International Society for Integrated Disaster Risk Management

IDRiM Newsletter

Issue 16, August 2018

Contents

1. IDRIM NEWS

A Message from the IDRiM President Prof. Adam Rose

It is my great honor to have been chosen as President of the International Society for Integrated Disaster Risk Management. I am also humbled by this position, since I am succeeding one of our founders, distinguished scholar and leader Norio Okada.

The IDRiM Charter states as the Society's main objective: "To promote knowledge sharing, interdisciplinary research and development on integrated disaster risk management contributing to the implementation of successful models for efficient and equitable disaster risk management options. Furthermore, the IDRiM Society aims at promoting knowledge transfer and dissemination of information and concepts on integrated disaster risk management."

I am committed to serving as the President to the betterment of the Society and all of its members. I intend to work with the IDRiM Board of Directors, the Secretariat, and our membership with the following vision:

- Stimulate high-quality research and research implementation
- Identify and explore new areas of inquiry in research and practice
- Advance the integration of the various aspects of our field
- Disseminate the work of the Society and its membership more widely
- Address pressing issues at the conceptual, methodological, empirical, policy and implementation levels
- Influence policy at the local, regional, national, and international levels
- Increase membership, with an eye toward attracting top people involved in research and practice
- Foster more involvement and new initiatives from our younger members
- Enhance the diversity of our membership

In October we will mark our 10-year anniversary. The Society has grown in membership and prominence over these years, as indicated by the number of

members, attendance at our annual conferences, readership of our Journal, and successful initiatives. We list among our Research, Service, and Research Implementation awardees many of the most prominent members of our profession.

Much of our success is attributable to the leadership of IDRiM, including founding members such as Norio Okada, Aniello Amendola, Peijun Shi, Joanne Bayer, Bijay Anand Misra, Mohsen Ghafory-Ashtiany, Hirokazu Tatano, Reinhard Mechler, and Ana Maria Cruz. They have been ably assisted by the Board of Directors, various members of the Secretariat, and many original and new members, whose contributions and awards are evident on our Website. We have also benefited from the contributions of younger members, such as Muneta Yokomatsu, organizer of the Young Scientist Sessions at our Annual Conference; Stephan Hochrainer-Stigler, editor of our Newsletter; and Matt Dorfstaetter, editor of our Bulletin and organizer of our new Social Media Committee. Finally, we have also been supported by several prominent international organizations, most notably the Disaster Prevention Research Institute of Kyoto University and the International Institute for Applied Systems Analysis.

I encourage all IDRiM members to avail themselves of the many perks of membership, including attending our conferences, publishing in our Journal, submitting manuscripts to our new IDRiM Book Series with Springer Publishers, reading our Newsletter, posting communications on our Website, and organizing and partaking of new IDRiM Initiatives. My colleagues on the BoD and I welcome suggestions for further enhancing and promoting our vision. We also encourage you to bring in new members, both individuals and organizations.

I look forward to seeing many of you at our 2018 Conference in Sydney Australia this October. Also, I am happy to announce that our 10th Anniversary Conference will be held in Nice, France next summer. Looking further ahead, the Annual Conference in 2020 will be the 20th Anniversary Conference of our core group that established the original DPRI-IIASA Conferences. We welcome your suggestions and involvement in these events.

Best regards,

Adam Rose
IDRiM President

IDRiM Conference 2018
2-4 October 2018, Sydney, Australia

We are proud to announce that the 9th Conference of the International Society for Integrated Disaster Risk Management will be held for the first time in Australia. This exciting event will be hosted by CSIRO's innovation hub Data61 in the vibrant city of Sydney. Some preliminary information is given below; there will a separate call for abstracts and proposals as well as more detailed information in the next couple of weeks.

Data Driven Approaches to Integrated Disaster Management

The vision for this year's event is to put data driven approaches at the epicentre of disaster mitigation, management, and resilience appealing across all disciplines and extending through to practitioners, academics, industry and Government. As a country affected by many natural hazards such as severe bushfires and large scale coastal and catchment flooding events, Australia recognises the flagship role that the integrated disaster risk management community has in this area. Several initiatives have been developed in Australia in recent years which entail rethinking how response and recovery processes are conceptualised and practiced, and call for new approaches to exploring how these processes can be woven into anticipatory reduction and readiness planning.

- The importance of Data in Risk Management
- The conference will explore data as a central component of present and future risk management practices

The role of data in disaster risk management

As Australia's national science agency CSIRO holds a unique place in the Australian landscape at the crossroads of academia, government and industry. Recognising the growing role of data in our everyday lives, CSIRO has recently created Data61 as its new innovation hub with digital

innovation and data integration at the heart of its mission. Data61, along with two other key CSIRO business units, Land & Water and Oceans & Atmosphere, are driving a nation-wide all-hazards planning and adaptation initiative which brings together researchers, emergency services, government and the community. They deliver innovative approaches to build a more resilient and sustainable society able to flexibly adapt to the growing threat of natural disasters.

- Disaster Risk Management as a cross disciplinary challenge
- We aim to bring together all stakeholders together spanning across academia, industry, research and government for an innovative and future focussed event.

Transdisciplinary approaches to address contemporary challenges

The changing climate and accompanying uncertainty is creating another level of complexity in our continued endeavour to manage risks associated with natural disasters. The conference will focus on transdisciplinary approaches which will bring together a broad range of stakeholders, with emphasis on inclusion of participants from all facets of natural disaster risk related work, such as engineers, earth science professionals, emergency managers, urban planners, social scientists, community groups, environmental practitioners and policy makers.

