Salzano

Title: Natech Risk Assessment and Management, 1st Edition, Reducing the Risk of

Natural-Hazard Impact on Hazardous Installations

Paperback ISBN: 9780128038079 eBook ISBN: 9780128038796

Imprint: Elsevier

In March 2011 the whole world watched in shock when a tsunami slammed into a nuclear power plant, causing a nuclear meltdown and raising the spectre of nuclear contamination. Raging fires and explosions at oil refineries in the wake of the massive earthquake that triggered the tsunami also made the global headlines. These events clearly demonstrate the potential for natural hazards to trigger fires, explosions, and toxic or radioactive releases from industrial activities that process, store or transport hazardous materials. These technological "secondary effects" caused by natural hazards are also called "Natech" accidents.

Elsevier has recently published the book "Natech risk assessment and management – Reducing the risk of natural-hazard impact on hazardous installations" which was coauthored by the European Commission's Joint Research Centre, Kyoto University and Bologna University, with a number of chapter contributions by other institutions. It covers the entire spectrum of issues pertinent to Natech risk assessment and management, and teaches engineers, safety managers and decision makers how to safeguard hazardous installations and pipelines against the impact of natural disasters.

After a thorough introduction of the topic, the book discusses various examples of national and international frameworks for major accident prevention and preparedness and provides a detailed view of the implementation of Natech risk management in the EU and OECD. The book also includes a dedicated chapter on natural-hazard characterization and measurement from an engineering perspective, as well as a discussion of selected Natech accidents, including recent ones, and specific lessons learned from each. An important part of the book is dedicated to Natech risk assessment and it provides an analysis of all essential elements of the assessment process, as well as a presentation of available support tools. The final section of the book addresses the reduction of Natech risk, including structural and organizational prevention and mitigation measures, as well as early warning issues and emergency planning.

The book is available directly from Elsevier or other major book sellers: http://store.elsevier.com/Natech-Risk-Assessment-and-Management/Elisabeth-Krausmann/isbn-9780128038079/

The Economics of the Global Environment: Catastrophic Risks in Theory and Policy

Authors: Graciela Chichilnisky (Editor), Armon Rezai (Editor)

Year: 2017

Publisher: Springer ISBN: 978-3319319414

Content: This is the first book combining research on the Global Environment, Catastrophic Risks and Economic Theory and Policy. Modern economic theory originated in the middle of the twentieth century when industrial expansion coupled with population growth led to a voracious use of natural resources and global environmental concerns. It is uncontested that, for the first time in recorded history, humans dominate the planet, changing the planet's atmosphere, its bodies of water, and the complex web of species that makes life on earth. This radical change in circumstances led to rethinking of the foundations of human organization and, in particular, the industrial economy and the economic theory behind it. This book brings together new approaches on multiple levels: environmental sustainability requires rethinking in terms of economic theory and policy as well as the considerations of catastrophic risk and extremal events. Leading experts address questions of economic governance, risk management, policy decision making and distribution across time and space.

Climate Hazard Crises in Asian Societies and Environments

Authors: Troy Sternberg

Year: 2017

Publisher: Routledge ISBN: 978-92-9257-475-8

Content: Climate hazards are the world's most widespread, deadliest and costliest natural disasters. Knowledge of climate hazard dynamics is critical since the impacts of climate change, population growth, development projects and migration affect both the impact and severity of disasters. Current global events highlight how hazards can lead to significant financial losses, increased mortality This book examines climate hazards crises in rates and political instability. contemporary Asia, identifying how hazards from the Middle East through South and Central Asia and China have the power to reshape our globalised world. In an era of changing climates, knowledge of hazard dynamics is essential to mitigating disasters and strengthening livelihoods and societies across Asia... By integrating human exposure to climate factors and disaster episodes, the book explores the environmental forces that drive disasters and their social implications. Focusing on a range of Asian countries, landscapes and themes, the chapters address several scales (province, national, regional), different hazards (drought, flood, temperature, storms, dust), environments (desert, mountain, coastal) and issues (vulnerability, development, temperate, management, politics) to present a diverse, comprehensive evaluation of climate hazards in Asia. This book offers an understanding of the challenges climate hazards present, their critical nature and the effort needed to mitigate climate

hazards in 21st century Asia. Climate Hazard Crises in Asian Societies and Environments is vital reading for those interested and engaged in Asia's development and well-being today And will be of interest to those working in Geography, Development Studies, Environmental Sciences, Sociology and Political Science.

