International Society for Integrated Disaster Risk Management

IDRiM Newsletter

Issue 2, July 2011

Contents

1. IDRIM NEWS

IDRiM2011 CONFERENCE TO BE HELD IN LOS ANGELES

The 2nd Conference (IDRiM2011) of the International Society for Integrated Disaster Risk Management (IDRiM Society) will be hosted at the University of Southern California (USC) in Los Angeles, USA, on 14-16 July 2011. The conference is co-organized by the Disaster Prevention Research Institute (DPRI) of Kyoto University, and partly supported by the International Institute for Applied Systems Analysis (IIASA), and the Japan Foundation.

The conference theme, "Reframing Disasters and Reflecting on Risk Governance Deficits," arises from the analysis of recent events including the Haiti and Chile earthquakes, the volcanic ash disruption to European air space (as well as interconnected airlines, businesses, and people around the world), and the BP Deepwater Horizon oil spill in the Gulf of Mexico. Furthermore, the devastating Tohoku earthquake and tsunami in Japan on 11 March 2011 which triggered the on-going accident at the Fukushima Dai-ichi nuclear power plant have shown that even in a country with some of the best earthquake and tsunami construction and disaster preparedness and mitigation systems in place there are gaps in risk management. These events have highlighted several important points: the need to rethink the way we design our infrastructure and protection and mitigation barriers; the need to address/ manage disasters locally, but also the need to consider their potential impacts globally; and the need to identify and address risk governance deficits as well as the need for more transparency in the governance and management of high risk activities. Integrated disaster risk management is needed that uses multi-hazard, interdisciplinary, multi-stakeholder, and comprehensive approaches to disaster risk reduction.

Several well-known national and international speakers have confirmed their participation including:

Kathleen Tierney (University of Colorado, USA)
Detlof von Winterfeldt (Director, IIASA, Austria)
James Featherstone (Director, City of Los Angeles Emergency Mg. Dept.)
George Apostolakis (US Nuclear Regulatory Commission)
Norio Okada (DPRI, Kyoto University, Japan)
Hirokazu Tatano (DPRI, Kyoto University, Japan)
Adam Rose (University of Southern California, USA)
Erwann Michel-Kierjan (The Wharton School, University of Pennsylvania, USA)
James Goltz (Caltech/State of California, USA)
Adrian Gheorghe (Old Dominion University, USA)

Stephanie Chang (University of British Columbia, Canada)
Aniello Amandola (IIASA, Austria/Italy)
Charles Scawthorn (Kyoto University, Japan/USA)
Fouad Bendimerad (Earthquake and Megacities Initiative, Philippines)
Friedemann Wenzel (Karlsruhe Institute of Technology, Germany)
Akemi Takeoka Chatfield (University of Wollongong, Australia)

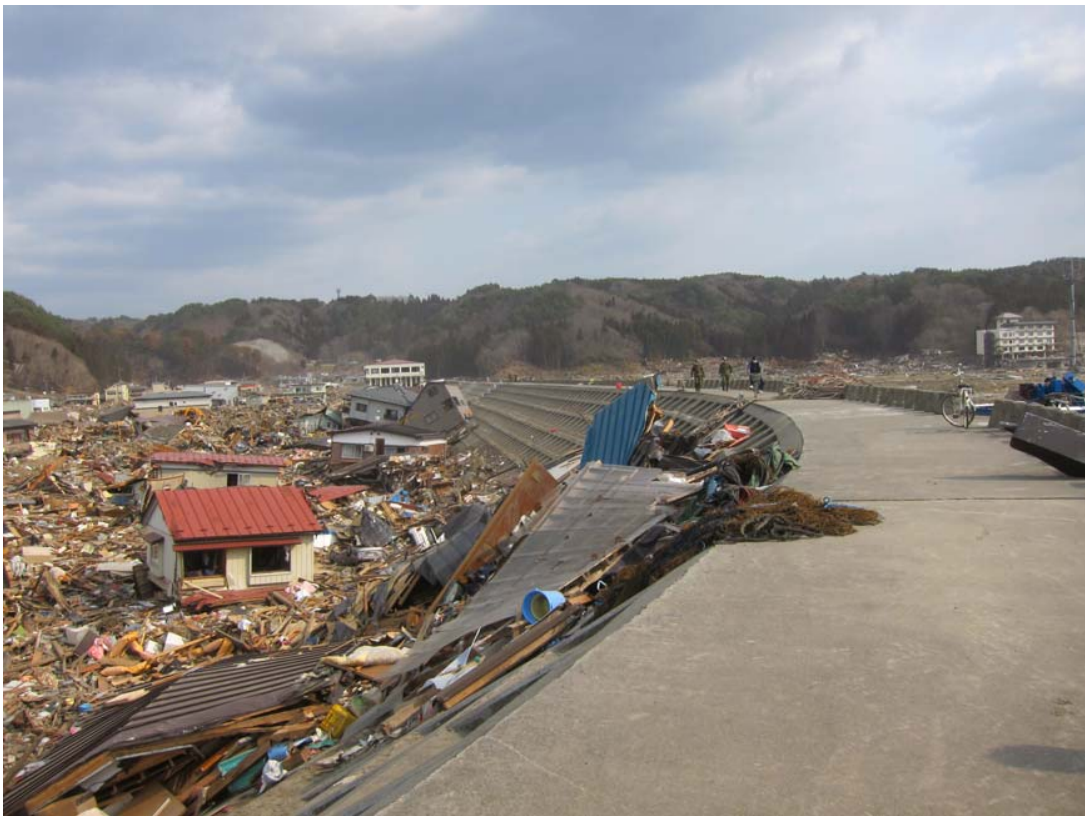
The conference will cover various topics including:

- The Tohoku earthquake and tsunami in Japan on 11 March 2011.
- Post-disaster reconstruction and recovery
- Resilience as an approach to integrated disaster risk management
- Megacities and disasters
- Transportation systems
- Critical infrastructure
- Climate change adaptation, linking climate change and weather-related disasters
- Conjoint natural and technological (Natech) disasters
- Social vulnerability
- Socio-economic strategies for disaster risk reduction
- Information management and sharing
- The Future and Limitations of Catastrophe Models
- Disaster debris management
- Terrorism risk
- Young scientists research session

The Great East Japan Earthquake and Tsunami of 11 March 2011
What worked and what did not: Views from the field

Prof. Rajib Shaw, Graduate School of Global Environmental Studies, Kyoto University, Japan

I recently had the opportunity to survey the affected areas of Iwate and Miyagi prefectures, affected by the Great Eastern Japan earthquake and tsunami of 11 March 2011, as a part of a needs assessment team of a non-profit organization named SEEDS Asia. This survey was an effort by the consortium of NGOs called Japan Platform which has been active to mobilize resources in the hardest hit areas. I visited several affected towns and cities including Taro, Miyako, Yamada, Kamaishi, Ofunato, Rikuzen Takata, Kesennuma, Minami Sanriku, Ishinomaki, Sendai, Iwanuma, Watari and Yamamoto-cho in four days. The devastation is huge, and beyond any expression. After the 2004 Indian Ocean Tsunami, I surveyed Indonesia, Sri Lanka and India, but did not see this level of destruction.



Caostal mega dyke in Taro

First, let us look at the magnitude of the earthquake, which is a once in 1,000 year event. The affected area is known for its past active seismicity, and repeated tsunamis

such as those that occurred on 15 June 1896, 3March 1933, and 22 May 1960. The last one was due to a Chile earthquake. Paleo-seismicity tells us that in 869 AD, there was a major event, named Jogan Earthquake, where three fault sources broke simultaneously. The current earthquake is also of the same nature. Therefore, the energy released was much higher compared to other recent earthquakes, causing one of the strongest tsunamis Japan has experienced in last 100 years.

Apart from the magnitude of the earthquake and resulting tsunami, one of the key reasons of the devastation is Japan's land character. Almost 70% of the country's land is covered by mountain, which leaves a very narrow coastal belt. The devastation caused by the tsunami was found to be the largest in two types of land areas. First is the area with a narrow opening to the sea, like that of Taro in Miyako town. The other one is the vast flat land, like Rikuzen Takada [in Iwate prefecture] or Watari, Yamamoto-cho [in Miyagi prefecture].