Dates

- Tuesday 2nd October, 2018
- Wednesday 3rd October, 2018
- Thursday 4th October, 2018

Venue
John Niland Scientia Building
University of New South Wales,
Kensington NSW 2033, Australia

Website: http://www.confer.nz/idrim2018/

IDRiM Book Series

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)

More information about the Series can be found at: https://www.springer.com/series/13465

2. Other NEWS

The 2019 Global Assessment Report on Disaster Risk Reduction (GAR19) Concept Note Published

From the newsletter website: Source: https://drmkc.jrc.ec.europa.eu/overview/News#news/432/details/14169/report-on-the-1st-expert-group-meeting-of-the-global-risk-assessment-framework-graf-in-geneva:

“The first Expert Group meeting of the Global Risk Assessment Framework (GRAF) was held on 13-14 June 2018, in Geneva, Switzerland. The GRAF is a flagship initiative of the United Nations Office for Disaster Reduction (UNISDR) and aims at becoming a central pillar in the UN’s prevention agenda, by including a common risk management approach in the global agendas for disaster risk reduction (DRR), sustainable development, urbanization, and climate change, as embodied by the Sendai Framework for DRR 2015-2030, the 2030 Agenda for Sustainable Development (Sustainable Development Goals), the New Urban Agenda, and the Paris Agreement adopted at the 2015 UN Climate Change Conference.

The Sendai Framework considerably expanded the hazards and risks to be addressed, and applies to “small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks”. In 2017, UNISDR initiated development of the GRAF, to support the Sendai Framework. The GRAF will provide state-of-the-art risk information, across all hazards and risks, with emphasis on vulnerability, exposure and impact, at a scale appropriate for sectors and regions, to enhance risk-informed decision making. The GRAF will approach risk from a systems perspective, considering correlations, across sectors, geographies and scales, between direct and indirect risk factors and potential impacts. It will seek to translate outputs for decision-makers, including by applying geospatial and Earth observation data to visualize risk, eliminating the need for translation / interpretation of modelled outputs. The

GRAF will consider key trends in global disaster risk and vulnerability identified by a wide variety of potential contributors, including those of the Global Flood Partnership (GFP), and the European Commission's Joint Research Centre (JRC) projects on wildfire risk, drought risk, and the Global Human Settlements Layer (GHSL).

The Expert Group for the GRAF, consisting of 40 leading experts - in risk research and assessment, impact and consequence analysis, risk communication and systems-based approaches – from scientific, public and private organisations in all global regions and all hazards and sectors, met to define the concept of the GRAF, and specify deliverables and milestones towards its planned launch in May 2019. The meeting created a shared vision of the GRAF among a wide group of stakeholders, strengthening links with existing global public and private initiatives, including the Index for Risk Management (INFORM), GEO (Group on Earth Observations), the Intergovernmental Panel on Climate Change 6th Assessment Report, the Insurance Development Forum and modelling and assessment initiatives on floods, droughts, wildfires, earthquakes and tsunamis, epidemics and industrial accidents. The Expert Group will work on deliverables, including a pilot project (based on INFORM) to demonstrate the added value of the GRAF, an initial knowledge gap assessment, extensive user profiling, and a definition of the GRAF governance, a collaborative IT platform and a funding and resource mobilisation approach. Several organisations offered to contribute to the GRAF in the initial period, including the Global Earthquake Model (GEM), NASA, GFP, George Washington University, Eye-on-Earth Initiative, and JRC through its DRR activities.

The GRAF will be launched in May 2019 at the Global Platform for DRR in Geneva, together with the UN's 2019 Global Assessment Report on DRR (GAR19). The GRAF will be introduced in the GAR19, along with analysis of key global risk trends for natural hazards, and with a specific focus on drought as an exemplar of the proposed approach, examining the complexity of global drought risk assessment, and propagation of drought and related impacts (direct and indirect) across economic and environmental sectors."

Website of final document:
https://www.preventionweb.net/files/58255_gar19conceptnote18.05.2018final.pdf
Additional Information:
https://www.unisdr.org/archive/57573
Information of past GAR reports:
https://www.unisdr.org/we/inform/gar
Information about the latest GAR Atlas:
https://www.unisdr.org/we/inform/publications/53086

Global Report on Internal Displacement 2018 Published

From the Press Release:
Source: http://www.internal-displacement.org/global-report/grid2018/

“Conflict and disasters displaced 30.6 million people within their own countries last year, according to a new report from the Internal Displacement Monitoring Centre (IDMC) and the Norwegian Refugee Council (NRC). […] This report shows why we need a new approach to address the huge costs of internal displacement, not only to individuals, but also to the economy, stability and security of affected countries.”

“Key findings from the Global Report on Internal Displacement (GRID 2018) show that new displacement due to conflict and violence reached 11.8 million in 2017, almost double the figure of 6.9 million in 2016. Sub-Saharan Africa accounted for 5.5 million of these displacements, followed by the Middle East and North Africa with 4.5 million. This brings the total number of people living in internal displacement due to conflict close to 40 million worldwide.”

“The report also shows that in 2017, disasters displaced 18.8 million people in 135 countries. Of these, 8.6 million displacements were triggered by floods, and 7.5 million by storms, especially tropical cyclones. The worst affected countries were China with 4.5 million, the Philippines with 2.5 million, Cuba and the US each with 1.7 million, and India with 1.3 million displacements. In 2017, cyclones displaced millions of people around the world, including Mora which struck Bangladesh in May and hurricane Irma that wreaked havoc in the Atlantic in August. […] Complex emergencies in places like Yemen and South Sudan, involving a breakdown in the rule of law, a weakened economy and limited humanitarian access, also led to significant displacement.

About IDMC:
IDMC is the leading source of information and analysis on internal displacement globally. We are part of the Norwegian Refugee Council, an independent, non-governmental humanitarian organisation. IDMC was set up in 1998 at the request of the international community to fill an important knowledge gap on the global scale and patterns of internal displacement. Since then, tens of millions of people become internally displaced each year as a result of conflict, violence and disasters. While the numbers are rising and the needs of millions go

unaddressed, internal displacement continues to receive insufficient political attention and commitment.