Rebuilding Fukushima

Authors: Mitsuo Yamakawa (Editor), Daisaku Yamamoto (Editor)

Year: 2017

Publisher: Routledge ISBN: 978-1138193796

Content: Five years after the one of the worst nuclear accidents in history, Fukushima now only occasionally headlines national and international media. However, the disaster is far from over, as evidenced by a hundred thousand people from Fukushima still in the state of evacuation, rising levels of radiation in streams and rivers, and failing attempts to control the leakage of radioactive materials at the Fukushima Daiichi Nuclear Power Plant. Despite these dismal conditions, efforts to recover and rebuild livelihoods in the afflicted regions of Fukushima did start immediately after the outset of the accident. Rebuilding Fukushima gives an account of how citizens, local governments, and businesses responded to and coped with the crisis of Fukushima. It addresses principles to guide reconstruction and international policy environments in which the current disaster is situated. It explores how reconstruction is articulated and experienced at different spatial scales, ranging from individuals to communities and municipalities, and details recovery efforts, achievements, and challenges in the realms of public transportation, agriculture and food production, manufacturing industries, retail sectors, and renewable-energy industries. This book also critically investigates the nature of the current reconstruction policy schemes, and seeks to articulate what may be required in order to achieve more sustainable and equitable (re)development in afflicted regions and other nuclear host regions. Drawing on extensive fieldwork and local surveys, this volume is one of the first books in English that captures the knowledge and insights of native Japanese social scientists who dealt with the complexities of nuclear disaster on a day-today basis. It will be of great interest to students and scholars of disastermanagement studies and nuclear policy.

Climate Change and Natural Disasters: Transforming Economies and Policies for a Sustainable Future

Authors: Vinod Thomas (Author)

Year: 2017

Publisher: Transaction Publishers

ISBN: 978-1412864404

Content: The start of the new millennium will be remembered for deadly climaterelated disasters—the great floods in Thailand in 2011, Super Storm Sandy in the United States in 2012, and Typhoon Haiyan in the Philippines in 2013, to name a few. In 2014, 17.5 million people were displaced by climate-related disasters, ten times more than the 1.7 million displaced by geophysical hazards. What is causing the increase in natural disasters and what effect does it have on the economy? Climate Change and Natural Disasters sends three messages: human-made factors exert a growing influence on climate-related disasters; because of the link to anthropogenic factors, there is a pressing need for climate mitigation; and prevention, including climate adaptation, ought not to be viewed as a cost to economic growth but as an investment. Ultimately, attention to climate-related disasters, arguably the most tangible manifestation of global warming, may help mobilize broader climate action. It can also be instrumental in transitioning to a path of low-carbon, green growth, improving disaster resilience, improving natural resource use, and caring for the urban environment. Vinod Thomas proposes that economic growth will become sustainable only if governments, political actors, and local communities combine natural disaster prevention and controlling climate change into national growth strategies. When considering all types of capital, particularly human capital, climate action can drive economic growth, rather than hinder it.

Flood Risk Management and Response

Authors: D. Proverbs (Author, Editor), C. A. Brebbia (Editor)

Year: 2016

Publisher: WIT Press / Computational Mechanics

ISBN: 978-1784662417

Content: Flooding is a global phenomenon that claims countless lives worldwide each year. Beginning in 2008 at the Institution of Civil Engineers in London this book contains papers from the proceedings of the 5th conference in the successful series on Flood Recovery, Innovation and Response. When flooding occurs in populated areas, it can cause substantial damage to property as well as threatening human life. Apart from the physical damage to buildings, contents and loss of life, which are the most obvious impacts of floods upon households, indirect losses are often overlooked. These indirect and intangible impacts are generally associated with disruption to normal life as well as longer term health issues including stress related illness. In many parts of the developing world, flooding can represent a major barrier to the alleviation of poverty as vulnerable communities are often exposed to sudden and life threatening events. How we respond and adapt to the challenges of flooding is key to developing our long term resilience. This book provides a platform for the work of researchers, academics and practitioners actively involved in improving our understanding of flood events and our approaches to response, recovery and resilience. A wide range of technical and management topics related to flooding and its impact are included: Flood management; Flood warning; Flood risk adaptation Flood protection products and processes; Flood risk modelling; Flood forecasting; Flood vulnerability; Urban flood modelling; Flood risk assessment and recovery; Climate change impact; Socio and economic impact; Flood case studies; Flood damage assessment; Storm water control.