Disaster management center in Minami Sanriku

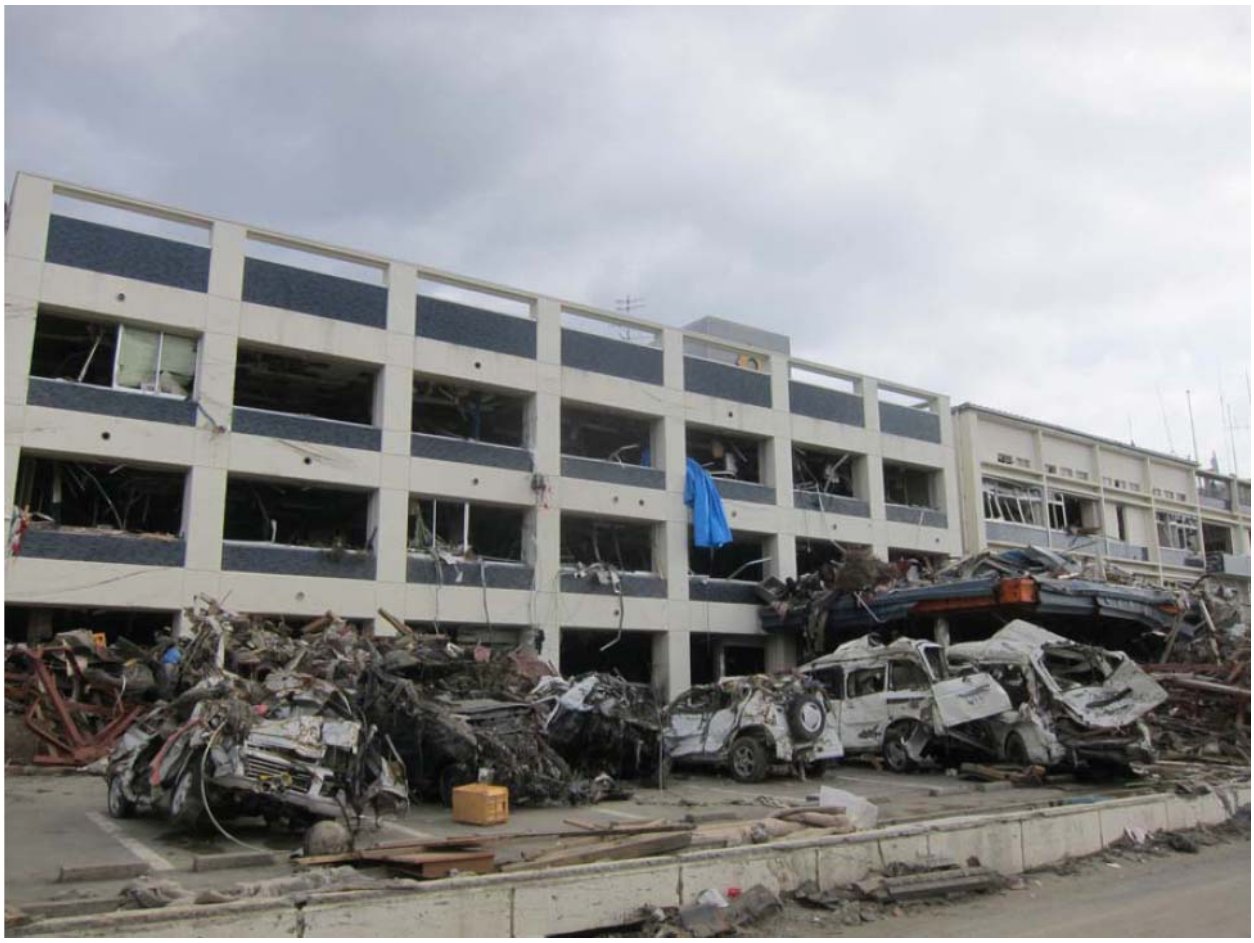
Taro is famous for its tsunami prevention measures. The town was affected by the 1896 tsunami [known as Meiji Sanriku earthquake and tsunami], which killed more than 22,000 people. The town lost most of its population in that disaster. In 1933, the town was again hit by another devastating tsunami, following a decision by the town leader to construct a mega dyke to protect its people. The dyke was built in several phases,

resulting in a 10 m, 2.5 km long structure. The current tsunami wave overflowed this dyke and damaged some areas; however, it would have been more devastating without the dyke. The importance of infrastructure based disaster prevention can be highlighted here.

In Kamaishi in Iwate prefecture, an eight storey tsunami evacuation building stood undamaged very close to the shoreline. In the hazard map, distributed by the city government, this building was designated and marked as an evacuation building with clear instructions that people need to evacuate higher than the fourth floor. What is more interesting is that, on March 3rd 2011 [the day of the 1933 earthquake and tsunami, known as Showa Sanriku earthquake and tsunami], an evacuation drill was performed with the local residents and school children. Therefore, tsunami awareness was rather fresh in their minds and people took shelter in evacuation buildings and used the nearby evacuation road [a pre-designated road on the nearby mountain with access stairs], immediately when they felt the earthquake. This shows the importance of evacuation drills and disaster education.

In contrast, in Rikuzen Takada, where there was rather vast land in the coastal area, the tsunami wave entered as much as 4 km inland, caused extensive damage to the local government building, and made it non-operational in the immediate rescue-relief phase. A distinct difference in the post disaster operation can be observed in the cities where the local government office was not affected due to its location in the higher ground. In Ofunato in Iwate prefecture or in Iwanuma, Yamamoto-cho in Miyagi prefecture, the local governments already started their preparation for the short and medium term recovery phase, including construction of temporary shelters. In contrast, in Minami Sanriku, where the three storey disaster management office was also destroyed, the relief phase is prolonged.

The effectiveness of early warning systems needs a proper risk communication mechanism, which links both information provider and receiver. In the March 11 disaster, the tsunami warning and tsunami advisory were issued within three minutes after the event. The warning was put on the Japan Meteorological Agency [JMA] webpage, transmitted on television, radio, social networking media, and also through announcements from the town and city offices. However, in several places, initially, people underestimated the height and severity of the tsunami, and started evacuating after the first wave had arrived. What makes people take immediate action for evacuation? An easy to understand early warning [with information on potential tsunami height], evacuation order and repeated evacuation drills make a difference. In some cases, people had a “feel safe” misperception, where neighbor’s and children’s roles became important.



Town office of Rikuzen Takada

What is an ideal tsunami prevention measure? There is possibly not a single formula applicable to every place. It needs to be customized based on the local geographic and topographic conditions. A combination of early warning systems, infrastructure measures like coastal dykes, tsunami evacuation centers, and awareness and education campaigns such as evacuation drills and disaster education is required.

Finally, I would like to emphasize that through the 400 km long survey along the coast, I did notsee major earthquake damages. While liquefaction effects were reported in Chiba and Ibaraki prefectures due to soft soil and reclaimed land, most of the buildings in the higher ground in the worst affected areas remain undamaged. The only visible impact was the damage of the roof tiles in some areas like Natori, Watari, and Yamamoto-cho in Miyagi prefectures. The epicenter and the fault zone were located under the sea, and therefore, it may not be comparable to the Great Hanshin Awaji Earthquake, which was an inland earthquake, and the fault line passed below the devastated city. But with a magnitude 9 earthquake, and with an intensity of 7 in Japanese scale (the maximum possible intensity), a real appreciation needs to be given to the earthquake risk reduction measures Japan has practiced over years. In all the coastal towns, a sharp demarcation of affected and non-affected areas can be made through the tsunami inundation, which varies from 3 to 5 km. If there were additional damages due to earthquakes, the situation would have been worse.

Tsunami evacuation building in Kamaishi

Rajib Shaw is an Associate Professor in the laboratory of International Environment and Disaster Management in the Kyoto University's Graduate School of Global Environmental Studies. His specialty is community based disaster risk reduction, and he is also the board chairman of SEED Asia.

2. Other News

Reducing disaster risk through microinsurance: new evidence from communities in South Asia

Rakhi Bhavnani, Stefan Hochrainer-Stigler, Reinhard Mechler, Mihir R. Bhatt and Mehul Pandya

Reducing disaster risk through the use of microinsur-ance is not a new idea or a new initiative, but how does it actually perform when operated at grassroots level? Where is the evidence? This article offers new and field survey-based evidence from the frontlines in South Asia.

There is broad and growing discussion on financial disaster safety nets, such as those provided by microinsurance, and the role that they can play as a resource for the poor in the aftermath of a disaster. Recent research and experience has pointed to the importance of such programmes in assisting the poor to avoid poverty traps and reduce their vulnerability to hazards. Despite its theoretical potential, very little is known about how microinsurance actually benefits households and communities after disasters. Much of the current work on disaster microinsurance has focused on supply-side issues, such as insurance pricing and implementation questions, whereas the demand side and potential benefits to the insured have gone largely unexamined.

This article attempts to address this and offers some summary information about the first large cross-country assessment, based on first-hand observation, of the impact of disaster microinsurance in the South Asia region. Communities across South Asia are vulnerable to disaster and include many households both with and without disaster microinsurance, making this a particularly useful area for rigorous comparative analysis. The overall aim of the study *Impact Assessment of Disaster Microinsurance for Pro-Poor Risk Management: Evidence from South Asia* is to advance the discussion of disaster microinsurance from anecdotal knowledge to specific evidence-based recommendations by assessing and understanding the impacts of products on clients.

Key areas covered include:

- client satisfaction in products and services
- client awareness, understanding and perceptions of risk, products, and needs
- current disaster coping mechanisms and risk management behaviour
- delivery mechanisms tailored for this low-income market
- the potential for vulnerability reduction, including poverty and disaster risk reduction (DRR) as well as enhancements in human welfare.

These areas have not previously been systematically looked into.

The study was initiated as a part of the Regional Risk Transfer Initiative, an effort led by the All India Disaster Mitigation Institute (AIDMI) to expand and strengthen microinsurance options for the poor in South Asia. It has been supported through funding from the ProVention Consortium and executed in partnership with the International Institute for Applied Systems Analysis. The study was led by Rakhi Bhavnani with Mehul Pandya, and guided by Reinhard Mechler, Hochrainer-Stigler and Ian O'Donnell.

Methodology

To investigate the impact of disaster microinsurance, an original dataset was generated across South Asia through primary data collection, based on stratified sampling of responses received from a control group (or 'non-clients') as well as microinsurance clients of the following five organizations offering disaster micro-insurance products:

- Basix (India)
- Self-Employment Women's Association (SEWA India)
- AIDMI (India)
- Yasiru (Sri Lanka)
- Proshika (Bangladesh).

Seven disaster products were evaluated: one for Yasiru, AIDMI, and SEWA, while two different products were surveyed for Basix and Proshika. Survey questionnaires were administered in local languages by 85 local and trained volunteers and representatives of the participating organizations, from October 2008 to September 2009. A total of 2,171 surveys were completed, with 1,640 client evaluations and 531 responses from non-insured clients across India, Bangladesh and Sri Lanka. While this study references the larger and growing body of literature on disaster microinsurance and findings from previous qualitative reviews, the analysis it offers is based solely on the findings from the survey of the five participating organizations.

