1. IDRIM NEWS

Message from the Editorial Team

The IDRiM Society wants to express empathy for those effected and suffering from the consequences of the global COVID-19 pandemic. We, as a Society, are committed to learning from the current events, promoting integrated disaster risk research, building on our networks and our members’ expertise. Together we may understand the failures, challenges, and identify best-practices that may help us be better prepared for future events. We are committed to identifying opportunities for enhancing sector knowledge and supporting the translation of these into practical solutions.

We wish everyone the best for the coming months. We hope you may stay safe and take care of yourself, your loved ones, and those around you.

Editorial Team
IDRiM Newsletter
IDRiM Virtual Workshop

On behalf of the IDRiM Board of Directors, the IDRiM Organizing Committee and the Local Host Committee, I would like thank you for your participation in the IDRiM Virtual Workshop!

A special thanks to our keynote speakers, Prof. Orwin Renn and Prof. Adam Rose, as well as all session chairs for taking time out of your busy schedule to join this event. Thanks also to all presenters, and participants. It is because of your active participation, excellent presentations and lively discussions that we can say that this IDRiM Virtual Workshop was a complete success. The high number of participants, the diversity of countries and regions, and multi-disciplinary topics highly exceeded our expectations. I learned a lot, and feel energized and motivated to continue working hard for IDRiM and in my own research.

I must say that although we lacked the opportunity to meet face to face, the online event did provide an informal setting which in many ways, at least for me, allowed me to feel at home and to have a personal connection with many of you.

As with all events, I am sure there are things we could have done differently, and that we can improve. We learned a lot from hosting the event and hope that if we hold future online events, we can do better. For example, I think it would be great to add the possibility of one to one or small group interactions. If you have comments or suggestions please do send them to us. They will be very helpful.

Thank you all and keep safe.

Best regards,
Ana Maria Cruz
President
IDRiM Society
Dear members of the IDRiM Society

We are making a call to all members of the Society interested in contributing to the Society more actively by engaging in one or more of our committees.

The following is a list of IDRiM committees and the current members. If you think you are interested in contributing to one of these committees, or have ideas for new activities/committees, please email us. Tell us which committee you are interested in contributing to, and why you would like to contribute, or tell us about any other ideas you have. We welcome your ideas!

We look forward to hearing from you.

Best regards,
Ana Maria Cruz, PhD
President
IDRiM Society
List of Committees and members

Committees

(1) **Review Charter and Bylaws:** Andrew Collins (Chair), andrew.collins@northumbria.ac.uk; Bijay Misra, Hiro Tatano, Mohsen Ashtiany, Peijun Shi, Charles Scawthorn, Norio Okada.

(2) **Web Site IDRiM Society:** Michinori Hatayama (Chair), hatayama@imdr.dpri.kyoto-u.ac.jp; Mohsen Ashtiany and Ayuna Matthews

(3) **Newsletter:** Stefan Hochrainer (Chair), hochrain@iiasa.ac.at Munetta Yokomatsu, Subho Samaddar, Ana Maria Cruz, Matthias Dorfstaetter

(4) **Advisory Committee (Associated Organization/Public Relations):** Norio Okada (Chair), kyotookanori@gmail.com; Joanne Bayer, Peijun Shi, Mohsen Ashtiany, Hiro Tatano, Katsuya Yamori, Manas Chatterji, Aniello Amendola,* Munetta Yokomatsu*, Subho Samaddar*, Elisabeth Krausmann*

(5) **Journal & Publications:** Ana Maria Cruz (Chair), anamaria@drs.dpri.kyoto-u.ac.jp Elisabeth Krausmann, Yoshio Kajitani, Liu Tiezhong, Subho Samaddar

(6) **Membership:** Bijayanand Misra (Chair), bijayanand.misra@gmail.com Adam Rose, Hirokazu Tatano, Peijun Shi, Norio Okada, Mohsen Ashtiany
(7) Events Organizing: Hirokazu Tatano (Chair), tatano@imdr.dpri.kyoto-u.ac.jp
Andrew Collins, Adam Rose, Joanne Bayer, Ana Maria Cruz, Norio Okada, Ye Tao, Bijay Misra

(8) Finance: Hirokazu Tatano (Chair), tatano@imdr.dpri.kyoto-u.ac.jp
Muneta Yokomatsu, Qian Ye, Ana Maria Cruz*

(9) Awards: Adam Rose (Chair), adam.rose@usc.edu
Hiro Tatano, Mohsen Ashtiany, Dan Wei*

(10) Young Scientists’ Session: Muneta Yokomatsu (Chair), yokomatsu.muneta.7v@kyoto-u.ac.jp
Stefan Hochrainer-Stigler, Wei Xu, Junko Mochizuki, Yoko Matsuda, Ana Maria Cruz

