Integrated Risk Science: A Tool for Sustainability

IRDR CONFERENCE 2014
June 7-9, 2014 Beijing, China

Programme
FRIDAY, 6 June 2014

08:30 - 17:30  **REGISTRATION**

SATURDAY, 7 June 2014

| 09:00 – 10:15 | OPENING CEREMONY (Convention Hall No. 2)  
**Chair:** David M. JOHNSTON (New Zealand)  
- Qin ZHANG, Vice President and Executive Secretary, China Association for Science and Technology (CAST) (China)  
- Huadong GUO, Director General, Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences (CAS) (China)  
- Steven WILSON, Executive Director, International Council for Science (ICSU) (France)  
- Feng Min KAN, Head, UN International Strategy for Disaster Reduction (UNISDR) Regional Office for Asia and the Pacific (Thailand)  
- Hanlin LI, Director General, National Institute of Social Development, Chinese Academy of Social Sciences (CASS) for the International Social Science Council (ISSC) (China) |
| 10:15 – 10:30 | Coffee and Tea Break |
| 10:30 – 12:00 | PLENARY I: TRANSLATING SCIENCE INTO ACTION (Convention Hall No. 2)  
**Chair:** Sálvano BRICEÑO (France)  
**Keynote Address:**  
- From Knowledge to Practice: Building Back Stronger after Haiyan with the Aid of Science  
  *Loren LEGARDA, Senator of the Republic of the Philippines and UNISDR Champion for Disaster Risk Reduction and Climate Change Adaptation for Asia-Pacific (Philippines)* |
<p>| 12:00 – 13:30 | Lunch |
| 13:30 – 15:15 | BREAKOUT SESSIONS |</p>
<table>
<thead>
<tr>
<th>13:30 – 15:15</th>
<th>Assessing Risk (Room 201A)</th>
<th>Community Disaster Reduction (Room 201B&amp;C)</th>
<th>Risk Interpretation and Action (RIA) (Room 201D)</th>
<th>Empowering Local Officials (Room 311)</th>
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<td><strong>Chair:</strong> Irasema ALCÁNTARA-AYALA (Mexico)</td>
<td><strong>Chair:</strong> Djillali BENOUAR (Algeria)</td>
<td><strong>Chair:</strong> Mark PELLING (UK)</td>
<td><strong>Chair:</strong> Virginia JIMENEZ-DIAZ (Venezuela)</td>
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<td>• Global Risk Model: a Fully Probabilistic Seismic and Tropical Cyclone Wind Risk Assessment <em>Omar Darío CARDONA (Colombia)</em></td>
<td>• Colombo City Without Floods: Forced Relocation of Underserved Settlers in the City of Colombo as a Flood Risk Reduction Strategy – the Case of Three Flood Risk Reduction Projects <em>Nishara FERNANDO (Sri Lanka)</em></td>
<td>• Anticipating Interpretations and Reactions to Earthquake Early Warnings <em>Ann BOSTROM (USA)</em></td>
<td>• Promotion of Grass Root Innovations for Disaster Risk Reduction and Climate Change <em>Reneema HAZARIKA (India)</em></td>
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<td>• Level of Seismic Exposure of Health Facilities in Mexico City, Mexico <em>Sonia MORÁN RODRÍGUEZ (Mexico)</em></td>
<td>• The Importance of Community Participation in Disaster Risk Management <em>Erica Akemi GOTO (Brazil)</em></td>
<td>• Emergency Management Decision-Making in the Laboratory: the Case of Uncertain Volcanic Advice <em>Emma HUDSON-DOYLE (New Zealand)</em></td>
<td>• Helping Districts Reduce Risk in Indonesia <em>Dwikorita KARNAWATI (Indonesia)</em></td>
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<td>• Assessment of Multi-Hazard Risk Toward Disaster Risk Reduction by Design <em>Kenji SATAKE (Japan)</em></td>
<td>• Built-in Risk: Linking Housing Concerns and Flood Risk in Subsidised Housing Settlements in Cape Town, South Africa <em>Robyn PHAROAH (South Africa)</em></td>
<td>• Promoting “Behavioural Disaster Management” Toward Disaster Risk Reduction by Design <em>Haruo HAYASHI (Japan)</em></td>