Lessons learned

Overall, the results of the study show that people have an interest in, and are willing to pay for disaster microinsurance programmes in South Asia. The knowledge that they were covered in case of disaster was a big factor in their decision to purchase insurance. The majority of people also seemed happy with the amount of money they had to pay. Nearly 77 per cent of people surveyed said that the cost of microinsurance was adequate, whereas a little less than 7 per cent indicated that the amount they pay is too much. The products are reaching poor clients, many of whom are below the poverty line, highly in debt, and unable to cope after a disaster.

However, the findings have also revealed some problems with the process: funds are often late in reaching clients, with 26 per cent of people stating that they received their money after two months, and 30 per cent stating that it took as long as three

months. Though this delay is common in many financial and welfare services in South Asia, it was especially pinching to recent victims of large natural disasters. This delay can negatively influence the way that money is spent when or if it does finally arrive. There are also reported difficulties with the claim process, with 85 per cent of people saying that the process was hard to understand and that they required help (89 per cent said that they subsequently received adequate help from the organizations, which illustrates the importance of the role of civil society organizations (CSOs) at local level in DRR). There were also reports of inadequate total coverage. A total of 272 people stated that the money they received from an insurance claim was not sufficient.

As a result of these problems, a number of individuals have had to borrow additional funds from moneylenders, friends and family. Clients usually have high existing levels of debt, which are only exacerbated after disasters. In other words, disasters wipe out the repayment capacity of the indebted poor. This calls for a review of modification in product offerings, safety nets, and other risk managing financial services in combination with disaster microinsurance. In addition, there is a need to review products and potential clients in communities to ensure that although 'the poor' are being served, the 'poorer than poor' are not being excluded due to costs and information barriers. For this there are neither any studies available, nor are any pilots funded.

Though the insurance agencies claimed that their plans helped people get back to work faster, increased investment activities and increased human welfare, the study did not completely corroborate these claims. Study analysis found no significant change in workdays lost or welfare (measured through levels of savings and debt). However, this is not to say that microinsurance has no long-term developmental impact; the study was just unable to see any significant changes in the surveyed group in this round.

In terms of long-term risk reduction, a number of indicators tell us that the clients are aware of some of the risks they face and may be proactively engaging in decreasing some of the vulnerabilities themselves. Indeed, 387 people (24 per cent of the total) identified the need to reinforce parts of their home, and 68 per cent of these also stated that they had done this over the past ten years to reduce the impact of disasters. This evidence shows that clients perceive some amount of personal risk, although it is difficult to ascertain the extent of their knowledge since this study did not allow for in-depth probing of this issue. The extent of knowledge can be useful and valuable for future product design. It is clear, however, that disaster recovery is a 'window of opportunity'; one that brings positive changes for the future. The study found that after disasters, clients had greater improvements in shelter – additional roofing, better walls, stronger pillars, and new toilets – than non-clients.

The importance of trust cannot be underestimated. Findings show that if an organization has a positive reputation, there is a far higher chance that clients will not just sign up, but will also renew each year. Of the people surveyed, 88 per cent said that they would renew their disaster insurance policy in the future. Of those people, 40 per cent said that this was solely because they had a good perception of the insurance

agency such as SEWA or BASIX, Yasiru or Proshika. Historically, low levels of insurance penetration in the region can be attributed to the negative reputation of insurance companies, and low levels of cover and long delays in payment to the beneficiary. Rapport with the community, trust networks and improved claims processes are essential for the further development of disaster microinsurance in South Asia. Finally, the key to reducing risk seems to be awareness and information. The study signalled high demand for disaster microinsurance after non-insured clients had been given information showing the relevance and pricing of such products, as well as the power of organizations to reach more clients. Knowledge of disaster insurance was generally low considering the significant role that disasters play in the everyday life of the communities interviewed. The majority of people in the control group (69 per cent) had heard about some type of insurance before, whereas 21 per cent had not, and another 10 per cent had heard only a little. Over half of the respondents (52 per cent) did not know what disaster insurance was. An overwhelming majority (80 per cent) of clients felt that because of this lack of knowledge, disaster microinsurance should be promoted to many more people.

Recommendations for the future

With disaster microinsurance in its infancy in the region, a number of things are required – many of which are beyond the scope of the study. The promotion of regulatory and developmental systems in countries that do not have a legal apparatus for microinsurance, an increase in the number of reinsurance options,
and diversifying delivery models are some of the important areas outlined in academic literature and in policy arenas. Organization of the poor is becoming more important in this regard. However, the aim of this study was to provide specific recommendations based on evidence. Therefore, the recommendations that follow are based solely on the findings of data analysed through this empirical review. While they are limited to the thematic areas covered by the study, they are extremely pertinent to the successful servicing of disaster microinsurance for the poor.

The following six priority activities and interventions are recommended based on the findings of this study.

- *Utilize the client community to increase awareness and grow* – microinsurance organizations should work to create innovative ways to involve the community in outreach and create awareness about disaster microinsurance. Client satisfaction is high and an overwhelming majority is ready to refer friends to the programme. Client-to-client and non-client-to-client information links and communications are important. For this donors and national governments must invest more resources at community level.
- *Use disaster microinsurance as an entry point for further risk reduction* – microinsurance is not a panacea for DRR. There is a need to promote long-term

DRR in conjunction with microinsurance and use strong outreach and community links to support existing micro-insurance organizations. This will help to develop programmes focused on risk education, structural mitigation (i.e. retrofitting), preparedness, and enhanced coping mechanisms. There is a need for investment in both microinsurance and microinsurance organizations. Private sector and national governments must jointly initiate risk transfer and mitigation, both projects to pilot in South Asia. The World Bank and Asian Development Bank can provide initial technical assistance and seed money.

- *Regularly review the different organizations' claims processes to ensure that money is getting to clients in the most effective and efficient way possible* – this includes examining services to help with claims, pre-positioning claim kits, support for the timely review of claims, and information management of decisions. Faster processing should be incentivized. The private sector, authorities, and CSOs need to pilot tripartite mechanisms for performance improvement.
- *Promote increased participation by women in disaster microinsurance programmes* – this includes a review of products, services and modifications based on the specific needs of women – as victims of disasters or as vulnerable to disasters – in the region. Women's organizations and national authorities must find ways to better cover women before, after, and between disasters.
- *Look for the biggest critic* – the impact of disaster microinsurance cannot be determined solely through client surveys, but must be also gauged through a survey of people who have dropped out of the programme, had claims rejected, and who will not renew membership in the future. With programmes in their infancy in the region, a critical component for growth is being opened to hear what has worked and what hasn't, in an effort to fix problems. Investments in national and regional fora will be timely in South Asia. Independent, client-focused studies such as these should be initiated regularly and long-term, to turn criticism into design input.
- *Use impact assessments for future product development* – impact measurement is a critical component of micro-insurance research and development in South Asia and other regions. There is a need to develop future product offerings based on the rigorous empirical findings from a wider range of and longer trend of impact assessments in South Asia. Investments must be made by donors and the United Nations in such regional, long-term, and focused impact studies.

Investment in evidence-based policy-making delivers results for better and more effective DRR. Though such investments need dedicated teams and a committed institutional base to collect evidence, it is not so difficult to find such conditions in South Asia. The results are of immediate and long-term use to everyone working on DRR.

3. Conference Announcements

- **7 - 9 September, 2011**
  8th International Conference on Earthquake Resistant Engineering Structures
  ERES 2011 is the eighth international conference in the series on Earthquake Resistant Engineering Structures organised by the Wessex Institute of Technology. The meeting provides a unique forum for the discussion of basic and applied research in the various fields of earthquake engineering relevant to the design of structures. The importance and actuality of the work presented at these meetings is reflected by the increasing number of major earthquakes that are taking place all over the world.

  Website: http://www.wessex.ac.uk/11-conferences/eres-2011.html

- **31 Oct. -2. Nov, 2011**
  IRDR Conference 2011: Disaster Risk: Integrating Science and Practice
  Our knowledge of natural hazards is steadily growing as science and technology develop rapidly, yet disasters continue to devastate people's lives and the resources they depend on. Are we focusing on the most important problems? Are we digging deep enough to uncover the root causes of disasters? Are people actually making decisions based on our findings? *No single discipline can answer these questions.* IRDR Conference 2011 will provide a platform from which to launch trans-disciplinary research alliances aimed at in-depth, practical disaster risk reduction studies.

  Website: http://www.irdrinternational.org/conference2011.php

- **27- 28 January, 2012.**
  Niche International Conference on Disaster Management
  Information not available yet.

  Website: http://www.niuiccdm.com/#

- **11- 12 May, 2012.**
  Insurance Markets and Catastrophe Risk.
  In recent years, a number of extreme events have caused large economic shocks and created substantial political and social challenges. Natural disasters, terrorist acts, technological accidents, outbreaks of contagious diseases, discrete medical advances impacting longevity and the recent financial crisis are salient examples. The costs and consequences of these extreme events depend

critically on the private and public actions, policies, and incentives that are in place both before and after they occur. This conference will highlight research on a range of issues related to insurance markets and catastrophic risks. Suitable themes for the meeting include: What drives the demand for and supply of physical and protective measures, including but not limited to insurance, from such events for residential and commercial structures and activities? Does the packaging and marketing of protective measures affect the demand for them, and the extent to which they reduce losses? How is information about the probability distribution and consequences of these events formed and relied upon? What distortions (institutional, behavioral, financial, theoretical) are present in markets for these risks? How does the public sector affect the supply of and demand for protection and influence the recovery process after catastrophic events? How do existing public and private interventions in the markets for catastrophe risks affect the overall level of risk-taking? How do current public programs, and other potential programs, affect the distributional effects of catastrophic events?