(11) Social Media Committee: Matt Dorfstaetter (Chair), matthias.dorfstaetter@hotmail.com
Amir Lolo, Iman Ahmadi, Dimitrios Tzioutzios
The Editors of the IDRiM Book Series invite submissions. Please send a one-page prospectus to Professors Norio Okada (kyotookanori@gmail.com) or Adam Rose (adam.rose@usc.edu)

Till now 4 books have been published in this Series:

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<thead>
<tr>
<th>Title</th>
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<tr>
<td>Defining and Measuring Economic Resilience from a Societal, Environmental and Security Perspective</td>
<td>Rose, Adam</td>
<td>2017</td>
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<tr>
<td>Economic Consequence Analysis of Disasters</td>
<td>Rose, A. (et al.)</td>
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<td>Disaster Risk Communication A Challenge from a Social Psychological Perspective</td>
<td>Yamori, Katsuya (Ed.)</td>
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<td>Extreme and Systemic Risk Analysis</td>
<td>Hochrainer-Stigler, Stefan</td>
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More information about the Series can be found at: https://www.springer.com/series/13465
2. Other NEWS

CRED Natural Disasters 2019 Report Published

From the press release:

“In 2019, 396 natural disasters were recorded in EM-DAT with 11,755 deaths, 95 million people affected and 103 billion US$1 in economic losses across the world. The burden was not shared equally as Asia suffered the highest impact and accounted for 40% of disaster events, 45% of deaths and 74% of the total affected. India was hit hardest and recorded nearly 20% of the total deaths and 24.5% of the total number of people affected. Floods were the deadliest type of disaster accounting for 43.5% of deaths, followed by extreme temperatures at 25% (mainly due to heat waves in Europe) and storms at 21.5%. Storms affected the highest number of people, accounting for 35% of the total affected, followed by floods with 33% and droughts with 31%.

In comparison to the previous decade (2009-2018), in 2019 there were more disasters compared to the annual average of 343 events, fewer deaths compared to the annual average of 45,212, fewer number of people affected compared to the annual average of 184.7 million people, and lower economic losses compared to the annual average of $176 billion. This decrease in impact is due to the absence of massive disaster events such as the 2010 earthquake in Haiti (222,500 deaths); the 2015/2016 drought in India (330 million people affected); and the 2011 Japan earthquake and tsunami ($210 billion in damages).
The deadliest events recorded in 2019 were the summer heat waves that affected Europe, more specifically France, Belgium and the Netherlands, with over 2500 deaths. The National Oceanic and Atmospheric Administration (NOAA) ranked 2019 as the second warmest year on record.

Temperature records were also shattered on individual country levels: for the first time, Belgium and the Netherlands recorded temperatures over 40°C. In general, the impact of heat waves remains grossly underestimated. This is primarily due to underreporting in developing countries, where temperatures often exceed European values by a large margin and local populations have limited possibilities to protect themselves from heat wave exposure.

The following most deadly event consisted of the flood in India due to the high monsoon rains, which lasted from July to October and affected 13 states (mainly in the North) and caused nearly 2000 dead. Two storms were the next deadliest: cyclone Idai affected central Mozambique and Zimbabwe (March) with over 1200 deaths /missing; and storm Dorian affected the United States and the Bahamas in September with at least 358 deaths /missing. We recorded more than twice as many floods (194) as storms (91) this year, both types affecting nearly 64 million people worldwide. The African continent was particularly affected by storms in 2019: 11 recorded events accounted for a total of 1300 deaths and affected over 4.5 million people. One month after cyclone Idai, Mozambique was hit by another cyclone in the north, Kenneth, which is considered to be the strongest cyclone to ever hit the African continent.

Fortunately, cyclone Kenneth’s official death toll was much lower than Idai’s, with only 45 fatalities reported. Nevertheless, the cyclone left nearly 400,000 people in need of humanitarian assistance in a country still struggling from the previous disaster.
The deadliest geophysical event was the earthquake that hit Albania in November, and which killed 51 people. There was only one volcanic eruption with a deadly impact in 2019, namely the White Island eruption in New Zealand in December. This event was broadly covered by the media. The year was also marked by large wildfires around the world which caught the public’s attention. The total damage and economic cost should reach 30 billion US$ in 2019. This estimate is likely to change in the future once there is more precise insight on the exact impact. At least 14 wildfires started in 2019, of which the most important were:

• California/USA (Kincade, Saddleridge and Sandalwood fires, October) with low human impact reported but with total damages estimated at 1.3 billion US$.

• Multi country event in South America/Amazonia for which it is quite difficult to have realistic figures on the human impact and the causal factors (both human and natural).

• Australia (September 2019 to February 2020): these long lasting wildfires led to 32 deaths, burned over 6 million hectares of forest and bush, killed almost 500 million animals, destroyed thousands of homes and forced hundreds of thousands of people to evacuate.

Overall, the most notable features of the year included: large, severe and long-lasting wildfires which captured international attention and had dramatic impacts on the environment, even if the human impact was less severe than in previous years, and multiple heat waves during summer time with record temperatures in several European countries.”