<td>• Guidance on Guidance: Providing Useable Natural Hazard Management Science for Local Government <em>Wendy S.A. SAUNDERS (New Zealand)</em></td>
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<td>• The Establishment of a Natural Disaster Risk Assessment Model for Mountain Scenic Areas in China: a Case Study of Mount Huangshan <em>Junxiang ZHANG (China)</em></td>
<td>• A Need-Based Approach for Exploring Vulnerability and Response to Disaster Risk in Rural Communities in Low Income Countries <em>David O. YAWSON (Ghana)</em></td>
<td>• A New Focus on Risk Reduction: an Ad-Hoc Decision Support System for Humanitarian Relief Logistics <em>Frank SCHÄTTER (Germany)</em></td>
<td>• Riverine Flood and Tropical Storm Risk Assessment in Timor-Leste <em>Soravit VITOONTUS (Thailand)</em></td>
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15:15 – 15:45  Coffee and Tea Break
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<tr>
<th>Time</th>
<th>Risk Reduction and Sustainable Development (Room 201A)</th>
<th>Integrated Risk Sciences (Room 201B&amp;C)</th>
<th>Forensic Investigations of Disasters (FORIN) (Room 201D)</th>
<th>Risk Reduction Planning (Room 311)</th>
</tr>
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<td>15:45 – 17:30</td>
<td>Chair: S.H.M. FAKHRUDDIN (Thailand)&lt;br&gt;- Dependencies Among Extremes: the Use of Copulas for Risk Management Stefan HOCHRAINER-STIGLER (Austria)&lt;br&gt;- Examining the Nexus between Disaster Risk Management and Climate Change Adaptation: Evidence from Caribbean Coastal Tourism Roché R.T. MAHON (Trinidad and Tobago)&lt;br&gt;- Linking Disaster Risk Reduction to Sustainable Development Kenichi TSUKAHARA (Japan)&lt;br&gt;- Framework of Disaster Risk Reduction Investment Accounts for Development and its Application to Pakistan Muneta YOKOMATSU (Japan)</td>
<td>Chair: Ferruccio FERRIGNI (Italy)&lt;br&gt;- Embedded Disaster Risk Management in Adaptation Targeted Policy and Practice in Large Deltas of Africa Shuaib LWASA (Uganda)&lt;br&gt;- Integrated Risk Research in Motozintla, Chiapas, Mexico David A. NOVELO-CASANOVA (Mexico)&lt;br&gt;- Building More Resilient Megacities in the Developing World: Exploring the Case Studies of Mexico City, Beijing, Lagos and New Delhi Fabiola SOSA-Rodriguez, 2013 World Social Science Fellow (Mexico)&lt;br&gt;- Economy and Culture of Recovery: Differences in Banda-Aceh and Tohoku Kunitoshi TAKEUCHI (Japan)&lt;br&gt;- Turning Black into Green: Innovative Approaches in Disaster Risk Governance and Green Growth Qian YE (China)</td>
<td>Chair: Anthony OLIVER-SMITH (USA)&lt;br&gt;- Migration, Urbanisation and Landslide Disasters in Contemporary Latin America: a Mexican Case Study in the Development and Social Construction of Risk Irisema ALCÁNTARA-AYALA (Mexico)&lt;br&gt;- Hurricane Katrina and the Forgotten Coast of Mississippi Susan L. CUTTER (USA)&lt;br&gt;- Stakeholder Interactions for Near Real-Time Forensic Analysis of Disasters Bijan KHAZAI (Germany)&lt;br&gt;- Causal Loss Analysis: a New Approach to Understand Risk Driving Factors Susan BRINK (Germany)</td>
<td>Chair: Ann BOSTROM (USA)&lt;br&gt;- According to Plan? Disaster Risk Knowledge and Organisational Responses to Heatwave Risk in London, UK Thomas ABELING (Germany)&lt;br&gt;- Multi-Scale Policy Implementation for Natural Hazard Risk Reduction: Preliminary Results Hsiang-Chieh LEE 2013, World Social Science Fellow (Chinese Taipei)&lt;br&gt;- A Seismic Hazard-Sensitive Model for Urban Land-Use Planning Mohsen GHAFORY-ASHTIANY (Iran)&lt;br&gt;- Research on Policy of Reconstruction after Wenchuan Earthquake Mingming XIANG (China)</td>
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### PLENARY II: THE ROLE OF SCIENCE IN THE 2015 AGENDA (Convention Hall No. 2)