Website:
http://www.internal-displacement.org/global-report/grid2018/

Follow-up Report 2018 to the World Bank Unbreakable Report published
Building back better

From the press release:
Source: https://www.worldbank.org/en/news/press-release/2018/06/18/building-back-better-how-to-cut-natural-disaster-losses-by-a-third

“When countries rebuild stronger, faster and more inclusively after natural disasters they can reduce the impact on people’s livelihoods and well-being by as much as 31 percent, potentially cutting global average losses from $555 billion to $382 billion per year. That’s the conclusion of a new report from the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), released today.

The report, Building Back Better: Achieving resilience through stronger, faster and more inclusive post-disaster reconstruction, assesses socioeconomic resilience and the impact of disasters on people’s well-being. It covers 149 countries, including 17 small island states, representing 95.5 percent of the world’s population.

It finds that in small island states particularly, better post-disaster recovery and reconstruction efforts can reduce annual losses by an average of 59 percent. And in 10 countries with a high level of risk – Antigua and Barbuda, Dominica, Guatemala, Trinidad and Tobago, Zimbabwe, Myanmar, Belize, Vanuatu, Peru and Angola – better reconstruction would reduce overall losses due to natural disasters by more than 60 percent.

The report looks at the potential benefits of improving reconstruction so that it minimizes the overall impact of disasters on affected populations, reduces future risks, and boosts resilience. Building on the recent Unbreakable report and its methodology to factor in the higher vulnerability of people living in poverty, the report looks at three dimensions:

- Building back stronger could reduce future well-being losses by ensuring that reconstructed infrastructure and homes resist more intense events. If all

post-disaster assets were designed to resist frequent disasters, annual disaster losses would be reduced by 12 percent in 20 years, delivering $65 billion in annual benefits.

- Building back faster after natural disasters could reduce well-being losses by 14 percent – equivalent to a US$75 billion gain. These savings are especially important to poor countries facing more frequent shocks, such as small island states and Sub-Saharan African countries.

- Building back more inclusively ensures that post-disaster support reaches all affected people and that no-one is left behind, unable to recover. This would help reduce disaster losses by 9 percent – equivalent to a US$52 billion gain.

If implemented together – rebuilding stronger, faster, and more inclusively – major benefits totaling US$173 billion per year are possible. While the report largely focuses on stronger, faster, and more inclusive recovery processes, it also stresses that preparation is key to the principle of building back better.

The report reviews many examples of countries – from China to Dominica – that have strengthened their ability to withstand the next natural shock, providing lessons that can be replicated elsewhere to contribute toward a more resilient future."

Report available at:
https://openknowledge.worldbank.org/bitstream/handle/10986/29867/127215.pdf

Unbreakable report available at:
http://documents.worldbank.org/curated/en/512241480487839624/Unbreakable-building-the-resilience-of-the-poor-in-the-face-of-natural-disasters

Global Risks Report 2018 **Published**

From the Press Release:
(Source: http://reports.weforum.org/global-risks-2018/press-release/)

"World Enters Critical Period of Intensified Risks in 2018

- Structural and interconnected nature of risks in 2018 threaten the very system on which societies, economies and international relations are based, according to *The Global Risks Report 2018*
- The positive economic outlook gives leaders the opportunity to tackle systemic fragility affecting societies, economies, international relations and the environment, according to the report
- Environmental risks dominate the Global Risk Perception Survey for the second year running; when we asked about risk trajectories in the coming year, 59% of answers pointed to increasing risks

The report – which every January shares the perspectives of global experts and decision-makers on the most significant risks that face the world – cautions that we are struggling to keep up with the accelerating pace of change. It highlights numerous areas where we are pushing systems to the brink, from extinction-level rates of biodiversity loss to mounting concerns about the possibility of new wars.

The annual Global Risks Perception Survey (GRPS) suggests that experts are preparing for another year of heightened risk. When we asked nearly 1,000 respondents for their views about the trajectory of risks in 2018, 59% of their answers pointed to an intensification of risks, compared with 7% pointing to declining risks.

A deteriorating geopolitical landscape is partly to blame for the pessimistic outlook in 2018, with 93% of respondents saying they expect political or economic confrontations between major powers to worsen and nearly 80% expecting an increase in risks associated with war involving major powers.

However, as in 2017, the environment was by far the greatest concern raised by experts. Among the 30 global risks the experts were asked to prioritize in terms of likelihood and impact, all five environmental risks – *extreme weather; biodiversity loss and ecosystem collapse; major natural disasters; man-made environmental disasters;* and *failure of climate-change mitigation and adaptation*

– were ranked highly on both dimensions. Extreme weather events were seen as the single most prominent risk.

According to the GRPS, *cyber threats* are growing in prominence, with *large-scale cyberattacks* now ranked third in terms of likelihood, while *rising cyber-dependency* is ranked as the second most significant driver shaping the global risks landscape over the next 10 years.

Economic risks, on the other hand, feature less prominently this year, leading some experts to worry that the improvement in global GDP growth rates may lead to complacency about persistent structural risks in the global economic and financial systems. Even so, inequality is ranked third among the underlying risk drivers, and the most frequently cited interconnection of risks is that between *adverse consequences of technological advances* and *high structural unemployment or under-employment*.

“Future Shocks”

The growing complexity and interconnectedness of our global systems can lead to feedback loops, threshold effects and cascading disruptions. Sudden and dramatic breakdowns – future shocks – become more likely. In this year’s *Global Risks Report* we present 10 short “what-if” scenarios, not as predictions but as food for thought to encourage world leaders to assess the potential future shocks that might rapidly and radically disrupt their worlds:

- **Grim reaping**: Simultaneous breadbasket failures threaten sufficiency of global food supply
- **A tangled web**: Artificial intelligence “weeds” proliferate, choking performance of the internet
- **The death of trade**: Trade wars cascade and multilateral institutions are too weak to respond
- **Democracy buckles**: New waves of populism threaten social order in one or more mature democracies
- **Precision extinction**: AI-piloted drone ships take illegal fishing to new – and even more unsustainable – levels
- **Into the abyss**: Another financial crisis overwhelms policy responses and triggers period of chaos
- **Inequality ingested**: Bioengineering and cognition-enhancing drugs entrench gulf between haves and have-nots
- **War without rules**: State-on-state conflict escalates unpredictably in the absence of agreed cyberwarfare rules
- **Identity geopolitics**: Amid geopolitical flux, national identity becomes a growing source of tension around contested borders

- **Walled off:** Cyberattacks, protectionism and regulatory divergence leads to balkanization of the internet

The Global Risks Report 2018 has been developed with the support throughout the past year of the World Economic Forum's Global Risks Advisory Board. It also benefits from ongoing collaboration with its Strategic Partners Marsh & McLennan Companies and Zurich Insurance Group and its academic advisers at the Oxford Martin School (University of Oxford), the National University of Singapore and the Wharton Risk Management and Decision Processes Center (University of Pennsylvania)."