**Website:** https://reliefweb.int/report/world/natural-disasters-2019
2019 Global Natural Disaster Assessment Report Published

From the press release:
Source: https://www.preventionweb.net/publications/view/73363

“This report systematically assessed the global natural disasters occurred in 2019 and over the last 30 years, and analyzed the ranking of China in Asia and worldwide, using Global Disaster Database (EM-DAT), China's disaster data, and data collected from the insurance industry.

The main conclusions had been drawn as follows (pp. 3-4):

1. In general, global natural disasters in 2019 were less severe;
2. The majority of global disasters in 2019 were caused by floods with smaller losses than the average for recent years;
3. 2019 witnessed only a few earthquakes, which was rare in recent years;
4. The impact of bush fires was substantial;
5. Developing countries account for a large share of the losses, with the United States and Japan showing significant losses;
6. China's natural disasters losses were light overall but still ranked high in the world."

Website: https://www.preventionweb.net/publications/view/73363
“Every year millions of people worldwide suffer from disasters in the aftermath of extreme natural events. But whether it be earthquakes, cyclones or floods, the risk of a natural event turning into a disaster only partly depends on the force of the natural event itself. The framework conditions of a society and the structures in place to respond quickly and to provide assistance in the event of emergency are just as significant. The more fragile the infrastructure network, the greater the extent of extreme poverty and inequality and the worse the access to the public health system, the more susceptible a society is to natural events. Extreme natural events cannot be prevented directly, but countries can reduce disaster risk by fighting poverty and hunger, strengthening education and health, and taking preparedness measures. Those who build earthquake-proof buildings, install and use early warning systems and invest in climate and environmental protection, are better prepared against extreme natural events.

The annual editions focus on a main topic and include the WorldRiskIndex. Since 2018 the report is published in cooperation with the Institute for International Law of Peace and Armed Conflict (IFHV) of the Ruhr-University Bochum. The WorldRiskReport should contribute to look at the links between natural events, climate change, development and preparedness at a global level and to draw future-oriented conclusions regarding relief measures, policies and reporting.”

“The WorldRiskIndex states the risk of disaster in consequence of extreme natural events for 180 of the world’s countries. It is calculated on a country-by-country basis through the multiplication of exposure and vulnerability. Exposure covers threats of the population and other certain protected entities due to earthquakes, cyclones, floods, droughts
and sea-level rise. Vulnerability encompasses the societal sphere and is comprised of three components, which are weighted equally in the calculation:

- Susceptibility describes the structural characteristics and framework conditions of a society and indicates the likelihood of suffering from harm in an extreme natural event.
- Coping comprises various abilities of societies to be able to minimize negative impacts of natural hazards and climate change through direct action and the resources available.
- Adaptation includes measures and strategies dealing with and attempting to address the negative impacts of natural hazards and climate change in the future. Adaptation, unlike coping, is understood as a long-term process that also includes structural changes.

The concept of the WorldRiskIndex, including its modular structure, was developed together with the United Nations University’s Institute for Environment and Human Security (UNU-EHS). In 2017 and 2018, the WorldRiskIndex was revised on the basis of new findings. Changes have been made at the level of the indicators. A total of 27 indicators, which are available in publicly accessible data sets, feed into the Index. Since 2018, the Index is calculated by the Institute for International Law of Peace and Armed Conflict (IFHV) of Ruhr-University Bochum. Among other things, the WorldRiskIndex serves as a guidance for decision makers and identifies fields of action for disaster risk reduction.”

**Website:** [http://weltrisikobericht.de/english/](http://weltrisikobericht.de/english/)
3. Conference Announcements

Due to the COVID-19 pandemic situation we refrain to list any upcoming conferences and refer to the related internet links given below for updated information.
4. Internet Resource List

- Global Alliance of Disaster Research Institutes
  http://www.gadri.net/

- 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

- 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.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/disasterManagementResources.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 Communities and Reduce Disaster Risk
  http://www.proventionconsortium.net/?pageid=29
5. Disaster Related Journals

- Journal of Integrated Disaster Risk Management, IDRIM Journal
  http://idrimjournal.com/index.php/idrim

- Economics of Disasters and Climate Change
  http://www.springer.com/economics/environmental/journal/41885

- Journal of Extreme Events
  http://www.worldscientific.com/worldscinet/joee

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

- Climate Risk Management
  http://ees.elsevier.com/clrm/

- Journal of Geography & Natural Disasters
  http://www.omicsgroup.org/journals/jgndhome.php

- Disaster Health
  http://www.landesbioscience.com/journals/disasterhealth/

- International Journal of Disaster Risk Reduction (IJDRR)
  http://www.elsevier.com/wps/find/journaldescription.cws_home/727506/descriptio n#description

- Journal of Contingencies and Crisis Management
  http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%29291468-5973

- Australasian Journal of Disaster and Trauma Studies
  http://www.massey.ac.nz/~trauma/welcome.shtml