Website: http://www.nber.org/callforpapers/InsuranceMarkets.html

- **2 - 4 July, 2012**
  1st International Conference on Environmental and Economic Impact on Sustainable Development
  The 1st International Conference on Environmental Impact and Development originated from the need to provide an inter-disciplinary forum where the most serious problems affecting sustainable development can be discussed. The basic premise is that development projects need to consider the most pressing issues related to environmental impacts in order to provide complete solutions. The current emphasis on sustainable development is a consequence of the general awareness of the need to solve numerous environmental problems resulting from our modern society. This has resulted in the need to assess the impact of economic investments on the environment. The topic of investment assessment and environmental economics needs to be discussed in an integrated way, in accordance with the principles of sustainability, considering the social and environmental aspects of new investments, as well as possible environmental damage. The roots of financial development are financial growth, which in conventional terms requires an increase in production and the use of more resources. Their overuse can result in the destruction of natural resources and larger releases of waste and pollution into the environment. The conference will address issues related to environmental toxicology and hazardous waste. With large numbers of new chemicals entering the market each year, it has become necessary to assess their effects on ecosystems as well as minimise their impact on the environment. There is a growing need for techniques and practices to minimize the environmental effects of chemicals, and for the implementation of the corresponding principles in the planning of environmental policy and decisionmaking. It is also necessary to understand the economic

impact of toxic products on the environment. The conference will also examine issues related to whether development enterprises are compatible with environmental protection, dealing in particular with cases of possible severe contamination and toxicity. The problem of what to do with the existing contaminated sites or brownfields is dealt with in detail, drawing from existing experience. The most important motivation for the conference is to learn from past failures, to not repeat the same mistakes while attempting to prevent emerging threats to the environment and ecological systems.

Website:http://www.wessex.ac.uk/12-conferences/Environmental-Impact-2012.html

- **26 -30 August, 2012**
  4th International Disaster and Risk Conference IDRC Davos 2012
  After three successful IDRC Davos conferences the GRF Davos team is already in the preparation for IDRC Davos 2012, which will take place from 26 to 30 August 2012 in Davos, Switzerland. Risks in a changing and global world are complex and interconnected, even more so in a globalized world consisting of many societies at very different levels of development. The frequency and severity of natural disasters have increased markedly worldwide. Economic losses associated with natural hazards are increasing exponentially in developing countries, where local risk-transfer markets are generally weak. Promoting integrative risk management is more then ever a pressing issue. At IDRC Davos 2012 a multi- and interdisciplinary group of stakeholders will discuss new findings and exchange experiences about the broad spectrum of risks societies are facing today in plenary and parallel sessions, workshops and training courses, and poster exhibitions.

  Website: http://www.idrc.info/

- **19 - 21 September, 2012**
  8th International Conference on Simulation in Risk Analysis and Hazard Mitigation
  Risk Analysis 2012 is the eighth international conference on computer simulation in risk analysis and hazard mitigation. Covering a series of important topics of current research interest and with many practical applications, the conference is concerned with all aspects of risk analysis and hazard mitigation, associated with both natural and anthropogenic hazards.The analysis and management of risk and the mitigation of hazards is of fundamental importance to planners and researchers around the world. We live in an increasingly complex society with the potential for disasters on a worldwide scale. Scientific knowledge is essential to our better understanding of risk. Natural hazards such as floods, earthquakes, landslides, fires and others have always affected human societies. Man-made hazards, however, played a comparatively small role until the industrial revolution

when the risk of catastrophic events started to increase due to the rapid growth of new technologies. The interaction of natural and anthropogenic risks adds to the complexity of the problem. Advances in computational methods and the ability to model systems more precisely now enables hazards to be quantified, their effects to be simulated and risk analysis to be pursued with greater accuracy, providing more effective risk management. These developments are important for all areas of human endeavour and have particular relevance to environmental issues where the risks involved are substantial. Effective risk management and the mitigation of possible hazards have become a high priority of government and a public concern.

Website: http://www.wessex.ac.uk/12-conferences/risk-analysis-2012.html

- **20-22 November, 2012**
  The 2nd European Conference on FLOODrisk Management
  Following the successful FLOODrisk 2008 conference held in Oxford (UK), FLOODrisk 2012 will bring together researchers, policy makers and practitioners from across the world to share experience and progress made in flood risk research and policy and management practice. FLOODrisk 2012 will include contributions from a variety of National, European and International flood related initiatives as well as wider international practice. In particular, the applicability of to flood risk management practice, and the influence of policy on research and practice will be considered. The programme of events is to be confirmed however registration will take place on 19th November with an Ice Breaker event in the evening. The conference will finish with a Dinner on 22nd November.

  Website: http://www.floodrisk2012.net/paper-submission.asp

4. Call for Papers

- **International Journal of Integrated Disaster Risk Management:** A call for papers for the IDRiM Society's new International Journal of Integrated Disaster Risk Management is now open. Papers should be submitted electronically via the online Editorial Management System at

  http://idrimjournal.com/index.php/idrim

- **Special Issue "Risk Management: Challenges Responses to Climate Change": A special issue of *Challenges* (ISSN 2078-1547)**

  Within minutes of the March 2011 earthquake in Japan, news media provided unprecedented coverage of an unfolding natural catastrophe. Events such as this place natural disasters firmly in the public eye but only for a short time. It falls to the research community to learn the lessons offered by these events and turn them into opportunities for developing more effective risk management and mitigation strategies and identifying the factors that contribute to the vulnerability and resilience of communities and response and recovery agencies. Disasters such as the Japanese tsunami also highlight the ever-present need for systematic, rigorous research into the risk posed by natural hazards and how these risks can be managed. Of course it is vital to ensure that the findings from such research endeavours are disseminated to those who can use the findings.This means that journals that disseminate these lessons are important resilience and adaptive resources for all those involved in risk and disaster management. Journals such as Challenges provide outlets for scholarly and professional debate on the causes and consequences of disasters and how their effects may be mitigated and managed. This special edition of Challenges will give voice to research into the causes of human and societal losses and ensure that the lessons learned from such disasters can be readily disseminated to the humanitarian, academic and political arenas where that knowledge can provide the evidence base necessary to inform effective risk management intervention.

  http://www.mdpi.com/journal/challenges/special_issues/challenges_responses/

- **ECIDM 2011 : Call for Paper: Special Issue on SMART ENVIRONMENTS AND COLLECTIVE COMPUTATIONAL INTELLIGENCE FOR DISASTER MANAGEMENT**

  Stakeholders in disaster management settings often find the effective and efficient utilization of emerging technologies quite a challenging process but very frequently a critical computational inclusion to the intelligence required for protecting individuals, communities, their environment and critical infrastructures. The special issue is dedicated to the dissemination of original contributions that are related to the theories, practices and concepts of smart environments and emerging collective computational and collaborative technologies for the specific purpose of improving intelligence when managing natural or man- made disasters. In particular, the special issue is focused on the applicability - for the purpose of managing disasters - of technologies that can support autonomous adaptation to complex and messy situations caused from these, highly dynamic contexts. Various methods and technologies including simulations, multi-dimensional decision modeling, data mining, swarm intelligence, smart spaces and sensors, context-aware, situated and pervasive computing, geographical information systems, ad- hoc mobile networks, wireless communications, grid and cloud computing, social networks and crowd sourcing are a smart technology means to enable a more informed decision making to mitigate and prepare for, respond to and recover from growing occurrences of disasters.

  http://www.derby.ac.uk/computing/research/jaihc

- **Large-Scale Disasters: What We Have Learned, What We Can Do: Special Issue of Leadership and Management in Engineering**

  The goal of the special issue is to draw from lessons learned from large-scale disasters to improve the practice of engineering for processes such as risk assessment, planning, design, construction, standard setting, operations and maintenance, emergency management, and forensic analysis, among others. LME welcomes submissions from engineering and allied fields, and professionals who focus on disaster response are also encouraged to submit. Disaster management involves anticipation and monitoring, preparedness, mitigation, and response and recovery, among others, and involves decision makers from national leaders to local first responders, as well as the international community. Papers on topics such as governance, emergency management, and incident management might accompany technical papers on engineering systems, vulnerability analysis, and key systems of critical infrastructure and descriptions of roles such as public works and utility officials, first responders, regulators, political leaders, vendors, and educators.

  http://www.asce.org/uploadedFiles/Books_and_Journals/Journals/call_for_papers_LE_Special%20issue.pdf

- **Special Issue "Flood Risk Management": A special issue of *Water*:**

  Flooding causes enormous damage and loss of life in various parts of the world. It is therefore of importance to continuously develop and improve our knowledge in the field of flood risk management. In recent years more traditional disciplines such as hydraulic modelling have evolved into the wider area of flood risk management. Moreover, our capacity to understand and manage flood risks has improved thanks to advances in computers, remote sensing technology and better consideration of social issues. Recent events continue to demonstrate the capacity of floods to cause substantial damage to property, loss of life, harm local economies and disrupt critical infrastructure systems. However, although these events and others share some common features they also highlight the diversity of issues and broader interactions that must be considered as part of a flood risk management strategy. This special issue of *Water* is timely in its focus on flooding, but in particular as it seeks to highlight the breadth and complexity of flood risk management. Interdisciplinary papers are welcomed that highlight new ideas, approaches and innovations in flood risk management, including topics such as: different types of flooding (rivers, coastal, estuarial, urban) and threats (storms, rainfall, tsunami, dam breach); case studies and comparative studies; analyses of regional/global patterns and trends; innovative modelling methods for flood hazards; new approaches to quantifying risk and uncertainty; advances in flood risk communication, policy making, economics of flood risk reduction; structural and non-structural solutions for flood risk reduction; relationship with other water issues such as drought, water quality; and interactions with land use, food, energy and critical infrastructure. effects of climate change and sea level rise on flood risks

  http://www.mdpi.com/journal/water/special_issues/flood_risk_manag/

- **Call for Papers for a Special Issue of the Journal of Urban and Regional Information Systems Association (URISA Journal)**