Report available at:
http://reports.weforum.org/global-risks-2018

GLOBAL CLIMATE RISK INDEX 2018

From the Press release:
Source: https://germanwatch.org/en/14674

"Increased intensity of storms takes a toll on small island states and poor countries / Since 1997, over 520,000 people have been killed by more than 11,000 extreme weather events. Island states are amongst the countries most impacted by extreme weather events worldwide. A number of developing countries regularly already have to address weather catastrophes, especially poorer countries like Haiti, Sri Lanka or Viet Nam are facing great challenges. These are some of the key findings of the Climate Risk Index published by Germanwatch today at the climate summit in Bonn.

In many of the countries most affected by natural disasters in the past year, extreme rainfall followed periods of severe drought. In Zimbabwe (No. 2 in 2016) for example, rain caused dramatic flooding that killed 250 people and left thousands of people homeless. In the past 20 years from 1997 to 2016, Honduras, Haiti and Myanmar were impacted the strongest, according to the long-term index. In this period, globally over 520,000 fatalities were directly linked to more than 11,000 extreme weather events. The economic damages amounted to approximately US$ 3.16 trillion (calculated in purchasing-power parity, PPP).

The vulnerability of poorer countries becomes visible in the long-term index: nine of the ten countries most affected between 1997 and 2016 are developing countries with low or lower middle income per capita. Some countries - like Haiti, India, Sri Lanka and Viet Nam - are repeatedly hit by extreme weather and have no time to fully recover. Germanwatch receives its data for calculating the Global Climate Risk Index from the NatCatSERVICE database of the reinsurance company Munich Re, as well as the socio-economic data of the International Monetary Fund (IMF). Even though the evaluation of the rising damages and fatalities do not allow for simple conclusions on the influence of climate change on these events, it does give a good impression of the vulnerability of nations.

About Germanwatch:
Germanwatch, based in Bonn and Berlin (Germany), is an independent development and environmental organisation which works for sustainable global development. Germanwatch actively promotes North-South equity and the preservation of livelihoods."

Source: https://germanwatch.org/en/14638

3. Book Review

Loss and Damage from Climate Change: Concepts, Methods and Policy Options.

Editors: Mechler, R., Bouwer, L., Schinko, T., Surminski, S., Linnerooth-Bayer, J.
Springer, 2018

There has been a long history of formal and informal deliberations regarding climate justice with reference to sharing the burdens associated with responses to climate change. The focus has predominantly been on climate mitigation responses, yet, over the last few years impact, adaptation and risk issues have moved into the spotlight, to some extent owing to the fact that evidence is mounting that climate change is already having an impact, particularly in terms of affecting extreme events and vulnerable countries. In 2013, the *Warsaw Loss and Damage Mechanism* (WIM) has been set up by climate negotiators at COP 19 for "dealing with climate-related effects, including residual impacts after adaptation." Since then, the WIM has been subject to very contentious debate: While some considered it the 3rd building block of negotiations under the UNFCCC, others saw it merely as an attempt to establish liability, and suggest its remit would be better covered under negotiations dealing with climate adaptation. The UNFCCC in 2014 set up an Executive Committee and devised a work programme to inform the deliberations. The WIM has been finally endorsed at COP as a stand-alone article of the Paris agreement. The exact focus and form of this mechanism is largely unclear and will see heavy debate over the coming years scheduled for developing proposals, whole a first stocktaking is planned for COP 22.

While the UNFCCC work programme will inform deliberations along the terms of reference identified, there is need and scope for more broad-based discussions taking a research focus while aiming to inform policy. A number of promising avenues exist and have been preliminarily identified for taking the debate further, such as focussing on climate risk management and current international efforts for promoting disaster risk management. There have been a few studies reporting on empirical

assessments. Yet, overall a comprehensive assessment exercise to identify the grounds for Loss and Damage (e.g., compared to adaptation), key principles to build on, as well as evidence regarding risk "beyond adaptation" is missing.

The book by Mechler et al. (2018) is a stocktaking exercise highlighting the state of the art of research, political debate and policy options on Loss and Damage and the debate on risks "beyond adaptation." The book is aimed at informing research, policy-making and practice and the public throughout regarding issues related to the WIM. It also goes beyond informing this policy mechanism by providing evidence-based research into the risks "beyond adaptation" faced by individuals communities and countries. The book is composed of 5 sections, including setting the stage with 3 chapters, critical issues for shaping the discourse with 6 chapters, geographic perspectives and cases with 4 chapters, research and practice with 4 chapters, and last but not least policy options and other actions for the L&D discourse consisting of 4 chapters.

The book offers and discusses successfully the multiple perspectives on Loss and Damage, with a particular focus on climate extremes and climate risk management. Importantly, it thoroughly debates the politics and institutional dimensions of the discourse focusing on the principles and definitions of Loss and Damage. This includes important ethical as well as normative aspects which are central to the whole discourse but very often not explicitly stated. It therefore should support the science-policy dialogue on the WIM, with the focus on the identification of practical and evidence-based (e.g. through modelling approaches) policy and implementation options for its operationalisation (e.g. within simulation methods). Given the increased interest in Loss and Damage the book is a very relevant contribution to the science-policy dialogue, with an emphasis on identifying practical and evidence-based policy and implementation options for its operationalisation as well as subsequent use in quantitative risk management approaches.