Natural Disaster Risk Management: Geosciences and Social Responsibility

Authors: Ulrich Ranke (Author)

Year: 2016

Publisher: Springer ISBN: 978-1784662417

Content: This textbook provides a thorough introduction to natural disaster risk management. Many aspects of disaster risk management, such as those involved in earthquakes, volcanic eruptions, floods, avalanches and mudslides call for similar prevention and preparedness instruments, management concepts, and countermeasures. This textbook assumes the viewpoint of a regional disaster risk manager who is responsible for a certain area, and for making the lives of the people who live there safer, regardless of the type of natural disaster that may occur. The same holds true for boosting preparedness and awareness in the population at risk. The book includes numerous examples of hazard mitigation concepts and techniques, as well as ways of intensively involving the local population in prevention schemes at an early stage. Furthermore, it provides an in-depth examination of the function of risk communication, both as an instrument for disseminating official information and as a function of public media. In closing, a chapter on risk splitting offers insights into insurance-based models for risk financing. This comprehensive book is a must-read for all students, researchers and practitioners dealing with natural disaster risk management.

Reducing Disaster Risk by Managing Urban Land Use: Guidance Notes for Planners

Authors: Year: 2016

Publisher: Asian Development Bank

ISBN: 978-92-9257-475-8

Content: Urban areas in Asian countries continue to face significant disaster risk. Rapid unplanned growth of cities increases the exposure and vulnerability of urban populations and their physical assets to natural hazards.

This document provides guidance for urban planners on how to use land use management-related tools they have at their disposal—land use planning, development control instruments, greenfield development, and urban redevelopment—to reduce disaster risk and contribute to strengthening urban resilience and sustainable urban development. The guidance provided in the document is further illustrated through case studies showing examples where urban land use management-related tools have been adopted to reduce disaster risk. It is hoped that this document will support urban planners as a professional group to step up and embrace disaster risk reduction.

Huge levels of aid are spent on reconstructing housing after disasters. Have these houses Still Standing?: Looking Back at Reconstruction and Disaster Risk Reduction in Housing

Authors: Theo Schilderman (Editor), Eleanor Parker (Editor)

Year: 2016

Publisher: Practical Action

ISBN: 185339839X

Content: Huge levels of aid are spent on reconstructing housing after disasters. Have these houses withstood the test of time and hazard? Just as important from the point of view of their owners, has the reconstruction process played a part in and restoring their livelihoods social networks? Unfortunately, aid agencies rarely go back to assess the impact of reconstruction in the longer term. The research upon which Still Standing? is based has done just that. Agencies that undertook projects 3-35 years ago in countries throughout Asia and Latin America have gone back to record changes and to interview beneficiaries, builders, authorities and other agencies in their project areas. This book describes the stories of the project beneficiaries and how their houses have changed, within contexts that have kept changing too. Still Standing? is essential reading for architects and engineers involved in humanitarian fieldwork as well as students and researchers concerned with disaster risk reduction.

Ecosystem-Based Disaster Risk Reduction and Adaptation in Practice

Authors: Fabrice G. Renaud (Editor), Karen Sudmeier-Rieux (Editor), Marisol

Estrella (Editor), Udo Nehren (Editor)

Year: 2016

Publisher: Springer **ISBN:** 3319436317

Content: This book is a compilation of recent developments in the field of ecosystem-based disaster risk reduction and climate change adaption (Eco-DRR/CCA) globally. It provides further evidence that ecosystem-based approaches make economic sense, and showcases how research has progressively filled knowledge gaps about translating this concept into practice. It presents a number of methods, and tools that illustrate how Eco-DRR/CCA has been applied for various ecosystems and hazard contexts around the world. It also discusses how innovative institutional arrangements and policies are shaping the field of Eco-DRR/CCA. The book is of relevance to scientists, practitioners, policy-makers and students in the field of ecosystem management for disaster risk reduction and climate change adaptation.