  The application of geographic information systems (GIS) continues to emerge as the tools are adopted by both information and social sciences. The ability to share dwindling resources by community, municipal and university partners has moved from the desktop to the information highway. Early definitions of public participation geographic information systems (PPGIS) emphasized the university as the change agent since the technology drove collaboration. Resident-led PPGIS models focus on the collection and distribution of neighborhood level data using distributed web-based interfaces. This special issue of the URISA Journal, scheduled for publication in November 2012, is intended to update the available body of applied GIS literature. In particular, research should explore problems or questions on PPGIS strategies including effectiveness measures and

implementation at varying levels of delivery. The discussion should include the changes in technology and data definitions including ‘volunteered geographic information’ or ‘VGI’ in the PPGIS model. Research may consider what influence of ‘crowdsourcing’ as a means to move PPGIS from participatory to action research, as well as, the impact on public policy in local and international spheres. Research that considers PPGIS in emerging markets, shrinking cities or post-disaster environments and how the application of a PPGIS can aid in relearning pedagogy are considered an important perspective. While it is important to consider the foundations of PPGIS and the traditional definitions of ‘partnership’, articles should describe how, or if, the model of participation has changed. When using contemporary examples, describe their ethical considerations in emerging markets from any part of the earth and address both earth and human-environment research.

http://www.urisa.org/Journal_PPGIS

5. Internet Resource List

- Disaster Reduction Hyper base: Web based facility to compile appropriate disaster reduction technologies and knowledge.
  Website:
  http://drh.edm.bosai.go.jp/

- MCEER: Collection of disaster management resources, including international, federal, state, local and non-profit organizations:
  Website:
  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.
  Website:
  http://www.keele.ac.uk/depts/por/disaster.htm

- Internet Resources for Disaster Studies: University of Delaware Library
  Website:
  http://www2.lib.udel.edu/subj/disasters/internet.htm

- FEMA" Federal Emergency Management Agency: Focus is on the US
  Website:
  http://www.fema.gov/index.shtm

- Disaster Handbook: University of Florida.
  Website:
  http://disaster.ifas.ufl.edu/links.htm

- Disaster Management: Royal Roads University.
  Website:
  http://libguides.royalroads.ca/content.php?pid=64941&sid=480216

- Natural Hazards and Disaster Information Resources: University of Colorado at Boulder (including newsletter).
  Website:
  http://www.colorado.edu/hazards/resources/

6. (New) Journals

- **Journal of Integrated Disaster Risk Management, IDRIM Journal:**

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

  - **Website:** http://idrimjournal.com/index.php/idrim

- **Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards:**

  - **Objective:** Georisk covers many diversified but interlinked areas of active research and practice, such as geohazards (earthquakes, landslides, avalanches, rockfalls, tsunamis, etc.), safety of engineered systems (dams, buildings, offshore structures, lifelines, etc.), environmental risk, seismic risk, reliability-based design and code calibration, geostatistics, decision analyses, structural reliability, maintenance and life cycle performance, risk and vulnerability, hazard mapping, loss assessment (economic, social, environmental, etc.), GIS databases, remote sensing, and many other related disciplines. The underlying theme is that uncertainties associated with geomaterials (soils, rocks), geologic processes, and possible subsequent treatments, are usually large and complex and these

uncertainties play an indispensable role in the risk assessment and management of engineered and natural systems. Significant theoretical and practical challenges remain on quantifying these uncertainties and developing defensible risk management methodologies that are acceptable to decision makers and stakeholders. All published research articles in this journal have undergone rigorous peer review, based on initial editor screening and anonymous refereeing by independent expert referees.

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

- ## Current Opinion in Environmental Sustainability:

  - **Objective:** The Current Opinion journals were developed out of the recognition that it is increasingly difficult for specialists to keep up to date with the expanding volume of information published in their subject. In Current Opinion in Environmental Sustainability, we help the reader by providing in a systematic manner: 1. The views of experts on current advances in environmental sustainability in a clear and readable form. 2. Evaluations of the most interesting papers, annotated by experts, from the great wealth of original publications. Current Opinion in Environmental Sustainability aims to address all the economic, social, technological and institutional aspects related to the challenge of environmental sustainability by focussing on integration across academic disciplines and insights with implications for societal practices and processes. Current Opinion in Environmental Sustainability aims to stimulate scientifically grounded, interdisciplinary, multi-scale debate and exchange of ideas. It will contain polished, concise and timely reviews and opinions. Current Opinion in Environmental Sustainability(COSUST) will serve as an invaluable source of information for researchers, lecturers, teachers, professionals, policy makers and students.
    The subject of environmental sustainability is divided into 6 themed sections, each of which is reviewed once a year:
    (1) Climate (covering climate change, climate risk management, and adaptation) (2) Human settlements and habitat (covering cities, urbanization, transport) (3) Energy systems (covering renewable energy, energy efficiency, bioenergy) (4) Terrestrials systems (food systems, biodiversity, and ecosystem services) (5) Carbon and Nitrogen cycles (6) Aquatic systems (covering marine and fresh water, isheries, currents, etc.) The common denominators across these sections, to assure a cross cutting approach are: (a) interdisciplinary and transdisciplinary; (b) quantitative; (c) multi-scale (regional vs. global; space vs. time); (d) focus on integrated assessment; (e) governance, ethics, behaviour, education, and policy tools..

- **Website:**http://www.elsevier.com/wps/find/journaldescription.cws_home/718675/description#description

- **International Journal of Risk Management (IJRM):**

  - **Objective:** The International Journal of Risk Management (IJRM) is a refereed international journal whose focus is on exchanging information on risk related theory and its applications, including project risk management, supply chain risk management, risk attitude and behavior, and risk management in finance, accounting, engineering, marketing, auditing, law, procurement and contracting, business and economics, etc. The objective is to provide an international forum for researchers and practitioners across the many relevant disciplines and industries to discuss some related problems and learn from each other's work. The readership includes professionals, academics, researchers, and managers.

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

- **International Journal of Safety and Security Engineering:**

  - **Objective:** The International Journal of Safety and Security Engineering aims to provide a forum for publication of papers on the most recent developments in the theoretical and practical aspects of these important fields. Safety and Security Engineering, due to its special nature, is an interdisciplinary area of research and applications that brings together in a systematic way many disciplines of engineering, from the traditional to the most technologically advanced. The Journal covers areas such as crisis management; security engineering; natural disasters and emergencies; terrorism; IT security; man-made hazards; risk management; control; protection and mitigation issues. The Journal aims to attract papers in all related fields, in addition to those listed under the List of Topics, as well as case studies describing practical experiences. The study of multifactor risk impact will be given special emphasis. Due to the multitude and variety of topics included, the List is only indicative of the themes of the expected papers. Authors are encouraged to submit papers in all areas of Safety and Security, with particular attention to integrated and interdisciplinary aspects.

  - **Website:** http://journals.witpress.com/jsse.asp

- **Global Environmental Change:**

  - **Objective:** *Global Environmental Change: Human and Policy Dimensions* is an international, interdisciplinary journal spanning the social and natural sciences. It publishes high-quality original theoretical and applied research and review articles across the entire field of global environmental change. Areas include biodiversity and ecosystem services, water resources, climate change, international agreements, North-South relations, land use and cover change, institutions and governance. The journal interprets global environmental change to mean the outcome of processes that are manifest in localities, but with consequences at multiple spatial, temporal and socio-political scales. The journal addresses issues of public policy, economics, equity, risk, and resilience, science policy, international development, and health and well-being.

  - **Website:**http://www.elsevier.com/wps/find/journaldescription.cws_home/30425/description#description

- **Journal of Homeland Security and Emergency Management:**

  - **Objective:** JHSEM is the primary source of new, peer-reviewed research and information in the fields of homeland security and emergency management. JHSEM features original, innovative, and timely articles and other information on research and practice from a broad array of professions including: emergency management, engineering, political science, public policy, decision science, and health and medicine. The electronic nature of the journal allows timeliness and responsiveness unparalleled among academic publications. JHSEM publishes peer-reviewed articles, news and communiqués from researchers and practitioners, and book/media reviews. The lead editor is Irmak Renda-Tanali at the Graduate School of Management & Technology, University of Maryland University College; Maryland. Authors have included prominent researchers from the Centers for Disease Control and Prevention, Harvard University, Carnegie Mellon University, the Environmental Protection Agency, George Mason University, George Washington University, RAND, and Vanderbilt University.