4. Conference Announcements

- **2 October – 4 October 2018**
  IDRiM 2018
  The 9th Conference of the International Society for Integrated Disaster Risk Management (IDRiM 2018) will take place in Sydney, Australia from 2 – 4 October 2018. The event will be hosted by CSIRO's innovation hub Data61.

  Website: http://www.idrim.org/?p=1730

- **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/

- **22 October – 24 October 2018**
  UN World Data Forum 2018
  The UN World Data Forum 2018 will be hosted by Federal Competitiveness and Statistics Authority, of United Arab Emirates from 22 to 24 October 2018, with support from the Statistics Division of the UN Department of Economic and Social Affairs, under the guidance of the United Nations Statistical Commission and the High-level Group for Partnership, Coordination and Capacity-Building for Statistics for the 2030 Agenda for Sustainable Development.

  Website: https://undataforum.org/WorldDataForum/

- **25 September – 27 September 2018**
  Disaster Management 2019
  The International Conference on Disaster Management is being reconvened following the success of the previous meetings, held at

Wessex Institute in the New Forest in 2009, the University of Central Florida in Orlando, USA in 2011, A Coruña, Spain in 2013, Istanbul Technical University, Turkey in 2015 and Seville, Spain, 2017. This series of conferences originated with the need for academia and practitioners to exchange knowledge and experience on the way to handle the increasing risk of natural and human-made disasters. Recent major earthquakes, tsunamis, hurricanes, floods and other natural phenomena have resulted in huge losses in terms of human life and property destruction. A new range of human-made disasters have afflicted humanity in modern times; terrorist activities have been added to more classical disasters such as those due to the failure of industrial installations for instance. It is important to understand the nature of these global risks to be able to develop strategies to prepare for these events and plan effective responses in terms of disaster management and the associated human health impacts. The conference provides a forum for the exchange of information between academics and practitioners, and a venue for presentation of the latest developments. The corresponding volume of WIT Transactions containing the papers presented at the meetings are published in paper and digital format and widely distributed around the world. The papers are also archived in the WIT elibrary (http://www.witpress.com/elibrary) where they are available to the international community.

Website: https://www.wessex.ac.uk/conferences/2019/disaster-management-2019

- **5 March – 6 March 2019**
  ICDEM 2019: 21st International Conference on Disaster and Emergency Management
  The International Research Conference is a federated organization dedicated to bringing together a significant number of diverse scholarly events for presentation within the conference program. Events will run over a span of time during the conference depending on the number and length of the presentations. The ICDEM 2019: 21st 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. Call for Contributions: All honorable authors are kindly encouraged to contribute to and help shape the conference through submissions of their research abstracts, papers and e-posters. Also, high quality research contributions describing original and unpublished results of conceptual, constructive, empirical, experimental, or theoretical work in all areas of Disaster and Emergency Management are cordially invited for presentation at the conference. The conference solicits contributions of abstracts, papers and e-posters that address themes and topics of the conference, including figures, tables and references of novel research materials.

Website: https://waset.org/conference/2019/03/rome/ICDEM

- **13 March – 15 March 2019**
  4th Global Summit of Disaster Research Institutes for Disaster Risk Reduction (4GSRIDRR2019); and GADRI General Assembly
  The past Global Summits have continued to maintain an institutional structure advocating importance of engagement in collaborative research activities to accomplish disaster risk reduction and resilience at a global level. The Sendai Framework Agenda for 2030 calls to increase awareness on disaster risk reduction and resilience and implement policies to prevent new risks. What could GADRI do to further promote the 2030 agenda of the Sendai Framework? GADRI are committed to take a coherent and a global approach to disaster risk reduction and resilience through its network of disaster research institutes. The Fourth Global Summit under the theme of “Increasing the effectiveness and relevance of our institutes” will explore: • GADRI contributions to the Science and Technology Roadmap; and the Tokyo Statement 2017 • Climate change and adaptation - What engagement mechanisms and research linkages are needed in governments, localities, media, etc.? • To what extent are these research directions and SDGs influences or impact the policy-makers? • What are the targeted research areas in DRR? How is

disaster research management promoted? • Where are the funding for disaster risk reduction activities coming from and are they invested to right causes and areas that are most needed? Expected Outcomes: • learn from accumulated research knowledge of each research institute • share information on ongoing project activities and Achievements • explore opportunities for collaborative and empirical research activities • develop a statement of actions for various stakeholders in DRR which could be presented at the Global Platform 2019.

Website: http://gadri.net/

- **13 May – 17 May 2019**
  Global Platform for Disaster Risk Reduction
  The sixth Session of the Global Platform for Disaster Risk Reduction (GP2019) will take place in Geneva, Switzerland from 13 to 17 May, 2019, convened and organized by the UN Office for Disaster Risk Reduction (UNISDR) and hosted by the Government of Switzerland. The session will be co-chaired by Switzerland and UNISDR. It will represent the next important opportunity for the international community to boost the implementation of the Sendai Framework and related Sustainable Development Goals of the 2030 Agenda, as well as commitments of the Paris Climate Agreement. It will be the last global gathering for all stakeholders before the deadline for the achievement of Target E of the Sendai Framework: Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020. The GP2019 will be organized under the overall theme entitled: Resilience Dividend: Towards Sustainable and Inclusive Societies. It will focus on how managing disaster risk and risk-informed development investments pay dividends in multiple sectors at all levels and throughout social, economic, financial and environmental fields.