- Jàmbá: Journal of Disaster Risk Studies

- 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/descriptio n#description
- Global Environmental Change http://www.elsevier.com/wps/find/journaldescription.cws_home/30425/description#description
- Regional Environmental Change http://www.springer.com/environment/global+change+-+climate+change/journal/10113
- Natural Hazards Review http://ascelibrary.org/nho/
- 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 https://www.jsnds.org/jnds/
- 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+climatology/journal/11027

- 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)

- 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)
6. New Books

**Extreme and Systemic Risk Analysis**

**Authors:** Hochrainer-Stigler, Stefan  
**Year:** 2020  
**Publisher:** Springer  
**ISBN:** 978-981-15-2688-6  
**Content:** This book is about how extreme and systemic risk can be analyzed in an integrated way. Risk analysis is understood to include measurement, assessment as well as management aspects. Integration is understood as being able to perform risk analysis for extreme and systemic events simultaneously. The presented approach is based on Sklar's theorem, which states that a multivariate distribution can be separated into two parts – one describing the marginal distributions and the other describing the dependency between the distributions using a so-called copula. It is suggested to reinterpret Sklar's theorem from a system or network perspective, treating copulas as a network property and individual, including extreme, risk as elements within the network. In that way, extreme and systemic risk can be analyzed independently as well as jointly across several scales. The book is intended for a large audience, and all techniques presented are guided with examples and applications with a special focus on natural disaster events. Furthermore, an extensive literature and discussion of it are given in each chapter for the interested reader.

**Disaster Risk Reduction and Resilience**

**Authors:** Muneta Yokomatsu, Stefan Hochrainer-Stigler  
**Year:** 2020  
**Publisher:** Springer  
**ISBN:** 978-981-15-4319-7  
**Content:** This book provides insight on how disaster risk management can increase the resilience of society to various natural hazards. The multidimensionality of resilience and the various different perspectives in regards to disaster risk reduction are taken explicitly into account by providing studies and approaches on different scales and ranging from natural science based methods to social science frameworks. For all chapters, special emphasis is placed on implementation aspects and specifically in regards to the targets and priorities for action laid out in the Sendai Framework for Disaster Risk Reduction. The chapters provide also a starting point for interested readers on specific issues of resilience and therefore include extensive reference material and important future directions for research.
Disaster Studies
Authors: Janki Andharia
Year: 2020
Publisher: Springer
ISBN: 978-981-329-338-0
Content: This book covers several dimensions of disaster studies as an emerging discipline. It is the inaugural book in the series ‘Disaster Studies and Management’ and deals with questions such as “Is disaster management a field of practice, a profession, or simply a new area of study?” Exploring intersectionalities, the book also examines areas of research that could help enhance the discourse on disaster management from policy and practice perspectives, revisiting conventional event-centric approaches, which are the basis for most writings on the subject. Several case studies and comparative analyses reflect a critical reading of research and practice concerning disasters and their management. The book offers valuable insights into various subjects including the challenge of establishing inter- and multi-disciplinary teams within the academia involved in disaster studies, and sociological and anthropological readings of post-disaster memoryscapes. Each of the contributors has an enduring interest in disaster studies, thus enriching the book immensely. This book will be of interest to all the students and scholars of disaster studies and disaster management, as well as to practitioners and policymakers.

Disaster Risk Communication
Authors: Katsuya Yamori
Year: 2020
Publisher: Springer
Content: This book provides a unique blend of integrated disaster risk communication research conducted by authors with diverse backgrounds, including social psychology, sociology, civil engineering, informatics, and meteorology. It reports on the latest advances in collaborative and participatory action research on community-based disaster management from the frontline in Japan, Nepal, China and the USA. In addition, it employs and integrate a broad range of methodologies, including mathematical analyses, computer simulations, questionnaire surveys, gaming approaches, and participatory observation. Each chapter deals with disaster risk communication initiatives to address various hazards, such as earthquakes, tsunamis, floods and landslides, which are uniquely integrated from a social psychological perspective.
Resistance, Resilience, and Recovery from Disasters: Perspectives from Southeast Asia

Authors: Ma. Regina M. Hechanova (Editor), Lynn C. Waelde (Editor)
Year: 2020
Publisher: Emerald Publishing Limited
ISBN: 978-1839097911
Content: The book fills a void by bringing together literature in an under-represented but disaster-prone region - Southeast Asia. It discusses the cultural considerations of those providing mental health and psychosocial support in the region. It highlights the role of education in reducing disaster vulnerability. It presents ways in which workplace organization have sought to enhance employee and organizational resilience in the face of disasters. It discusses how the disaster planning process, including prevention, mitigation, and preparedness efforts, can be integrated with mental health efforts. It features how mental health interventions including psychological first aid, resilience interventions, mindfulness, and art therapy have been carried out. It also discusses the issues of those caring for survivors and describes MHPSS interventions for disaster responders themselves. The book also addresses post-traumatic growth as an outcomes of disaster exposure, concluding by summarizing the challenges and prospects for promoting resistance, resilience, and recovery in SEA.