Disasters: Learning the Lessons for a Safer World

Authors: David Eves

Year: 2016

Publisher: Routledge **ISBN:** 1138144231

Content: Disasters: learning the lessons for a safer world is both a tribute to the victims of past safety failures and a warning against complacency and cutting corners today. It also recognises the achievements of health and safety professionals and others in learning the lessons of past mistakes. As Trevor Kletz has written, "Someone has paid the 'tuition fess'. There is no need for you to pay them again."Illustrated throughout in colour, the book looks at over 90 accidents, incidents and safety failures. Some, like Aberfan, Chernobyl and Hillsborough, are known simply by a single place name. Others have now faded from our collective consciousness but still have important lessons for us today, such as the early fires, explosions and mining disasters that paved the way for better safety management. Disasters: learning the lessons for a safer world offers:a description of events from 1800 to the present day a wide range of incidents, from explosions and fires to floods, pollution and human and animal ill health information on the background to each incident, what happened and the lessons that were learnt an exploration of the politics of disaster and risk reduction

Identifying Emerging Issues in Disaster Risk Reduction, Migration, Climate Change and Sustainable Development: Shaping Debates and Policies

Authors: Karen Sudmeier-Rieux (Editor), Manuela Fernández (Editor), Ivanna

Penna (Editor), Michel Jaboyedoff (Editor), JC Gaillard (Editor)

Year: 2016

Publisher: Springer ISBN: 3319338781

Content: The goal of this book is to explore disaster risk reduction (DRR), migration, climate change adaptation (CCA) and sustainable development linkages from a number of different geographical, social and natural science angles. Well-known scientists and practitioners present different perspectives regarding these inter-linkages from around the world, with theoretical discussions as well as field observations. This publication contributes in particular to the discussion on the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 and the debate about how to improve DRR, including CCA, policies and practices, taking into account migration processes from a large perspective where both natural and social factors are crucial and mutually "alloyed". Some authors see the SFDRR as a positive step forward in terms of embracing a multitude of issues, others doubting that the agreement will lead to much concrete action toward real action on the ground. This book is a timely contribution for researchers, students and policy makers in the fields of environment, human geography, migration, disaster and climate change studies who seek a more comprehensive grasp of contemporary development issues.

Urban Resilience: A Transformative Approach

Authors: Yoshiki Yamagata (Editor), Hiroshi Maruyama (Editor)

Year: 2016

Publisher: Springer

ISBN: 3319398105

Content: 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.

Climate Change Adaptation, Resilience and Hazards

Authors: Walter Leal Filho (Editor), Haruna Musa (Editor), Gina Cavan

(Editor), Paul O'Hare (Editor), Julia Seixas (Editor)

Year: 2016

Publisher: Springer ISBN: 3319398792

Content: This book analyses the links between climate change adaptation, resilience and the impacts of hazards. The contributors cover topics such as climate change adaptation in coastal zones, the evaluation of community land models, climate change considerations in public health and water resource management, as well as conceptual frameworks for understanding vulnerabilities to extreme climate events. The book focuses on a variety of concrete projects, initiatives and strategies currently being implemented across the world. It also presents case studies, trends, data and projects that illustrate how cities, communities and regions have been striving to achieve resilience and have handled hazards.

Disaster Risk Reduction and the Global System: Ruminations on a Way Forward

Authors: Michael Gordy (Author)

Year: 2016

Publisher: Springer ISBN: 3319416669

Content: This short manuscript is both a distillation of some of the latest work on disaster risk reduction and an interpretation of this distillation from the author's political economic perspective. It is based on information found in the flagship reports on disaster risk reduction of the United Nations. The book sums up and interprets issues of disaster risk reduction and makes them accessible to professional and non-professional readers alike, including governmental policy makers.