  Website: https://www.unisdr.org/conference/2019/globalplatform

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/non-life/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/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

6. 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/description#description

- **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/journaldescription.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+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)**
  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

The Sociotechnical Constitution of Resilience

Authors: Amir, Sulfikar (Ed.)
Year: 2018
Publisher: Palgrave Macmillan
ISBN: 978-981-10-8508-6
Content: This book considers the concept of resilience in a global society where coping with the consequence and long term impact of crisis and disaster challenges the capacity of communities to bounce back in the event of severe disruption. Catastrophic events such as the 9.11 terrorist attack, the Fukushima nuclear disaster, and the volcano eruption in Central Java entailed massive devastation on physical infrastructures, and caused significant social and economic damage. This book considers how the modern sociotechnological system facilitating human activity defines how societies survive and whether a crisis will be short-lived or prolonged. Drawing on the concept of sociotechnical resilience, this book closely examines a range of events North America, Asia, Australia, and Europe. By presenting the successes and failures of sociotechnical resilience, it offers important insights and practical lessons to build better and comprehensive understandings of resilience in a real-world setting, significantly contributing to the study of disaster resilience.

Natural Hazards GIS-based Spatial Modeling Using Data Mining Techniques

Authors: Pourghasemi, Hamid Reza, Rossi, Mauro (Eds.)
Year: 2018
Publisher: Springer International Publishing
ISBN: 978-3-319-73382-1
Content: This edited volume assesses capabilities of data mining algorithms for spatial modeling of natural hazards in different countries based on a collection of essays written by experts in the field. The book is organized into three parts which were under the editorial responsibility of different section editors: (1) Geophysical disasters, (2) Hydrological disasters, and (3) climatological disaster. The first part consists of landslides and earthquake (seismic) disasters. The second part includes flash flood, erosion, and land subsidence research. The final part focuses on climate change, forest fire, land fire, and drought subjects. Chapters were peer-reviewed by recognized scholars in the field of natural hazards research. Each chapter provides an overview on the topic, methods applied and discusses examples used. The concepts and methods are explained at a level that allows undergraduates to understand and other readers learn through examples. This edited volume is shaped and structured to provide the reader with a comprehensive overview of all covered topics. It serves as a reference for researchers from different fields including land surveying, remote sensing, cartography, GIS, geophysics, geology, natural resources, and

geography. It also serves as a guide for researchers, students, organizations, and decision makers active in land use planning and hazard management.

Urban Resilience for Risk and Adaptation Governance

Authors: Brunetta, G., Caldarice, O., Tollin, N., Rosas-Casals, M., Morató, J. (Eds.)
Year: 2018
Publisher: Springer International Publishing
ISBN: 978-3-319-76943-1
Content: This book brings together a series of theory and practice essays on risk management and adaptation in urban contexts within a resilient and multidimensional perspective. The book proposes a transversal approach with regard to the role of spatial planning in promoting and fostering risk management as well as institutions' challenges for governing risk, particularly in relation to new forms of multi-level governance that may include stakeholders and citizen engagement. The different contributions focus on approaches, policies, and practices able to contrast risks in urban systems generating social inclusion, equity and participation through bottom-up governance forms and co-evolution principles. Case studies focus on lessons learned, as well as the potential and means for their replication and upscaling, also through capacity building and knowledge transfer. Among many other topics, the book explores difficulties encountered in, and creative solutions found, community and local experiences and capacities, organizational processes and integrative institutional, technical approaches to risk issue in cities.

Advances in Indian Earthquake Engineering and Seismology

Authors: Sharma, M.L., Shrikhande, Manish, Wason, H.R. (Eds.)
Year: 2018
Publisher: Springer International Publishing
ISBN: 978-3-319-76854-0
Content: This edited volume is an up-to-date guide for students, policy makers and engineers on earthquake engineering, including methods and technologies for seismic hazard detection and mitigation. The book was written in honour of the late Professor Jai Krishna, who was a pioneer in teaching and research in the field of earthquake engineering in India during his decades-long work at the University of Roorkee (now the Indian Institute of Technology Roorkee). The book comprehensively covers the historical development of earthquake engineering in India, and uses this background knowledge to address the need for current advances in earthquake engineering, especially in developing countries. After discussing the history and growth of earthquake engineering in India from the past 50 years, the book addresses the present status of earthquake engineering in regards to the seismic resistant designs of bridges, buildings, railways, and other infrastructures. Specific topics include response spectrum superposition methods, design philosophy, system identification approaches, retaining walls, and shallow foundations. Readers will learn about

developments in earthquake engineering over the past 50 years, and how new methods and technologies can be applied towards seismic risk and hazard identification and mitigation.

Big Data in Engineering Applications

Authors: Roy, S.S., Samui, P., Deo, R., Ntalampiras, S. (Eds.)
Year: 2018
Publisher: Springer Singapore
ISBN: 978-981-10-8475-1
Content: This book presents the current trends, technologies, and challenges in Big Data in the diversified field of engineering and sciences. It covers the applications of Big Data ranging from conventional fields of mechanical engineering, civil engineering to electronics, electrical, and computer science to areas in pharmaceutical and biological sciences. This book consists of contributions from various authors from all sectors of academia and industries, demonstrating the imperative application of Big Data for the decision-making process in sectors where the volume, variety, and velocity of information keep increasing. The book is a useful reference for graduate students, researchers and scientists interested in exploring the potential of Big Data in the application of engineering areas.

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
Content: This book provides important insight on a range of issues focused on three themes; what new climate change information is being developed, how that knowledge is communicated and how it can be usefully applied across international, regional and local scales. There is increasing international investment and interest to develop and communicate updated climate change information to promote effective action. As change accelerates and planetary boundaries are crossed this information becomes particularly relevant to guide decisions and support both proactive adaptation and mitigation strategies. Developing new information addresses innovations in producing interdisciplinary climate change knowledge and overcoming issues of data quality, access and availability. This book examines effective information systems to guide decision-making for immediate and future action. Cases studies in developed and developing countries illustrate how climate change information promotes immediate and future actions across a range of sectors.