  - **Website:** http://www.bepress.com/jhsem/about.html

- **Journal of Emergency Management:**

  - **Objective:** *Journal of Emergency Management* is a professional, bi-monthly journal with a simple but urgent goal: to better equip all those responsible for emergency preparedness and response to deal effectively with everything from acts of terror, fires, floods, and weather emergencies to gas explosions and catastrophic accidents on land, in the air, or at sea. With a well-focused game plan carried out by an unbeatable team of emergency preparedness and response experts, *Journal of Emergency Management* is already being hailed as long overdue and a "must have" for anyone responsible for the safety and well-being of both personnel and property.With each issue of *Journal of Emergency Management* look for in-depth articles on topics as wide ranging as:Meeting the challenge of the shadowy world of terrorism, Emergency response and disaster management, Severe weather, flood and hurricane case studies, Emergency preparedness and response legislation, Public buildings recovery planning, Information analysis and infrastructure protection,Evacuation procedures for the visually impaired, Emergency wireless messaging

  - **Website:** http://www.pnpco.com/pn06001.html

- **International Journal of Disaster Resilience in the Built Environemnt:**

  - **Objective:** *The International journal of Disaster Resilience in the Built Environment* aims at developing the skills and knowledge of the built environment professions and will strengthen their capacity in strategic and practical aspects of disaster prevention, mitigation, response and reconstruction to mitigate the effects of disasters nationally and internationally. The journal publishes original and refereed material that contributes to the advancement of the research and practice and provides contributing authors with an opportunity to disseminate their research and experience to a broad audience. *International journal of Disaster Resilience in the Built Environment* promotes research and scholarly activity that examines the role of building and construction to anticipate and respond to unexpected events that damage or destroy the built environment (for example, an infrastructure project – from earthquakes, flooding and climate change to terrorist attacks) and reflects construction's ongoing responsibility toward built environment's users. Accordingly, the journal is designed for researchers and academics, policy makers and other professionals working with, or who anticipate having, disaster prevention, mitigation, response and reconstruction responsibilities, and who wish to improve their working knowledge of both theory and practice. The journal

focuses on basic and applied research, practical developments, case studies, editorials, book reviews, information on forthcoming events in the field, and field reports. In keeping with the journal's international scope, articles are particularly welcome with details of: overall leadership in research, education, planning, design and implementation for infrastructure renewal and reconstruction projects in developing countries; and, details of innovative and socially responsible projects inspired via internal synergies that lead to rapid development and improved quality of life. *International journal of Disaster Resilience in the Built Environment* helps to communicate new practical ideas, applications and development details of education and training, and thus build capacity for self-sufficiency. The journal reports research that assists capacity-building for reconstruction, renewal and development of sustainable infrastructure, supports proactive and fruitful collaborations and networking among various stakeholders, and helps develop appropriate policy development and plans for implementation. Regular special issues on a range of multidisciplinary subjects keeps readers abreast of topical subjects.

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

- **Regional Environmental Change:**

  - **Objective:** Environmental changes of many kinds are accelerating worldwide, posing significant challenges for humanity. Solutions are needed at the regional level, where physical features of the landscape, biological systems, and human institutions interact. The goal of Regional Environmental Change is to publish scientific research and opinion papers that improve our understanding of the extent of these changes, their causes, their impacts on people, and the options for society to respond. "Regional" refers to the full range of scales between local and global, including regions defined by natural criteria, such as watersheds and ecosystems, and those defined by human activities, such as urban areas and their hinterlands. We encourage submissions on interdisciplinary research across the natural sciences, social sciences and humanities, and on more focused studies that contribute towards the solutions to complex environmental problems. Topics addressed include (i) the regional manifestations of global change, especially the vulnerability of regions and sectors; (ii) the adaptation of social-ecological systems to environmental change in the context of sustainable development; and (iii) trans-boundary and cross-jurisdictional issues, legislative and governance frameworks, and the broad range of policy and management issues associated with building, maintaining and restoring robust social-ecological systems at regional scales.

The primary format of contributions are research articles, presenting new evidence from analyses of empirical data or else more theoretical investigations of regional environmental change. In addition to research articles, we also publish editorials, short communications, invited mini-reviews on topics of strong current interest, as well as special features that provide multifaceted discussion of complex topics or particular regions.

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

- **Natural Hazards Review:**

  - **Objective:** The *Natural Hazards Review* stands on the realization that natural disaster losses result from interactions between the physical world, the constructed environment, and the character of the societies and people who occupy them. The journal is dedicated to bringing together the physical, social, and behavioral sciences; engineering; and the regulatory and policy environments to provide a forum for cutting edge, holistic, and cross-disciplinary approaches to natural hazards loss and cost reduction. The journal offers a means for researchers and practitioners working together to publish the results of truly interdisciplinary and partnered approaches to loss reduction and long-term disaster resiliency. Engineering topics covered include the characterization of hazard forces and the planning, design, construction, maintenance, performance and use of structures in the physical environment. Social and behavioral sciences topics addressed include a range of issues related to hazard mitigation and human response as well as significant issues related to the built environment such as land use, building standards, and the role of financial markets and insurance. The specific physical science topics covered include those pertinent to understanding the hazardous character of the world and the performance of the structures that we build to accommodate our way of life. More importantly, the journal features papers co-authored by people from a variety of specializations who bring a cross-disciplinary perspective to the complex factors that contribute to disasters in today's-and especially tomorrow's-world.

  - **Website:** http://ascelibrary.org/nho/

Address list of already listed journals in back issues:

- **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.ijdrs.org

- **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

Extreme Environmental Events: Complexity in Forecasting and Early Warning

Authors : Robert A. Meyers (Editor)
Year: 2011
Publisher: Springer
ISBN: 978-1441976963
Content: *Extreme Environmental Events* is an authoritative single source for understanding and applying the basic tenets of complexity and systems theory, as well as the tools and measures for analyzing complex systems, to the prediction, monitoring, and evaluation of major natural phenomena affecting life on earth. These phenomena are often highly destructive, and include earthquakes, tsunamis, volcanoes, climate change,, and weather. Early warning, damage, and the immediate response of human populations to these phenomena are also covered from the point of view of complexity and nonlinear systems. In 61 authoritative, state-of-the art articles, world experts in each field apply such tools and concepts as fractals, cellular automata, solitons game theory, network theory, and statistical physics to an understanding of these complex geophysical phenomena.

Dynamics of Disaster: Lessons on Risk, Response and Recovery

Authors :Rachel A Dowty et al. (Editor)
Year: 2011
Publisher: Earthsscan Pulbications Ltd
ISBN: 978-1849711432
Content: Disasters are the result of complex interactions between social and natural forces, acting at multiple scales from the individual and community to the organizational, national and international level. Effective disaster planning, response and recovery require an understanding of these interacting forces, and the role of power, knowledge and organizations. This book sheds new light on these dynamics, and gives disaster scholars and practitioners new and valuable lessons for management and planning in practice. The authors draw on methods across the social sciences to examine disaster response and recovery as viewed by those in positions of authority (Part I) and the recipients of operations (Part II). These first two sections examine cases from Hurricane Katrina, while Part III compares this to other international disasters to draw out general lessons and practical applications for disaster planning in any context. The authors also offer guidance for shaping institutional structures to better meet the needs of communities and residents.

Calculating Catastrophe

Authors : Gordon Woo
Year: 2011
Publisher: Imperial College Press
ISBN: 978-1848167384
Content: This book explains the underlying quantitative basis for understanding catastrophe phenomena, both natural and man-made. The catastrophes covered range from geological, meteorological and hydrological hazards to political violence, industrial, ecological and financial risk.

Global Aerospace Monitoring and Disaster Management

Authors : Anatoly N., Menshikov, Valery A., Urlichich, Yuri M.
Year: 2011
Publisher: Springer
ISBN: 978-3-7091-0809-3
Content: In this book, space systems are situated in the global processes of the 21st century's information society and the role that space information systems could play in risk management is determined; methods of detecting and forecasting of both natural disasters and technogenic catastrophes and existing global and regional monitoring systems are described; and the IGMASS is introduced with its architecture and design concept and social and economic aspects and estimates of its creation, development, and utilization. Finally, results of the international symposium held in Limassol, Cyprus, in November 2009 in preparation of the IGMASS project's submission to the United Nations are discussed.

The Wenchuan Earthquake of 2008

Authors :Chen, Yong, Booth, David C.
Year: 2011
Publisher: Springer
ISBN: 978-3-642-21158-4
Content: "The Wenchuan Earthquake of 2008: An anatomy of disaster" gives a detailed account of the damage, seismology and tectonics of the event and discusses earthquake prediction, seismic hazard and risk management, the creation and implementation of building codes, and new practices used in rescue, relief and reconstruction. It will be of significant interest to researchers and practitioners engaged in seismology, geophysics, engineering, the social sciences, and disaster management and recovery. It also offers a valuable new and uniquely Chinese perspective with many insights for future mitigation of earthquake risk.

Coping with Climate Change: Principles and Asian Context

Authors: Chandrappa, Ramesha, Gupta, Sushil, Kulshrestha, Umesh Chandra
Year: 2011
Publisher: Springer
ISBN: 978-3-642-19673-7
Content: The Environmental and climatic issues varies from continent to continent and is unique to Asia. Understanding the issues does need lot of research and study material which students may not be able to gather due to shortage of time and resources. Hence an effort is made by authors gathering there experience and academic input from renowned universities of world. Climate change is real and coping with it is major concern in coming days. Most of the books written and sold in the past need updating and customizing. The general description of climate change and world will not help the professionals and students. It needs to seen area wise as a professional will work in specific geographic area. Hence an effort is made to collect data from Asia which host most populated countries along with ecological hot

In Extremes: Disruptive Events and Trends in Climate and Hydrology

Authors : V. Pisarenko, M. Rodkin
Year: 2011
Publisher: Springer
ISBN: 978-3-642-14862-0
Content: The book addresses a weakness of current methodologies used in extreme value assessment, i.e. the assumption of stationarity, which is not given in reality. With respect to this issue a lot of new developed technologies are presented, i.e. influence of trends vs. internal correlations, quantitative uncertainty assessments, etc. The book not only focuses on artificial time series data, but has a close link to empirical measurements, in order to make the suggested methodologies applicable for practitioners in water management and meteorology.