Natural Disasters and Climate Change: Innovative Solutions in Financial Risk Management

Authors: Juan José Durante (Editor), Rafael Rosillo (Editor)
Year: 2020
Publisher: Springer
ISBN: 978-3030437060
Content: This book presents a technical approach to promoting the development of disaster and climate change risk financing and transfer strategies, and discusses several practical issues, chiefly focusing on Latin America and the Caribbean. Innovative risk financing and insurance mechanisms are vital for governments around the world, in order to provide financial protection and reduce the economic costs and social and developmental impacts of natural disasters and climate change. The book's main content is complemented by a wealth of graphics, diagrams and tables that illustrate the concepts discussed and make the text accessible for practitioners and non-practitioners alike. The book offers proven, creative and innovative ideas on how to tackle risk financing and management for natural disasters and climate change. Strategic topics such as sovereign disaster risk financing, property catastrophe risk insurance, and agricultural insurance are also discussed.
Nature-based Solutions for Resilient Ecosystems and Societies
Authors: Shalini Dhyani (Editor), Anil Kumar Gupta (Editor), Madhav Karki (Editor)
Year: 2020
Publisher: Springer
ISBN: 978-9811547119
Content: Over the past few decades, the frequency and severity of natural and human-induced disasters have increased across Asia. These disasters lead to substantial loss of life, livelihoods and community assets, which not only threatens the pace of socio-economic development, but also undo hard-earned gains. Extreme events and disasters such as floods, droughts, heat, fire, cyclones and tidal surges are known to be exacerbated by environmental changes including climate change, land-use changes and natural resource degradation. Increasing climate variability and multi-dimensional vulnerabilities have severely affected the social, ecological and economic capacities of the people in the region who are, economically speaking, those with the least capacity to adapt. Climatic and other environmental hazards and anthropogenic risks, coupled with weak and wavering capacities, severely impact the ecosystems and Nature’s Contributions to People (NCP) and, thereby, to human well-being. Long-term resilience building through disaster risk reduction and integrated adaptive climate planning, therefore, has become a key priority for scientists and policymakers alike. Nature-based Solutions (NbS) is a cost-effective approach that utilizes ecosystem and biodiversity services for disaster risk reduction and climate change adaptation, while also providing a range of co-benefits like sustainable livelihoods and food, water and energy security. This book discusses the concept of Nature-based Solutions (NbS) – both as a science and as art – and elaborates on how it can be applied to develop healthy and resilient ecosystems locally, nationally, regionally and globally. The book covers illustrative methods and tools adopted for applying NbS in different countries. The authors discuss NbS applications and challenges, research trends and future insights that have wider regional and global relevance. The aspects covered include: landscape restoration, ecosystem-based adaptation, ecosystem-based disaster risk reduction, ecological restoration, ecosystem-based protected areas management, green infrastructure development, nature-friendly infrastructure development in various ecosystem types, agro-climatic zones and watersheds. The book offers insights into understanding the sustainable development goals (SDGs) at the grass roots level and can help indigenous and local communities harness ecosystem services to help achieve them. It offers a unique, essential resource for researchers, students, corporations, administrators and policymakers working in the fields of the environment, geography, development, policy planning, the natural sciences, life sciences, agriculture, health, climate change and disaster studies.
Supply Chain Resilience: Reducing Vulnerability to Economic Shocks, Financial Crises, and Natural Disasters

Authors: Venkatachalam Anbumozhi (Editor), Fukunari Kimura (Editor), Shandremugan Thangavelu (Editor)
Year: 2020
Publisher: Springer
ISBN: 978-9811528699
Content: This book investigates individual companies’ and industries’ supply chain risk management approaches to identify risk drivers and verify effective risk-reduction measures and business continuity plans. Typically, supply chain risk assessments focus on normative guidelines based on single best practice examples or vulnerability events, and there has been little work exploring how the concepts of supply chain risk management and resilience are related. However, since this relationship has implications for developing integrated response strategies, a clear understanding of the possible consequences is a fundamental step in building socio-economic resilience along the supply chain. Against this background, the book addresses three main topics: firstly, it defines the conceptual and sectoral domains of supply chain risk management and resilience by examining the welfare effects of extreme weather events and other economic shocks on selected global supply chains. It then presents an in-depth analysis of the scope of public–private partnerships to tackle the risks, by empirically exploring supply chain risk effects and information management. Thirdly, it proposes a regional cooperation framework in the context of major supply chain vulnerability events such as disasters and global financial crises.