Disasters Without Borders: The International Politics of Natural Disasters

Authors: John Hannigan
Year: 2018
Publisher: Wiley
ISBN: 978-0-745-66311-1
Content: Dramatic scenes of devastation and suffering caused by disasters such as the 2011 Japanese earthquake and tsunami, are viewed with shock and horror by millions of us across the world. What we rarely see, however, are the international politics of disaster aid, mitigation and prevention that condition the collective response to natural catastrophes around the world. In this book, respected Canadian environmental sociologist John Hannigan argues that the global community of nations has failed time and again in establishing an effective and binding multilateral mechanism for coping with disasters, especially in the more vulnerable countries of the South. Written in an accessible and even-handed manner, Disasters without Borders it is the first comprehensive account of the key milestones, debates, controversies and research relating to the international politics of natural disasters. Tracing the historical evolution of this policy field from its humanitarian origins in WWI right up to current efforts to cast climate change as the prime global driver of disaster risk, it highlights the ongoing mismatch between the way disaster has been conceptualised and the institutional architecture in place to manage it. The book's bold conclusion predicts the confluence of four emerging trends - politicisation/militarisation, catastrophic scenario building, privatisation of risk, and quantification, which could create a new system of disaster management wherein 'insurance logic' will replace humanitarian concern as the guiding principle. *Disasters Without Borders* is an ideal introductory text for students, lecturers and practitioners in the fields of international development studies, disaster management, politics and international affairs, and environmental geography/sociology.

The Asian Tsunami and Post-Disaster Aid

Authors: Sunita Reddy
Year: 2018
Publisher: Springer
ISBN: 978-9811301810
Content: Through the lens of the Asian tsunami, this book problematizes concepts that are normally taken for granted in disaster discourse, including relief, recovery, reconstruction and rehabilitation. The unprecedented flow of humanitarian aid after the Asian tsunami, though well-intentioned, showed adverse effects and unintended consequences in the lives of people in the communities across nations. Aid led not only to widespread relief and recovery but also to an exacerbation of old forms of inequities and the creation of new ones arising from the prioritization, distribution and management of aid. This, in turn, led to the incongruity between the needs and expectations of the affected and the agendas of aid agencies and their various intermediaries. This book examines the long-term consequences of post-disaster aid by posing the

following questions: What has the aid been expended on? Where has the aid primarily been expended, and how? And what were the unintended consequences of post-disaster aid for the communities? This topical volume is of interest to social scientists, human rights and law researchers and environmental scientists interested in disaster studies.

Disaster Risk Reduction: Community Resilience and Responses

Authors: Bupinder Zutshi, Akbaruddin Ahmad, Ananda Babu Srungarapati Year: 2018

Publisher: Palgrave Macmillan

ISBN: 978-9811088445

Content: This book discusses the interconnected, complex and emerging risks in today's societies and deliberates on the various aspects of disaster risk reduction strategies especially through community resilience and responses. It consists of selected papers presented at the World Congress on Disaster Management, which focused on community resilience and responses towards disaster risk reduction based on South Asian experiences, and closely examines the coordinated research activities involving all stakeholders, especially the communities at risk. Further, it narrates the experiences of disaster risk-reduction in different communities that have policy implications for mitigation of future disaster risks in the societies affected by these types of disasters. Written from the social science perspective to disasters rather than an engineering approach, the book helps development and governance institutions to prioritize disasters as a problem of development rather than being parallel to it.

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

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.

Loss and Damage from Climate Change: Concepts, Methods and Policy Options

Authors: Mechler R. et al.
Year: 2018
Publisher: Springer
ISBN: 978-3319720258
Content: This book provides an authoritative insight on the Loss and Damage discourse by highlighting state-of-the-art research and policy linked to this discourse and articulating its multiple concepts, principles and methods. Written by leading researchers and practitioners, it identifies practical and evidence-based policy options to inform the discourse and climate negotiations. With climate-related risks on the rise and impacts being felt around the globe has come the recognition that climate mitigation and adaptation may not be enough to manage the effects from anthropogenic climate change. This recognition led to the creation of the Warsaw International Mechanism on Loss and Damage in 2013, a climate policy mechanism dedicated to dealing with climate-related effects in highly vulnerable countries that face severe constraints and limits to adaptation. Endorsed in 2015 by the Paris Agreement and effectively considered a third pillar of international climate policy, debate and research on Loss and Damage continues to gain enormous traction. Yet, concepts, methods and tools as well as directions for policy and implementation have remained contested and vague. Suitable for researchers, policy-advisors, practitioners and the interested public, the book furthermore: discusses the political, legal, economic and institutional dimensions of the issue, highlights normative questions central to the discourse, provides a focus on climate risks and climate risk management, presents salient case studies from around the world.

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
ISBN: 978-981-10-2566-2
Content: This study develops a methodology for rapidly obtaining approximate estimates of the economic consequences from numerous natural, man-made and technological threats. This software tool is intended for use by various decision makers and analysts to obtain estimates rapidly. It is programmed in Excel and Visual Basic for Applications (VBA) to facilitate its use. This tool is called E-CAT (Economic Consequence Analysis Tool) and accounts for the cumulative direct and indirect impacts (including resilience and behavioral factors that significantly affect base estimates) on the U.S. economy. E-CAT is intended to be a major step toward advancing the current state of economic consequence analysis (ECA) and also contributing to and developing interest in further research into complex but rapid turnaround approaches. The essence of the methodology involves running numerous simulations in a computable general equilibrium (CGE) model for each threat, yielding synthetic data for the estimation of a single regression equation based on the identification of key explanatory variables (threat characteristics and background conditions). This

transforms the results of a complex model, which is beyond the reach of most users, into a "reduced form" model that is readily comprehensible. Functionality has been built into E-CAT so that its users can switch various consequence categories on and off in order to create customized profiles of economic consequences of numerous risk events. E-CAT incorporates uncertainty on both the input and output side in the course of the analysis.