**Chair:** Susan L. CUTTER (USA)

**Keynote Addresses:**

- **The Road to HFA2: Can Science Help to Inform Policy and Practice?**  
  *Virginia MURRAY, Consultant in Global Disaster Risk Reduction, Public Health England (PHE) (UK)*

- **Intergovernmental Processes and the Framing of Disaster Risk Reduction**  
  *Mark PELLING, Professor of Geography, Director of Research and Deputy Head, Department of Geography, King’s College London (UK)*

### 10:30 – 11:00

Coffee and Tea Break

### 11:00 – 12:15

**PLENARY III: WATER (Convention Hall No. 2)**

**Chair:** Sálvano BRICEÑO (France)

**Keynote Address:**

- **Water and Emergencies: The Impact of Thirst**  
  *Nathaniel FORBES, Director, Forbes Calamity Prevention Pte Ltd. (Singapore)*

### 12:15 – 13:30

Lunch

### 13:30 – 15:15

BREAKOUT SESSIONS
<table>
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<tr>
<th>Time</th>
<th>Water and Disasters (Room 201A)</th>
<th>Science and National Politics (Room 201B&amp;C)</th>
<th>Indigenous and Vulnerable Populations (Room 201D)</th>
<th>Capacity Building (Room 311)</th>
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<tr>
<td>13:30 – 15:15</td>
<td>Chair: S.H.M. FAHKRUDDIN (Thailand)</td>
<td>Chair: Virginia JIMENEZ-DIAZ (Venezuela)</td>
<td>Chair: Ann BOSTROM (USA)</td>
<td>Chair: Kuniyoshi TAKEUCHI (Japan)</td>
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<td>• Managing Watershed as a Strategy for Disaster Risk Reduction in the Semi-Arid Zones of Senegal Mateugue DIACK (Senegal)</td>
<td>• Volcanoes on Borders: Potentially Explosive Geopolitical Agents Amy DONOVAN (UK)</td>
<td>• Gender in the Pacific Islands: Towards Climate and Disaster Risk Reduction and Resilience Cheryl L. ANDERSON (USA)</td>
<td>• Integrating Disaster Risk Science in the Algerian Higher Education System: Challenges and Perspectives Djillali BENOUAR (Algeria)</td>
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<td>• Impact of Climate Change on Extreme Water Related Events: a Case Study of Ta Chin River Basin, Thailand Sathaporn MONPRAPUSSORN (Thailand)</td>
<td>• Winds of Change: Voter Blame and Storm Gudrun in the Historical 2006 Regime Shift of the Swedish Parliamentary Election Lina M. ERIKSSON (Sweden)</td>
<td>• Triangulation of Research, Policy and Indigenous Knowledge: Pathway for Sustainable Disaster Risk Reduction in Nigeria Catherine V. NNAMANI (Nigeria)</td>
<td>• The 2010-2013 Monsoon Floods in Pakistan: Meteorological Advancements and Required Improvements Farrukh CHISHTIE (Pakistan)</td>
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<td>• Why Disaster Risk Reduction in the Horn of Africa Remain Elusive: the Case of IGAD Wondwosen SEIDE (Republic of Djibouti)</td>
<td>• Community-led Disaster Risk Management: a Maori Response to Otautahi (Christchurch) Earthquakes Christine M. KENNEY (New Zealand)</td>
<td>• Emergency Preparedness and Perceptions of Vulnerability among Disabled People Following the Christchurch Earthquakes Suzanne R. PHIBBS (New Zealand)</td>
<td>• Skills and Capacity Shortages in South African Disaster Risk Management Entities: Observations from the USAID/ACDS Disaster Risk Management Training Project Christo COETZEE (South Africa)</td>
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<td>• Integrating Indigenous Knowledge into Decision and Policy-Making for Disaster Risk Reduction (2013 World Social Science Fellows’ Topic) Simon LAMBERT (New Zealand)</td>
<td>• Research on Capacity Building for Disaster Risk Reduction Zoe SCOTT (UK)</td>
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<td>• Research on Theories and Practices of Disaster Education Ying ZHANG (China)</td>
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15:15 – 15:45 Coffee and Tea Break
### Science and the Post-2015 Natural Hazard Agenda (Room 201A)

**Chair:** Shuaib LWASA (Uganda)

- Political Dimensions amongst Researchers and Practitioners Gauging Community Disaster Resilience at a Provincial Scale
  - *Thomas J. HUGGINS (New Zealand)*