Natural Disasters in China

Authors: Peijun Shi (Editor)

Year: 2016

Publisher: Springer ISBN: 3662502682

Content: This is the first English language book that systematically introduces the spatial and temporal patterns of major natural disasters in China from 1949 to 2014. It also reveals natural disaster formation mechanisms and processes, quantifies vulnerability to these disasters, evaluates disaster risks, summarizes the key strategies of integrated disaster risk governance, and analyzes large-scale disaster response cases in recent years in China. The book can be a good reference for researchers, students, and practitioners in the field of natural disaster risk management and risk governance for improving the understanding of natural disasters in China.

Disaster Risk Reduction: Cases from Urban Africa

Authors: Mark Pelling and Ben Wisner

Year: 2016

Publisher: Routledge ISBN: 1138002054

Content: 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; livehood; 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

Mathematics Geostatistical and Geospatial Approaches for the Characterization of Natural Resources in the Environment: Challenges, Processes and Strategies

Authors: N. Janardhana Raju (Editor)

Year: 2016

Publisher: Springer **ISBN:** 3319186620

Content: Mathematics plays a key part in the crust, mantle, oceans and atmosphere, creating climates that cause natural disasters, and influencing fundamental aspects of life-supporting systems and many other geological processes affecting Planet Earth. As such, it is essential to understand the synergy between the classical geosciences and mathematics, which can provide the methodological tools needed to tackle complex problems in modern geosciences. The development of science and technology, transforming from a descriptive stage to a more quantitative stage, involves qualitative interpretations such as conceptual models that are complemented by quantification, e.g. numerical models, fast dynamic geologic models, deterministic and stochastic models. Due to the increasing complexity of the problems faced by today's geoscientists, joint efforts to establish new conceptual and numerical models and develop new paradigms are called for.

National Flood Insurance: Management and Accountability in the Wake of Superstorm Sandy

Authors: Brenda Murphy (Editor)

Year: 2016

Publisher: Nova Science Pub Inc

ISBN: 1634843797

Content: -

Estimating Fatality Rates for Earthquake Loss Models

Authors: Emily So (Author)

Year: 2016

Publisher: Springer **ISBN:** 3319268376

Content: This manuscript sets out a process for estimating fatalities in collapsed buildings due to ground shaking in an earthquake. The aim of this research is to supplement current earthquake loss estimation with fatality rates (percentage of occupants killed) for use in models which are based on recent empirical information on deaths from earthquakes. This document specifically explores the lethality potential to occupants of collapsed structures. Whilst earthquake casualty modeling has admittedly suffered from a lack of post-earthquake collection of data and rigour in assessing these data, recent earthquakes such as 2008 Wenchuan (China) and 2011 Christchurch (New Zealand) have brought to light some important findings. Under the auspices of US Geological Survey's PAGER, empirical fatality data related to collapses of buildings from significant earthquakes in the past 40 years have been thoroughly examined. Through detailed investigations of fatal building collapses and the volume reductions within these buildings, important clues related to the lethality potential of different failure mechanisms of global modern and older construction types were found. The gathered evidence forms the basis of the derivation of a set of fatality rates for use in loss models. The set of judgment-based rates are for 31 global building types. This significant advancement in casualty modeling, the resolutions and quality of available data, the important assumptions made, and the final derivation of fatality rates are discussed here. This document contributes to global efforts to develop a way of estimating probable earthquake fatalities very rapidly after an earthquake has taken place. The fatality rates proposed here can be incorporated directly into earthquake loss estimation models where fatalities are derived from collapses of different types of buildings.

Resilience by Design

Authors: Alexandra Jayeun Lee (Author)

Year: 2016

Publisher: Springer **ISBN:** 3319306391

Content: This book discusses that disasters, whether natural or man-made, are essentially a human phenomenon. When a city becomes gridlocked and its resources depleted, the collective resilience of those who remain on the ground becomes critical to its immediate survival and recovery. The author argues that in order to build resilient futures for our urban environment, we need more than the skills of architects, engineers, and planners. Support of local communities and policymakers is also needed. The book revisits the recent catastrophic events: the earthquakes in Port-au-Prince and Christchurch, and the hurricane in New

Orleans, and places emphasis on the social, cultural, and political processes of rebuilding houses, facilities, and infrastructure that often go unnoticed. Understanding the wider context for how a built project comes to be, the author argues, is a solid indicator of its longevity than by the measure of its material characteristics alone, and gives us reasons to question the validity of our intentions as designers of the future. This book provides strategies for thinking about, assessing, and developing ways for place-makers from all disciplines to become responsible citizen designers of our cities.