Post-Disaster Reconstruction of the Built Environment: Rebuilding for Resilience

Authors :Dilanthi Amaratunga, Richard Haigh
Year: 2011
Publisher: Wiley
ISBN: 978-1-4443-3356-5
Content: The construction industry is typically engaged in a range of critical activities after a disaster: providing temporary shelter after the disaster; restoration of permanent shelter and public services such as hospitals, schools, water supply, power, communications, and environmental infrastructure. This book identifies the challenges that face the industry and highlight best practices to enable the construction industry to address those problems which make an effective response to these unexpected events difficult. Written by an international team of experts, this book will help researchers and advanced students of construction understand the problems faced by communities and the

construction industry when faced with a natural or man made disaster, and identify the planning and management processes required by the industry to mount an effective response.

Environmental Hazards and Disasters: Contexts, Perspectives and Management

Authors: Bimal Kanti Paul
Year: 2011
Publisher: John Wiley and Sons Ltd
ISBN: 9780470660027
Content: Environmental Hazards and Disasters: Contexts, Perspectives and Management focuses on manifested threats to humans and their welfare as a result of natural disasters. The book uses an integrative approach to address socio-cultural, political and physical components of the disaster process. Human and social vulnerability as well as risk to environmental hazards are explored within the comprehensive context of diverse natural hazards and disasters. In addition to scientific explanations of disastrous occurrences, people and governments of hazard-prone countries often have their own interpretations for why natural disasters occur. In such interpretations they often either blame others, in order to conceal their inability to protect themselves, or they blame themselves, attributing the events to either real or imagined misdeeds. The book contains a chapter devoted to the neglected topic of such reactions and explanations. Includes chapters on key topics such as the application of GIS in hazard studies; resiliency; disasters and poverty; climate change and sustainability and development. This book is designed as a the primary text for an interdisciplinary course on hazards for upper-level undergraduate and Graduate students. Although not targeted for an introductory hazards course, students in such a course may find it very useful as well. Additionally, emergency managers, planners, and both public and private organizations involved in disaster response, and mitigation could benefit from this book along with hazard researchers. It not only includes traditional and popular hazard topics (e.g., disaster cycles, disaster relief, and risk and vulnerability), it also includes neglected topics, such as the positive impacts of disasters, disaster myths and different accounts of disasters, and disasters and gender.

Crisis Information Management: Communication and Technologies

Authors:Christine Hagar
Year: 2011
Publisher: Woodhead Publishing Ltd
ISBN: 9781843346470
Content: This book explores the management of information in crises, particularly the interconnectedness of information, people, and technologies during crises. Events, such as the Haiti earthquake, Hurricane Katrina and 9/11, have demonstrated that there is a great need to understand how individuals, government, and non-government agencies organize, manage, access, communicate, and disseminate information within communities during crisis

situations. Information management problems and information technology failures have been cited as significant factors in the failed responses to many crises. This edited book brings together papers written by researchers, academics, and practitioners from a variety of information perspectives in crisis response and management (e.g., information science, information management, information systems, and librarians).

The Causes and Behavioral Consequences of Disasters

Authors:
Year: 2011
Publisher: Springer
ISBN: 9781461403166
Content: "The Causes and Behavioral Consequences of Disasters" brings a public health perspective to the literature, reflecting the increasing importance of the field in both disaster preparedness and disaster response. Arguing that a disaster is not only the event but its aftermath as well, the authors apply salient local content to the study of scenarios ranging from the Cuzco, Peru, earthquake of 1950 to the Columbine school shooting, the Oklahoma City bombing, and 9/11. These case studies form the basis for models of vulnerabilities to disasters and population behavior following disasters, illustrating how careful pre-event planning and coordinated post-event response strategies can minimize the initial damage and negative aftereffects. "The Causes and Behavioral Consequences of Disasters" will further professional discussion and understanding among a wide range of professionals and students across public health, mental health, education, health administration and policy, social work, and the social sciences.

Forecasting, Warning and Responding to Transnational Risks

Authors:Chiara De Franco, Christoph O. Meyer
Year: 2011
Publisher: Palgrave Macmillan
ISBN: 9780230297845
Content: What does it take to recognize and prevent impending harm, which has transnational causes and consequences? How can we handle the risks related to financial instability, terrorism, pandemics, air pollution, flooding, and climate change? The book brings together scholars and senior practitioners from different areas to conceptualize and empirically study the interlinked problems of forecasting, warning and mobilizing preventive action. Contributors comment on key generic problems such as uncertainty, silo-mentality, spotting weak-signals, cultures of blame, conflicts of interest and divergent risk perceptions, but are also sensitive to differences between actors and types of risk. The overall thrust is to challenge both technocratic and popularized accounts of the warning-response problem. Successful prevention or mitigation involves difficult cognitive, normative and political judgements. Whilst these difficulties cannot be eliminated, contributors suggest ways in which organizations, journalists, scientists and decision-makers can at least mitigate them.

Disaster Education

Authors: Rajib Shaw, Koichi Shiwaku, Yukiko Takeuchi
Year: 2011
Publisher: Emerald Group Publishing Limited
ISBN: 9780857247377
Content: Education is the key to risk reduction, be it environmental management or disaster risk reduction, and is a process which needs to be embedded at different levels of management and practices to collectively reduce the risk. While school education forms the foundations of the knowledge cycle, for effective knowledge use, it is necessary to link school and community education. Education is linked to enhanced awareness and a key reflection of education is seen in terms of actions. Divided into four sections this book begins with an informative introduction to the subject of disaster risk reduction education and proceeds to highlight key places of education such as family, community, school, and higher education. It then examines approaches, methods and tools before providing a future perspective and pointing to the way ahead. This is the first book of its kind on disaster risk reduction education. A ready reference for practitioners in the field, this book describes and demonstrates different aspects of education in an easy-to-understand form with current academic research and practical field experiences included throughout.

The Economic Impacts of Natural Disasters

Authors: Debarati Guha-Sapir, Indhira Santos, Alexandre Borde
Year: 2011
Publisher: Earthscan Ltd
ISBN: 9781844077694
Content: Research on the economics of natural disasters has not kept up with the tremendous impacts of these phenomena on people's lives. However, large scale events such as Hurricane Katrina, the Tsunami in Asia and the more recent 2008 hurricane in Myanmar and earthquake in Sichuan, China, have sparked new interest in the field. This book brings together the work of academic researchers and practitioners covering methodological aspects of measuring natural disasters as well as relevant macro and microeconomic theory and evidence, trying to put forward a research agenda and policy options for the next decade. The book has two parts. Part I first provides an overview of the general trends in natural disasters and their effects, and later focuses on a critical analysis of different methodologies to assess the economic impact of natural disasters, as well as on the ex-ante and ex-post mechanisms to deal with the effects of disasters and the relationship between extreme natural events and climate change. Part II covers six case studies from both the developed and the developing world, and from three different continents: Bangladesh, Vietnam, India, Nicaragua, Japan and the Netherlands. Using both country-level data and household surveys, these case studies analyse and quantify the impact of natural hazards - hurricanes, floods, earthquakes, among other types of disasters - on household welfare and macroeconomic performance. This is an indispensible

volume for researchers, academics and policy professionals addressing the short and long term economic effects of natural disasters.

List of already listed new books in back issues:

Heavy-Tailed Distributions in Disaster Analysis
Authors: V. Pisarenko, M. Rodkin
Year: 2010
Publisher: Springer, New York
ISBN: 978-9048191703

When the Planet Rages: Natural Disasters, Global Warming and the Future of the Earth
Authors: Charles Offices, Jake Page
Year: 2010
Publisher: Oxford University Press
ISBN: 978-0195377019

Early Warning for Geological Disasters
Authors: Friedemann Wenzel, Jochen Zschau (editor)
Year: 2010
Publisher: Springer, Berlin
ISBN: 978-3642122323

Natural Hazards, UnNatural Disasters
Authors: World Bank, United Nations
Year: 2010
Publisher: Word Bank
ASIN: 978-0739124161

Mitigation of Natural Hazards and Disasters: International Perspectives
Authors: C. Emdad Haque (editor)
Year: 2010
Publisher: Springer
ISBN-10: 9048167965

Systems Approach to Management of Disasters: Methods and Applications
Authors: Slobodan P. Simonovi
Year: 2010
Publisher: Wiley
ISBN-10: 978-0739124161

Extreme Events in Nature and Society
Authors: Sergio Albeverio, Volker Jentsch, Holger Kantz
Year: 2010
Publisher: Springer
ISBN: 3642066798

Natural and Anthropogenic Disasters: Vulnerability, Preparedness and Mitigation
Authors: M.K. Jha (editor)
Year: 2010
Publisher: Springer
ISBN: 9048124972

Natural Disasters as Interactive Components of Global-Ecodynamics
Authors: Kirill Ya Kondratyev, Vladimir F. Krapivin, Costas A. Varostos
Year: 2010
Publisher: Springer
ISBN: 3642068448

Catalogue of Risks: Natural, Technical, Social and Health Risks
Authors: Dirk Proske
Year: 2010
Publisher: Springer
ISBN: 3642098487

In Extremis: Disruptive Events and Trends in Climate and Hydrology
Authors: Jürgen Kropp, Hans-Joachim Schellnhuber (editor)
Year: 2010
Publisher: Springer
ISBN: 364214862X

Natural Disasters and Sustainable Development
Authors : Riccardo Casale, Claudio Margottini (editor)
Year: 2010
Publisher: Springer
ISBN: 3642075800

Assessing Vulnerability to Global Environmental Change: Making Research Useful for Adaptation Decision Making and Policy [Paperback]
Authors : Anthony G. Patt et al. (editor)
Year: 2010
Publisher: Springer
ISBN: 1849711542

8. Book Review

Vulnerable India: A Geographical Study of Disasters

Anu Kapur, Sage Publications India, 2010:
300 Pages

Anu Kapur is an associate Professor of Geography at the Delhi School of Economics and a Fellow of the Indian Institute of Advanced Study. The book, while written in an emotional style, maintains (mostly) a scientifically rigorous manner. The focus of the work is less on natural scientific advancements of disaster loss assessments or risk management in India, but more on the socio-economic realities which cause disasters to happen and the responsibilities society has to lessen them. As one of the necessary conditions in dealing with disasters is the notion that they are results of human activity and not "acts of god," much focus is given to the historical development of the perception of disasters within India and responsibilities and failures in due course, which increased vulnerability - in the authors view - to unacceptable levels. Throughout the book, disaster statistics from various sources are used to underpin some arguments as well as to show geographically hazard prone areas and give a clearer picture of the problems discussed. The data used is from a relatively short time period (1977-2002) and therefore not able to show possible future hotspots, nor a complete risk picture; however, it is useful for a description of the past and provides a good overview, which was the author's goal. From a methodological viewpoint, various (relatively simple) quantitative indices are developed (e.g. to show multi hazard prone areas for Indian districts), in addition to more advanced statistical methods such as cluster analysis (used to shed light on specific issues). Another focus is, as the title suggests, vulnerability and how it can be identified and measured within a holistic approach, incorporating both quantifiable tangible dimensions as well as intangibles. While interesting, it lacks in incorporating these ideas into the current scientific literature dealing with this issue. The frameworks proposed, with the components of vulnerability analyzed at the regional scale, in combination with the historical description of disaster perception in India, makes the book a valuable and rewarding read, not only for people interested in India.