- Anthropological Expertise and Risk Communication: Technical Knowledge Confronted in the Courtroom after the 2009 L’Aquila Earthquake
  - *Mara BENADUSI (Italy)*

- Defining Disaster: the Need for Harmonisation of Terminology
  - *Lidia MAYNER (Australia)*

- Needs of National Disaster Statistics on Damages and Losses for Making Better Policy and Setting Disaster-Related Goals and Targets in the Post-HFA and Post-MDGs
  - *Yuichi ONO (Japan)*

### Risk Indexing (Room 201B&C)

**Chair:** Omar Darío CARDONA (Colombia)

- Validation of the Social Vulnerability Index in a Cross-National Context
  - *Christopher T. EMRICH (Presented by Susan L. CUTTER) (USA)*

- Evaluating Natural Disaster Risk in Cambodia: Exploring Asset Risk and Production Interdependence
  - *Junko MOCHIZUKI (Austria)*

- Urban Seismic Risk Index for Medellín: a Probabilistic and Holistic Approach
  - *Mario-Andrés SALGADO-GÁLVEZ (Spain)*

- Comparing Impacts of Long and Short Term Disasters on Urban-Rural Systems in India
  - *Nitin SRIVASTAVA (Japan)*

### The Gap Between Disaster Knowledge, Policy and Practice (SFAA Topical Interest Group on Disasters) (Room 201D)

**Chair:** Anthony OLIVER-SMITH (USA)

  - *Roberto E. BARRIOS (USA)*

- The Gap between Knowledge, Policy, and Practice that Result in Natural Hazard Events Becoming Disasters: a View from Looking at Four Groups of Stakeholders
  - *Stephen BENDER (USA)*

- Bridging the Chasm: Illustrating Issues and Delineating Approaches to Bringing Knowledge into the Increasingly Template Policies of International and National and NGO Disaster Aid
  - *Susanna HOFFMAN (USA)*

- Is International Advocacy Impeding Accomplishments in National Disaster Risk Management?
  - *Terry JEGGLE (USA)*

- Policy-Makers, Researchers and Locals: Some Issues in Translating Disaster
  - *Peter RUDIAK-GOULD (Canada)*

### Data and Technology (Room 311)

**Chair:** Sisi ZLATANOVA (Netherlands)

- Emerging and Trustful Citizen-Scientist Technologies for Disaster Data Collection and Mapping
  - *ZhiQiang CHEN (USA)*

- Data Integration and Information Fusion toward Disaster Risk Reduction by Design
  - *Toshio KOIKE (Japan)*

- Determination of Hazard, Vulnerability and Risk by Means of the Application of GIS Tools and Multi-Criteria Methods: the Colombia-Spain Study Cases
  - *Nelson RANGEL (Colombia)*

- Mapping Seismic Risk of Mandalay City, Myanmar: a Scenario Earthquake Approach
  - *Peeranan TOWASHIRAPORN (Thailand)*
### MONDAY, 9 June 2014

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<th>Time</th>
<th>Session</th>
<th>Chair(s)</th>
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<td>09:00 – 10:30</td>
<td>PLENARY IV: SCIENCE AND THE MEDIA PANEL DISCUSSION (Convention Hall No. 2)</td>
<td>Chair: Susan L. CUTTER (USA)</td>
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<td>Members of the Panel:</td>
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<td>• Kathleen KOCH, freelance journalist, author and former CNN Correspondent (Moderator) (USA)</td>
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<td>• Miles O’BRIEN, Science Correspondent for PBS NewsHour, freelance broadcast and web journalist (USA)</td>
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<td>• David M. JOHNSTON, Chair, IRDR Science Committee and Director, Joint Centre for Disaster Research, Massey University (New Zealand)</td>
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<td>• Stephen BENDER, former Division Chief, Department for Sustainable Development (DSD), Organization of American States (OAS) (USA)</td>
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<td>10:30 – 11:00</td>
<td>Coffee and Tea Break</td>
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<td>11:00 – 12:30</td>
<td>PLENARY V: RESILIENCY AND RECONSTRUCTION (Convention Hall No. 2)</td>
<td>Chair: Kuniyoshi TAKEUCHI (Japan)</td>
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<td>Keynote Addresses:</td>
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<td>• The Politics of Disaster Recovery</td>
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<td>Bill NICOL, Management Strategist and Former Australian Government Senior Adviser to the Indonesian Government for Tsunami Recovery (Australia)</td>
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<td>• For Accelerating the Reconstruction from the Great East Japan Earthquake</td>
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<td>Makoto MIZUTANI, Counsellor, Reconstruction Agency, Government of Japan (GoJ) (Japan)</td>
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<td>12:30 – 13:30</td>
<td>Lunch</td>
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<td>13:30 – 15:15</td>
<td>BREAKOUT SESSIONS</td>
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### Communications and the Media (Room 201A)