Disaster Resilience After Hurricane Sandy: Enhancement Efforts, Use of Funds, and National Mitigation Framework

Authors: Johnathan Carr (Editor)

Year: 2016

Publisher: Nova Science Pub Inc

ISBN: 1634846451

Content: -

Implementing Climate Change Adaptation in Cities and Communities: Integrating Strategies and Educational Approaches

Authors: Walter Leal Filho (Editor), Kathryn Adamson (Editor), Rachel Dunk (Editor), Ulisses M. Azeiteiro (Editor), Sam Illingworth (Editor), Fatima Alves

(Editor) Year: 2016

Publisher: Springer **ISBN:** 3319285890

Content: This book analyzes how climate change adaptation can be implemented at the community, regional and national level. Featuring a variety of case studies, it illustrates strategies, initiatives and projects currently being implemented across the world. In addition to the challenges faced by communities, cities and regions seeking to cope with climate change phenomena like floods, droughts and other extreme events, the respective chapters cover topics such as the adaptive capacities of water management organizations, biodiversity conservation, and indigenous and climate change adaptation strategies. The book will appeal to a broad readership, from scholars to policymakers, interested in developing strategies for effectively addressing the impacts of climate change.

Extreme Weather, Health, and Communities: Interdisciplinary Engagement Strategies

Authors: Sheila Lakshmi Steinberg (Editor), William Sprigg (Editor)

Year: 2016

Publisher: Springer **ISBN:** 3319306243

Content: This volume presents a unique interdisciplinary approach, drawing on expertise in both the natural and social sciences. A primary goal is to present a scientific and socially integrated perspective on place-based community engagement, extreme weather, and health. Each year extreme weather is leading to natural disasters around the world and exerting huge social and health costs. The International Monetary Fund (2012) estimates that since 2010, 700 worldwide natural disasters have affected more than 450 million people around the globe. The best coping strategy for extreme weather and environmental change is a strong offense. Communities armed with a spatial understanding of their resources, risks, strengths, weaknesses, community capabilities, and social networks will have the best chance of reducing losses and achieving a better outcome when extreme weather and disaster strikes.

Disaster Resilience of Education Systems: Experiences from Japan

Authors: Koichi Shiwaku (Editor), Aiko Sakurai (Editor), Rajib Shaw (Editor)

Year: 2016

Publisher: Springer

ISBN: 4431559809Content: Education is regarded as a cross-cutting issue for disaster risk reduction (DRR) through reviewing the Sendai Framework for DRR (SFDRR) 2015-2030. Mainstreaming Disaster Risk Reduction (DRR) in the education sector is one of the important efforts to enhance resilience in a community. DRR in the education sector not only focuses on provision of disaster education, but also includes securing a safe school environment, developing school disaster management plans, and building the capacity of schoolteachers and local educational officers. Japan, with its wealth of experience in DRR, has developed a good resilient system in its education sector, which has been tested and revised through experiences of past disasters. This book reviews the evolution of DRR in the education sector in Japan, including some of the recent developments after the 2011 Great East Japan Earthquake, focusing on DRR governance and practices in national policies, curriculum development and teacher training, community linkage, and international cooperation, to enhance resilience in the education sector. The primary target groups for this book are students and researchers in the fields of disaster management and DRR studies. Another target group comprises practitioners and policy makers, who will be able to apply the collective knowledge from this work to policy and decision making. The book provides an overview of the current research trends and furnishes basic knowledge on this important topic.

The Handbook of Disaster and Emergency Policies and Institutions

Authors: John Handmer (Author), Stephen Dovers (Author)

Year: 2016

Publisher: Routledge **ISBN:** 113897188X

Content: Disasters both natural and human-induced are leading to spiralling costs in terms of human lives, lost livelihoods and damaged assets and

businesses. Yet these consequences and the financial and human crises that follow catastrophes can often be traced to policies unsuited to the emerging scales of the problems they confront, and the lack of institutional capacity to implement planning and prevention or to manage disasters. This book seeks to overcome this mismatch and to guide development of a policy and institutional framework. For the first time it brings together into a coherent framework the insights of public policy, institutional design and emergency and disaster management.