Emergency Management: Concepts and Strategies for Effective Programs 2nd Edition

Authors: Dennis W. Tafoya
Year: 2020
Publisher: Palgrave Macmillan
ISBN: 978-3030370732
Content: This book explores how and why an event is a precursor to the emergence of a crisis and how a given crisis affects an organization and its stakeholders. Using existing systems theory blended with innovative use of wave, epidemiological, immunological and psycho-social theories, the author discusses ways to understand the effects of different types of crises while showing how to document and/or quantitatively measure those effects. The book offers new models illustrating how events trigger crises and how they subsequently morph into catastrophes and disasters. Using theories and tools tested in organizational settings to identify contributors to a traumatic event, this book makes a valuable contribution to organizational and crisis management literature.
Emergency Management: Concepts and Strategies for Effective Programs 2nd Edition

Authors: Nikolas Scherer
Year: 2020
Publisher: Routledge
ISBN: 978-0367342470

Content: This book provides one of the first systematic in-depth studies on regional catastrophe risk pools. It explores the various goals of these new financial instruments, illustrating how they function on a conceptual, technical and practical level, and reconstructs their political genesis. With climate-related disasters increasing in frequency and severity, Insuring Against Climate Change explores how affected countries, especially those in the Global South, have increasingly turned to innovative index insurance instruments, as demonstrated by the creation of the Caribbean Catastrophic Risk Insurance Facility (CCRIF), the African Risk Capacity (ARC) and the Pacific Catastrophe Risk Assessment and Financing Initiative Facility (PCRAFI Facility). Scherer scrutinizes the formation of this trend, exploring comparatively the goals, characteristics and histories of these tools, and argues that their attractiveness rests more on political than economic benefits and is, in fact, more supply than demand-driven. Making a significant contribution to current debates on the opportunities and limitations of what are sometimes described as indirect ‘climate risk insurance’, this book will be of great interest to political scientists with an interest in insurance instruments and climate-related disaster management politics as well as to practitioners working in the insurance, finance and the development sectors.

Disaster Risk Communication

Authors: Yamori, Katsuya (Ed.)
Year: 2020
Publisher: Springer

Content: This book provides a unique blend of integrated disaster risk communication research conducted by authors with diverse backgrounds, including social psychology, sociology, civil engineering, informatics, and meteorology. It reports on the latest advances in collaborative and participatory action research on community-based disaster management from the frontline in Japan, Nepal, China and the USA. In addition, it employs and integrate a broad range of methodologies, including mathematical analyses, computer simulations, questionnaire surveys, gaming approaches, and participatory observation. Each chapter deals with disaster risk communication initiatives to address various hazards, such as earthquakes, tsunamis, floods and landslides, which are uniquely integrated from a social psychological perspective.
An Interdisciplinary Approach for Disaster Resilience and Sustainability

**Authors:** Pal, I., von Meding, J., Shrestha, S., Ahmed, I., Gajendran, T. (Eds.)  
**Year:** 2020  
**Publisher:** Springer  
**ISBN:** 978-981-329-526-1  
**Content:** 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.

Advances in Spatial and Economic Modeling of Disaster Impacts,  
**Authors:** Yasuhide Okuyama and Adam Rose (Editors)  
**Year:** 2019  
**Publisher:** Springer  
**ISBN:** 978-3-030-16236-8  
**Content:** This book is divided into three parts. The first part addresses the conceptual and broader issues of disaster modeling, offering insights for better understanding of disaster characteristics, with the aim of improving the theoretical representations and interpretations of disasters in quantitative analysis. The second part presents a series of advances in the state-of-the-art modeling frameworks using Computable General Equilibrium (CGE), Input-Output (I-O), integrated, and other economic models. The third part illustrates the use of disaster modeling in the decision-making process for recovery and reconstruction after a disaster, as well as for strategies to reduce risk from future disasters. This chapter concludes with a discussion of priorities for future research, including distributional impacts, integration with financial models, and long-run sustainability after a disaster.
Disaster Upon Disaster: Exploring the Gap Between Knowledge, Policy and Practice

Authors: Susanna M. Hoffma and Roberto E. Barrios
Year: 2019
Publisher: Berghahn Books
ISBN: 978-1789206487

Content: A consistent problem that confronts disaster reduction is the disjunction between academic and expert knowledge and policies and practices of agencies mandated to deal with the concern. Although a great deal of knowledge has been acquired regarding many aspects of disasters, such as driving factors, risk construction, complexity of resettlement, and importance of peoples’ culture, very little has become protocol and procedure. Disaster Upon Disaster illuminates the numerous disjunctions between the suppositions, realities, agendas, and executions in the field, goes on to detail contingencies, predicaments, old and new plights, and finally advances solutions toward greatly improved outcomes.