**Chair:** Mark PELLING (UK)

- Environmental Information Portals for Local Stakeholders: Lessons Learned from Different Projects in Asia  
  Malte AHRENS (Germany)

- Not Only News, Not Only After: Problems and Suggestions for a More Effective Contribution of Media to Disaster Reduction  
  Ferruccio FERRIGNI (Italy)

- Communications Influences on Decision Making in Disaster Recovery and Reconstruction: Implications for RIA Framework  
  Kuan-Hui Elaine LIN, 2013 World Social Science Fellow (Chinese Taipei)

- Promoting Science Communication: Panos Eastern Africa’s Experience  
  Masaba David WANALOBI (Uganda)

- The Role of Newspapers in Disaster Risk Dissemination: Review from Indonesia  
  Ramanditya WIMBARDANA (Indonesia)

### Meteorological Issues (Room 201B&C)

**Chair:** Irasema ALCÁNTARA-AYALA (Mexico)

- Impact of Flash Flood Disaster in Uttarkhand, India: Implications to Socio-Economic Settings  
  Nadimikeri JAYARAJU (India)

- Climate-Induced Disaster Management among Affected Communities: Exploring the Nuances between the Duo in Nigeria  
  Babatunde OMOTOSHO (Nigeria)

- Integration of Hydrological-Flood Model and Dynamic Economic Model  
  Aina OTA (Japan)

- The Assessment of the Correlation between Extreme Precipitation Events and Geological Disasters  
  Feng QIANG (China)

### CAS-TWAS Special Session on Earth Observations for Disaster Risk Reduction in Developing Countries (Room 201D)

**Chair:** Sisi ZLATANOVA (Netherlands)

- CAS-TWAS Disaster Framework for Building DRR in Developing Countries  
  Fang CHEN (China)

- Earth Observations for the Mitigation of Natural Disasters: the Role of the Group on Earth Observations  
  Francesco GAETANI (Italy)

- Space Technology Contribution in Disaster Risk Reduction: UN-SPIDER Efforts  
  Longfei LIU (China)

- The Global Facility for Disaster Reduction and Recovery (GFDRR): Mainstreaming Disaster Risk Reduction in Development  
  David ROGERS (USA)

- UNESCO’s Work on the Use of Remote Sensing Tools in DRR for Developing States  
  Hans THULSTRUP (China)

### Committee on Data for Science and Technology (CODATA) Session: Opportunities for Innovative Use of Data in Disaster Research (Room 311)

**Chair:** Omar Dario CARDONA (Colombia)

- Improving Data on the Built Infrastructure for Disaster Management: Progress and Opportunities  
  Robert CHEN (USA)

- Sustainable Data Infrastructures For Integrated Disaster Science Research  
  Sara GRAVES (USA)

- Big Data Potentials for Early Warning and Crises Management  
  Milan KONEČNÝ (Czech Republic)

- The Data Application of SJ-9 Satellite in Disaster Monitoring  
  Yiwei LIU (China)

- A Gap Analysis of Using Social Science Data in Natural Disaster Research (Representing CODATA LODGD Task Group)  
  Xinlu XIE (China)
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<tr>
<td>15:15 – 15:45</td>
<td>Coffee and Tea Break</td>
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| 16:00 – 17:00 | **PLENARY VI: MOVING FORWARD (CONVENTION HALL NO. 2)**  
Chair: Sá lvano BRICEÑO (France)  
- Introducing the International Study Conference on Disaster Risk Reduction (Tokyo, Japan, 14-16 January 2015)  
  Toshio KOIKE, Chairman, IRDR National Committee Japan (IRDR Japan)  
- Conference Summary, Outcomes and Way Forward  
  David M. JOHNSTON, IRDR Science Committee Chair (New Zealand) |

**END OF 2ND IRDR CONFERENCE 2014**