Managing Extreme Climate Change Risks through Insurance

Authors: W. J. Wouter Botzen (Editor)

Year: 2016

Publisher: Cambridge University Press

ISBN: 1316600882

Content: In recent years, the damage caused by natural disasters has increased worldwide; this trend will only continue with the impact of climate change. Despite this, the role for the most common mechanism for managing risk - insurance - has received little attention. This book considers the contribution that insurance arrangements can make to society's management of the risks of natural hazards in a changing climate. It also looks at the potential impacts of climate change on the insurance sector, and insurers' responses to climate change. The author combines theory with evidence from the rich experiences of the Netherlands together with examples from around the world. He recognises the role of the individual in preparing for disasters, as well as the difficulties individuals have in understanding and dealing with infrequent risks. Written in plain language, this book will appeal to researchers and policy-makers alike

Already listed new books in previous newsletters with publication date between 2014 and 2015:

Designing Water Disaster Management Policies

Authors: Chennat Gopalakrishnan (Editor)

Year: 2015

Publisher: Routledge **ISBN:** 978-1-13-893079-7

Global Volcanic Hazards and Risk

Authors: Susan Loughlin et al. (Editors)

Year: 2015

Publisher: Cambridge University Press

ISBN: 1107111757

Hydrometeorological Disasters and Climate Change

Authors: Amarnath Giriraj et al. (Editors)

Year: 2015

Publisher: CRC Press ISBN: 0415621321

Uncertainty and Catastrophe Management: The 2011 Great East Japan

Earthquake and Beyond

Authors: Akira Ishikawa (Author, Editor), Atsushi Tsujimoto (Editor)

Year: 2015

Publisher: World Scientific Publishing Co

ISBN: 9814644951

Strategic Disaster Risk Management in Asia

Authors: Huong Ha et al. (Editors)

Year: 2015

Publisher: Springer ISBN: 8132223721

Disaster Vulnerability, Hazards and Resilience: Perspectives from Florida

Authors: Fernando I. Rivera (Author), Naim Kapucu (Author)

Year: 2015

Publisher: Springer ISBN: 331916452X

Rethinking Disaster Recovery: A Hurricane Katrina Retrospective

Authors: Jeannie Haubert et al. (Editors)

Year: 2015

Publisher: Lexington Books

ISBN: 1498501206

Natural Disaster Management in the Asia-Pacific: Policy and Governance

Authors: Caroline Brassard et al. (Editors)

Year: 2015

Publisher: Springer ISBN: 4431551565

National Economic Impact Analysis of Terrorist Attacks and Natural Disasters

Authors: Harry W. Richardson et al. (Editors)

Year: 2015

Publisher: Edward Elgar Pub

ISBN: 1783475854

Tohoku Recovery: Challenges, Potentials and Future Authors: Rajib Shaw (Editor)

Year: 2015

Publisher: Springer **ISBN:** 4431551352

Risk Governance: The Articulation of Hazard, Politics and Ecology Authors: Urbano Fra.Paleo (Editor)

Year: 2015

Publisher: Springer **ISBN**: 9789401793278

8. Selected Article References¹

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- Yu, J., Cruz, A. M., Piatyszek, E., Lesbats, M., Tardy, A., Hokugo, A., & Tatano, H. (2017). A survey of impact on industrial parks caused by the 2011 Great East Japan earthquake and tsunami. *Journal of Loss Prevention in the Process Industries*.
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- Samaddar, S., Okada, N., Choi, J., & Tatano, H. (2017). What constitutes successful participatory disaster risk management? Insights from post-earthquake reconstruction work in rural Gujarat, India. *Natural Hazards*, *85*(1), 111-138.
- Sadeghi, Mehdi, Mohsen Ghafory-Ashtiany, and Naghmeh Pakdel-Lahiji. "Multi-objective optimization approach to define risk layer for seismic mitigation." *Geomatics, Natural Hazards and Risk* (2016): 1-14.

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¹ To spread the information of published articles in the last year from IDRiM members to other IDRiM members we now include selected and recent (not older than 1-2 years) publications of IDRiM members (see previous IDRiM News section for more details).