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
Content: This volume presents an economic framework for the analysis of resilience in relation to societal, environmental, and personal security perspectives. It offers a rigorous definition of economic resilience and an operational metric, and it shows how they can be applied to measuring and applying the concept to private and public decision making. Major dimensions of resilience and their implications for human development are explored. Resilience is emphasized as a coping mechanism for dealing with short-term crises, such as natural disasters and acts of terrorism. As well, the author shows how lessons learned in the short-run out of necessity and through the application of human ingenuity can be incorporated into long-run sustainability practices. In part, this opportunity stems from viewing resilience as a process, one that enhances individual and societal competencies. The book links economic resilience to several other disciplines and examines the relationship between resilience and various other key concepts such as vulnerability, adaptation, and sustainability. It scrutinizes the measurement of economic resilience in terms of temporal, spatial, and scale dimensions. It examines the time-path of resilience and relates it to the recovery process. This work also looks closely at progress on the formulation of resilience indices and stresses the importance of actionable variables. It presents a risk-management framework, including aspects of cost-effectiveness and cost-benefit analysis. Additionally, it explores the role of resilience in relation to the co-benefits of disaster risk management.

Risk Modeling for Hazards and Disasters

Authors: Gero Michel (Editor)
Year: 2017
Publisher: Elsevier
ISBN: 0128040718
Content: Risk Modeling for Hazards and Disasters covers all major aspects of catastrophe risk modeling, from hazards through to financial analysis. It explores

relevant new science in risk modeling, indirect losses, assessment of impact and consequences to insurance losses, and current changes in risk modeling practice, along with case studies. It also provides further insight into the shortcomings of current models and examines model risk and ideas to diversify risk assessment. Risk Modeling for Hazards and Disasters instructs readers on how to assess, price and then hedge the losses from natural and manmade catastrophes. This book reviews current model development and science and explains recent changes in the catastrophe modeling space, including new initiatives covering uncertainty and big data in the assessment of risk for insurance pricing and portfolio management. Edited by a leading expert in both hazards and risk, this book is authored by a global panel including major modeling vendors, modeling consulting firms, and well-known catastrophe modeling scientists. Risk Modeling for Hazards and Disasters provides important insight into how models are used to price and manage risk. Includes high profile case studies such as the Newcastle earthquake, Hurricane Andrew and Hurricane Katrina. Provides crucial information on new ideas and platforms that will help address the new demands for risk management and catastrophe risk reporting. Presents the theory and practice needed to know how models are created and what is and what is not important in the modeling process. Covers relevant new science in risk modeling, indirect losses, assessment of impact and consequences to insurance losses, and current changes in risk modeling practice, along with case studies

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
Content: This book covers both the practical and theoretical aspects of catastrophe modelling for insurance industry practitioners and public policymakers. Written by authors with both academic and industry experience it also functions as an excellent graduate-level text and overview of the field. Ours is a time of unprecedented levels of risk from both natural and anthropogenic sources. Fortunately, it is also an era of relatively inexpensive technologies for use in assessing those risks. The demand from both commercial and public interests—including (re)insurers, NGOs, global disaster management agencies, and local authorities—for sophisticated catastrophe risk assessment tools has never been greater, and contemporary catastrophe modelling satisfies that demand. Combining the latest research with detailed coverage of state-of-the-art catastrophe modelling techniques and technologies, this book delivers the knowledge needed to use, interpret, and build catastrophe models, and provides greater insight into catastrophe modelling’s enormous potential and possible limitations. The first book containing the detailed, practical knowledge needed to support practitioners as effective catastrophe risk modellers and managers.

Includes hazard, vulnerability and financial material to provide the only independent, comprehensive overview of the subject, accessible to students and practitioners alike. Demonstrates the relevance of catastrophe models within a practical, decision-making framework and illustrates their many applications. Includes contributions from many of the top names in the field, globally, from industry, academia, and government. Natural Catastrophe Risk Management and Modelling: A Practitioner's Guide is an important working resource for catastrophe modelling analysts and developers, actuaries, underwriters, and those working in compliance or regulatory functions related to catastrophe risk. It is also valuable for scientists and engineers seeking to gain greater insight into catastrophe risk management and its applications.

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
Content: Natural Hazards: Earth Processes as Hazards, Disasters and Catastrophes, Fourth Edition, is an introductory-level survey intended for university and college courses that are concerned with earth processes that have direct, and often sudden and violent, impacts on human society. The text integrates principles of geology, hydrology, meteorology, climatology, oceanography, soil science, ecology and solar system astronomy. The book is designed for a course in natural hazards for non-science majors, and a primary goal of the text is to assist instructors in guiding students who may have little background in science to understand physical earth processes as natural hazards and their consequences to society. Natural Hazards uses historical to recent examples of hazards and disasters to explore how and why they happen and what we can do to limit their effects. The text's up-to-date coverage of recent disasters brings a fresh perspective to the material. The Fourth Edition continues our new active learning approach that includes reinforcement of learning objective with a fully updated visual program and pedagogical tools that highlight fundamental concepts of the text. This program will provide an interactive and engaging learning experience for your students. Here's how: Provide a balanced approach to the study of natural hazards: Focus on the basic earth science of hazards as well as roles of human processes and effects on our planet in a broader, more balanced approach to the study of natural hazards. Enhance understanding and comprehension of natural hazards: Newly revised stories and case studies give students a behind the scenes glimpse into how hazards are evaluated from a scientific and human perspective; the stories of real people who survive natural hazards, and the lives and research of professionals who have contributed significantly to the research of hazardous events.ã Strong pedagogical tools reinforce the text's core features: Chapter structure and design organizes the material into three major sections to help students learn, digest, and review learning objectives.

Natech Risk Assessment and Management , 1st Edition, Reducing the Risk of Natural-Hazard Impact on Hazardous Installations

Authors: Elisabeth Krausmann Ana Cruz Ernesto Salzano
ISBN: 9780128038079
eBook ISBN: 9780128038796
Imprint: Elsevier
Content: 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 co-authored 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.

Already listed new books in previous newsletters with publication date between 2015 and 2017:

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

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Authors: W. J. Wouter Botzen (Editor)
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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 the announcements in the previous IDRiM News section for more details).

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.

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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 chose 1-2 programs. If there is additional is 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.

Registrations for the 2019 program are being accepted from **1 Oct 2018 - 11 Jan 2019**.

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

- **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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