The book is organized in three sections: Fact, Response and Reality. In the first section, there are two chapters: Chapter 1 gives a detailed overview of historical and recent natural disasters in India. The word “disasterscape” is introduced on p. 5, defined “… as a place where human life is lost or damaged, relationships ripped and livelihoods disrupted”. Hence, the focus in this book is not only on tangible losses such as population killed and affected, or monetary losses and financing issues, but also on intangible effects on livelihoods and communities. This allows for a broader look at disaster effects and possible responses in later chapters. The disasterscape attributed to (in total sixteen) different natural phenomena is described in chapter 2. This include disasters due to heavy snowfalls, cold waves, hailstorms, lightning, thunderstorms, squall, dust storms, heat waves, cloudbursts, gale, cyclones, heavy rain, flooding, flash floods, droughts, as well as earthquakes. For each of these meteorological events, the numbers of disastrous occurrences, as well as the number of persons killed, are shown for a 26 year time period, from 1977to 2002. Additionally, statistics about the disaster frequency for each hazard are shown on spatial maps for the 593 districts in India, and discussed on more aggregated levels where necessary throughout the text. This supplies a good overview of the spatial dimension of the problem; however, the short time period looked at, as well as neglecting the intensity of events (a short discussion is given) limits the value of such an analysis. Based on the occurrence and fatalities between 1977 and 2002, weights to each of these hazards were attached to a composite index created to show hotspot regions within India. As noted by the author, the hotspot regions can change quite dramatically (p.85) if different weights are applied. Therefore, other weighting methods, as well as the total fatalities in each district for all hazards, was analyzed, attempting to round out the picture, which is achieved with only mild success, as these efforts also lead to additional problems.. Overall, the two chapters give a comprehensive overall picture on past and recent disasters happened in India.

Section II is called Response and includes 4 chapters about the historical understanding of disasters in India through time. Naturally, chapter 3 starts with a discussion about the traditional conceptualization of disasters (like the Vedic conception), traditional systems to forecast disasters (divination, using stars, transcendental perception) as well as folk paradigms to disaster. The chapter proves very interesting to read, with much information about religious and philosophical disputes. Chapter 4, called “Colonial: The idea of ‘natural’ disaster” discusses the shift in thinking of the perception of

disasters via the separation of the natural process from the human process. A large section is given to the history of European philosophical reflections about nature and the consequences (separation of the natural from the divine) of these ideas as they were introduced via British colonists. Following this background, chapter 5 discusses the time period from 1947 to 1990 and blames a neglect of some important dimensions, which increased the vulnerability of people to hazards and ultimately led to the current widespread losses. This argument is supported by a range of quantitative and qualitative information on governmental, administrative, and academic efforts to deal (or not deal) with disasters over the time period. The entire chapter is rewarding due to its comprehensive analysis, as well as in providing frameworks to specific issues such as the language used to condemn natural processes, however, sometimes there is a lack of integration of these ideas. Chapter 6 discusses the period after 1990 within the theme of globalization. While the author sees greater recognition of the importance of disasters and discusses programs established to lessen their impacts in India, she also sees ignorance of this topic in recent times and calls for greater attention, as “the reason for disasters is not the naturals but a vulnerable India” (p. 192).

Hence, section III takes a closer look at why and how India is vulnerable against disasters (chapter 7). Again, this is emphasized via the construction of several indices and geographical mapping of exposures of different risk bearers on various scales. While interesting, the chapter lacks a discussion of the recent literature on this issue and comparison to other approaches. The last chapter, called “a disaster divide,” presents various statistics for showing which sub-groups of society have to bear the greatest costs. Based on these findings, the author concludes that the “human suffering is a consequence of neglect and apathy” and therefore suggests a change in vocabulary, to reflect the idea that the causes of disasters are primarily due to human interaction. The literature used is a bit outdated in some cases, and more efforts could have been made to incorporate other approaches as well.

In summary, this book is an excellent introduction into the issues of natural disasters in India, geographic location of natural hazards, causes of vulnerability, historical development of perceptions and approaches to disasters and management, and deserves special attention.

.

9. Ongoing Field Work

Investigating Drought Impacts, Perceptions and Prevention in Iran.

Masoud Yazdanpanah
Department of Agricultural Extension and Education, College of Agriculture,
Shiraz University, Iran

Iran is a very drought prone country and due to anthropogenic climate change, drought repetition and its severity is predicted to increase. These natural disasters have severe effects in Iran. One estimate by The United Nations stated that drought-related costs to Iran in 2000 alone were 3.5 billion US dollars, and the mid-year estimate for the following year was already 2.5 billion. From 1998 to 2001, drought events cost Iran over 4.2 billion dollars. In 2000, fifty villages in the Kerman province were evacuated due to lack of water, and more than one million head of livestock perished throughout the country. It is estimated that in that year, three million tons of wheat and barley were lost (12 million tons of wheat being the estimate of the amount of grain needed to feed the Iranian population for one year). In 2001 things were even worse: in Esfahan Province, 100,000 farm workers lost their jobs because of the drought, and in the southeast of the country Lake Hamoun – formerly the largest body of freshwater in Iran – ceased to exist by September. Up to that point, fishermen from the villages around *Hamoun* had taken 12,000 tons of fish from the lake every year. Beyond the loss of the fishermen, the lake's disappearance has resulted in strong winds and sandstorms, which have increased soil erosion in 94 of the south-eastern villages.

In this regard and based on my research interests, I focus on investigating drought and water crisis effects on rural areas, with an additional focus in drought management and water conservation behavior at the households level and policy making in these two areas (drought management and water management). Also, I have done research on adoption of crop insurance and investigating farmers' satisfaction with crop insurance. In drought management, I recently undertook a qualitative and quantitative study in southern Iran. The qualitative aspect investigates drought effects on farmers and their coping with drought in three economic

groups (poor, moderate and rich). In this study, I investigated centralism drought management through the perception of farmers. In the quantitative study, I used “Planned behavior theory” to investigate farmers’ behavior and factors which affect their actions. Also in this sub-section of this study, I investigated experts’ attitudes towards drought management. This research was a collaborative effort with Dr Nouzar Monfared.

Currently, I work on water management at both the policy-making and household levels. Also, I did a study about adoption of crop insurance and farmers’ satisfaction with it, using a diffusion model, farm structure model and combination of the two for investigating Iranian farmers’ adaptation behavior. The models were tested with three groups, insured, previously insured, and uninsured farmers. To analyze the currently and previously insured farmers’ satisfaction with the programs, I used Swedish customer satisfaction, the American satisfaction index, and many other indices.. At the policymaking level, I work on two well defined theories, reflexive modernity and cultural theory. Indeed, in water management we recognize that modernization theory can't solve our current challenges and therefore we’re seeking an alternative theory. At the individual level, I work on a combination of cultural theory and planned behavior theory to design a new framework to investigate farmers’ behavior related to water management. Right now I am gathering data in the south of Iran, the Bushehr province, for a water management project. In the last phase, I designed two surveys, one for farmers and another for experts. While many farmers in Iran aren’t well educated, after sampling I had to find them and do face to face interviews for fill out surveys. It is very difficult work, and time consuming. I should do 420 face to face interviews across the Bushehr provinces while the temperature is around 40 C, but for second group, the situation is much easier; I can post surveys to experts or just deliver the paperwork to them. I hope to complete this phase in around 3 months; I started on the started on the 15th of May, and hope to be finish by the 15th of August.

10. Miscellaneous

Other 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/

Newsletter Committee:

Head:
Stefan Hochrainer-Stigler
IIASA- International Institute for Applied Systems Analysis, Laxenburg, Austria
Email: hochrain@iiasa.ac.at

Muneta Yokomatsu
Research Center for Disaster Reduction Systems,
Disaster Prevention Research Institute, Kyoto University
E-mail: yoko@drs.dpri.kyoto-u.ac.jp

Ana Maria Cruz
Consultant, Natech Risk Management
Bordeaux, France
E-mail: cruzanamaria2000@yahoo.com

Wei Xu
Beijing Normal University (BNU)
Beijing, China
E-mail: xuwei@bnu.edu.cn

IDRiM Society

Secretariat
Kyoto University
Gokasyo Uji, Kyoto, Japan
Tel: +81-774-38-4043
FAX :+81-774-38-4636
Email: society@idrim.org