- Singh, R. P., & Nachtnebel, H. P. (2016). Decision aid for hydropower project prioritisation in Nepal by applying Visual PROMETHEE. *International Journal of Multicriteria Decision Making*, *6*(4), 316-342.
- Chen, Z., Rose, A. Z., Prager, F., & Chatterjee, S. (2017). Economic consequences of aviation system disruptions: A reduced-form computable general equilibrium analysis. *Transportation Research Part A: Policy and Practice*, *95*, 207-226.
- Liu, J., Zhang, Q., Singh, V. P., & Shi, P. (2017). Contribution of multiple climatic variables and human activities to streamflow changes across China. *Journal of Hydrology*, *545*, 145-162.
- Mavhura, E., Collins, A., & Bongo, P. P. (2017). Flood vulnerability and relocation readiness in Zimbabwe. *Disaster Prevention and Management: An International Journal*, *26*(1).
- Sun, Y., Nakai, F., Yamori, K., & Hatayama, M. (2017). Tsunami evacuation behavior of coastal residents in Kochi Prefecture during the 2014 Iyonada Earthquake. *Natural Hazards*, *85*(1), 283-299.
- Krausmann, E. (2016). Natural hazard triggered technological (Natech) accidents--an overlooked type of risk?. *Loss Prevention Bulletin*, (250).
- Kotani, H., & Yokomatsu, M. (2016). Natural disasters and dynamics of "a paradise built in hell": a social network approach. *Natural Hazards*, *84*(1), 309-333.
- Ye, T., Wang, Y., Wu, B., Shi, P., Wang, M., & Hu, X. (2016). Government Investment in Disaster Risk Reduction Based on a Probabilistic Risk Model: A Case Study of Typhoon Disasters in Shenzhen, China. *International Journal of Disaster Risk Science*, 7(2), 123-137.
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- Alexander, D. E. (2016). The game changes: "Disaster Prevention and Management" after a quarter of a century. *Disaster Prevention and Management*, 25(1), 2-10.

8. Miscellaneous

New Graduate Degree Program:

We are pleased to announce a new blended Master of Science (MSc) Disaster Management: Resilience, Response and Relief course at the Humanitarian and Conflict Response Institute (HCRI) at The University of Manchester. Offered jointly with The Hong Kong Polytechnic University, this programme is designed for participants who intend to develop theoretical and practical knowledge and skills in the disaster risk management and humanitarian contexts. Graduates will be equipped to work and become leaders in the fields of disaster management, humanitarianism, and other related fields. This programme will further enhance students' personal and professional development and provide important collaborative links globally. The application deadline for the fall semester is 29 April 2016. For more information please visit HCRI's website (http://www.hcri.manchester.ac.uk/study-with-us/postgraduate-taught/).

Other Newsletters:

- **IISD Reporting Services:** Free newsletters and lists for environment and sustainable development issues.

Website: http://www.iisd.ca/email/subscribe.htm

- The International Emergency Management Society Newsletter (TIEMS)

Website: http://www.tiems.info/

Natural Hazards Group Newsletters:

Website: http://www.agu.org/focus group/NH/about/newsletters/

- Disaster Research: DISASTER RESEARCH (DR) is a moderated newsletter for

creators and users of information about hazards and disasters.

Website: http://www.colorado.edu/hazards/dr/currentdr.html

- Emergency Manager's Weekly Report:

Website:

http://www.6pinternational.com/news.php?category=Emergency%20Managers%20Weekly%20Report&

- **KatNet-Newsletter:** (mostly in German language)

Website: http://www.katastrophennetz.de/

- EM-DAT: International Disaster Database Newsletter (CRED)

Website: http://www.emdat.be/publications

DSCRN: Disaster and Social Crisis Research Network Newsletter

Website: http://www.dscrn.org/cms/index.php?page=newsletter

 International Institute for Sustainable Development Newsletter: IISD Reporting Services.

Website: Climate Change: http://climate-l.iisd.org/about-the-climate-l-mailing-list/

General Information: http://www.iisd.ca/

Society of Risk Analysis Newsletter:

Website: http://www.sra.org/newsletter.php

- ULC Institute for Risk and Disaster Reduction Newsletter:

Website: http://www.ucl.ac.uk/rdr/irdr/newsletter/

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