Already listed new books in previous newsletters with publication date between 2015 and 2018:

Emergency Management: Concepts and Strategies for Effective Programs 2nd Edition
Authors: Lucien G. Canton
Year: 2018
Publisher: Wiley
ISBN: 1119066859

Resilient Structures and Infrastructure 1st ed. 2019 Edition
Authors: Noroozinejad Farsangi, Ehsan (Editor), Izuru Takewaki (Editor), Tony Y. Yang (Editor), Abolhassan Astaneh-Asl (Editor), Paolo Gardoni (Editor)
Year: 2018
Publisher: Springer
ISBN: 9811374457

Disaster Risk Science
Authors: Peijun Shi (Author)
Year: 2018
Publisher: Springer
ISBN: 9811366888
Palaeohydrology: Traces, Tracks and Trails of Extreme Events
Authors: Jürgen Herget (Editor), Alessandro Fontana (Editor)
Year: 2018
Publisher: Springer
ISBN: 3030233146

Livestock Survival And Management During Disasters
Authors: Mahadevappa D Gouri (Author), Y. B. Rajeshwari (Author), S. B. Prasanna (Author)
Year: 2018
Publisher: New India Publishing Agency -NIPA
ISBN: 9387973107

Reduction And Predictability Of Natural Disasters 1st Edition
Authors: John Rundle (Author), William Klein (Author), Don Turcotte (Author)
Year: 2018
Publisher: Routledge
ISBN: 0367320495

The UNHCR and Disaster Displacement in the 21st Century: An Organizational Analysis
Authors: Sinja Hantscher
Year: 2018
Publisher: Springer
ISBN: 3030196887

Hurricane Risk
Authors: Jennifer M. Collins (Editor), Kevin Walsh (Editor)
Year: 2018
Publisher: Amazon Digital Services LLC
ASIN: B07NV9H1YF

The Big Ones: How Natural Disasters Have Shaped Us (and What We Can Do About Them)
Authors: Lucy Jones
Year: 2018
Publisher: Doubleday
ISBN: 978-0385542708
Communicating Climate Change Information for Decision-Making
Authors: Serrao-Neumann, Silvia, Coudrain, Anne, Coulter, Liese (Eds.)
Year: 2018
Publisher: Springer International Publishing
ISBN: 978-3-319-74668-5

Disasters Without Borders: The International Politics of Natural Disasters
Authors: John Hannigan
Year: 2018
Publisher: Wiley
ISBN: 978-0-745-66311-1

The Asian Tsunami and Post-Disaster Aid
Authors: Sunita Reddy
Year: 2018
Publisher: Springer
ISBN: 978-9811301810

Disaster Risk Reduction: Community Resilience and Responses
Authors: Bupinder Zutshi, Akbaruddin Ahmad, Ananda Babu Srungarapati Year: 2018
Publisher: Palgrave Macmillan
ISBN: 978-9811088445

Implementing Climate Change Adaptation in Cities and Communities: Integrating Strategies and Educational Approaches
Authors: Walter Leal Filho, Kathryn Adamson, Rachel M Dunk
Year: 2018
Publisher: Springer
ISBN: 978-3319803821

Loss and Damage from Climate Change: Concepts, Methods and Policy Options
Authors: Mechler R. et al.
Year: 2018
Publisher: Springer
ISBN: 978-3319720258
Economic Consequence Analysis of Disasters: The E-CAT Software Tool
Authors: Rose, A., Prager, F., Chen, Z., Chatterjee, S., Wei, D., Heatwole, N., Warren, E.
Year: 2017
Publisher: Springer Singapore

Defining and Measuring Economic Resilience from a Societal, Environmental and Security Perspective
Authors: Rose, Adam
Year: 2017
Publisher: Springer Singapore
ISBN: 978-981-10-1532-8

Risk Modeling for Hazards and Disasters
Authors: Gero Michel (Editor)
Year: 2017
Publisher: Elsevier
ISBN: 0128040718

Natural Catastrophe Risk Management and Modelling: A Practitioner's Guide
Authors: Kirsten Mitchell-Wallace (Author), Matthew Jones (Author), John Hillier (Author), Matthew Foote (Author)
Year: 2017
Publisher: Wiley-Blackwell
ISBN: 1118906047

Natural Hazards: Earth's Processes as Hazards, Disasters, and Catastrophes
Authors: Edward A. Keller (Author), Duane E. DeVecchio (Author)
Year: 2017
Publisher: Routledge
ISBN: 1138090867

Authors: Elisabeth Krausmann, Ana Cruz, Ernesto Salzano
ISBN: 9780128038079
eBook ISBN: 9780128038796
Imprint: Elsevier
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

Climate Hazard Crises in Asian Societies and Environments
Authors: Troy Sternberg
Year: 2017
Publisher: Routledge
ISBN: 978-92-9257-475-8

Rebuilding Fukushima
Authors: Mitsuo Yamakawa (Editor), Daisaku Yamamoto (Editor)
Year: 2017
Publisher: Routledge
ISBN: 978-1138193796

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

Flood Risk Management and Response
Authors: D. Proverbs (Author, Editor), C. A. Brebbia (Editor)
Year: 2016
Publisher: WIT Press / Computational Mechanics
ISBN: 978-1784662417

Natural Disaster Risk Management: Geosciences and Social Responsibility
Authors: Ulrich Ranke (Author)
Year: 2016
Publisher: Springer
ISBN: 978-1784662417
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

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

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

Disasters: Learning the Lessons for a Safer World
Authors: David Eves
Year: 2016
Publisher: Routledge
ISBN: 1138144231

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

Urban Resilience: A Transformative Approach
Authors: Yoshiki Yamagata (Editor), Hiroshi Maruyama (Editor)
Year: 2016
Publisher: Springer
ISBN: 3319398105
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

Disaster Risk Reduction and the Global System: Ruminations on a Way Forward
Authors: Michael Gordy (Author)
Year: 2016
Publisher: Springer
ISBN: 3319416669

Natural Disasters in China
Authors: Peijun Shi (Editor)
Year: 2016
Publisher: Springer
ISBN: 3662502682

Disaster Risk Reduction: Cases from Urban Africa
Authors: Mark Pelling and Ben Wisner
Year: 2016
Publisher: Routledge
ISBN: 1138002054

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

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

Resilience by Design
Authors: Alexandra Jayeun Lee (Author)
Year: 2016
Publisher: Springer
ISBN: 3319306391

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

Extreme Weather, Health, and Communities: Interdisciplinary Engagement Strategies
Authors: Sheila Lakshmi Steinberg (Editor), William Sprigg (Editor)
Year: 2016
Publisher: Springer
ISBN: 3319306243

Disaster Resilience of Education Systems: Experiences from Japan
Authors: Koichi Shiwaku (Editor), Aiko Sakurai (Editor), Rajib Shaw (Editor)
Year: 2016
Publisher: Springer
ISBN: 4431559809
The Handbook of Disaster and Emergency Policies and Institutions
Authors: John Handmer (Author), Stephen Dovers (Author)
Year: 2016
Publisher: Routledge
ISBN: 113897188X

Managing Extreme Climate Change Risks through Insurance
Authors: W. J. Wouter Botzen (Editor)
Year: 2016
Publisher: Cambridge University Press
ISBN: 1316600882
7. Selected Article References


9. 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/).

Young Scientists Summer Program

Since 1977, IIASA’s annual 3-month Young Scientists Summer Program (YSSP) offers research opportunities to talented young researchers whose interests correspond with IIASA’s ongoing research on issues of global environmental, economic and social change. From June through August accepted participants work within the Institute’s research programs under the guidance of IIASA scientific staff. Funding is provided through IIASA’s National Member Organizations.

The program is designed for PhD students (ideally about 2 years prior to receiving their PhD) working on a field compatible with ongoing research at IIASA and a wish to explore the policy implications of their work. Participants will be working under the direct supervision of an experienced IIASA scientist in a unique interdisciplinary and international research environment. They will produce a paper (serving as first step towards a publishable journal article) and will get the opportunity to build up contacts for future collaboration within IIASA’s worldwide network.
How to apply?

Candidates apply via the online application form (find the 'APPLY NOW' banner on the right side during the application period). Applicants can choose 1-2 programs. If there is additional interest in one of our flagship projects this can be indicated in the box provided in the application form (under "please justify your choice of programs here"). We strongly encourage contacting the various program representatives and carefully read through all program descriptions before making your decision.

Applicants from all countries are welcome, although IIASA gives priority to citizens or residents of NMO countries. Participation in the YSSP is only possible for one summer (however, you may apply several times).

Website:
http://www.iiasa.ac.at/web/home/education/yssp/about.html
Other Newsletters:

- **IISD Reporting Services**: Free newsletters and lists for environment and sustainable development issues.
  Website: [http://www.iisd.ca/email/subscribe.htm](http://www.iisd.ca/email/subscribe.htm)

- **The International Emergency Management Society Newsletter (TIEMS)**
  Website: [http://www.tiems.info/](http://www.tiems.info/)

- **Natural Hazards Group Newsletters**
  Website: [http://www.agu.org/focus_group/NH/about/newsletters/](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](http://www.colorado.edu/hazards/dr/currentdr.html)

- **Emergency Manager's Weekly Report**

- **KatNet-Newsletter**: (mostly written in German )
  Website: [http://www.katastrophennetz.de/](http://www.katastrophennetz.de/)

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

- **DSCRN**: Disaster and Social Crisis Research Network Newsletter

- **International Institute for Sustainable Development Newsletter: IISD Reporting Services**.
  Website: Climate Change: [http://climate-l.iisd.org/about-the-climate-l-mailing-list/](http://climate-l.iisd.org/about-the-climate-l-mailing-list/)

- **Society of Risk Analysis Newsletter**
  Website: [http://www.sra.org/newsletter.php](http://www.sra.org/newsletter.php)

- **ULC Institute for Risk and Disaster Reduction Newsletter**
  Website: [http://www.ucl.ac.uk/rdr/irdr/newsletter/](http://www.ucl.ac.uk/rdr/irdr/newsletter/)
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