



IRDR

Integrated Research on Disaster Risk



ANNUAL REPORT 2011

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IRDR Programme

The Integrated Research on Disaster Risk (IRDR) Programme is a decade-long integrated research initiative co-sponsored by the International Council for Science (ICSU), the International Social Science Council (ISSC), and the United Nations International Strategy for Disaster Reduction (UNISDR). It is a global, trans-disciplinary approach addressing the challenges brought by natural hazards and disasters, mitigating their impacts, and improving related policy-making mechanisms. IRDR is designed to go beyond traditional approaches to disaster risk science.

Mission and Objectives

The IRDR mission is to develop trans-disciplinary, multi-sectoral alliances for in-depth, practical disaster risk reduction research studies, and to implement effective, evidence-based disaster risk policies and practices.

The key research objectives of the IRDR Programme are:

1. Characterization of hazards, vulnerability and risk
2. Understanding decision-making in complex and changing risk contexts
3. Reducing risk and curbing losses through knowledge-based actions

Attainment of these three research objectives through successful projects will lead to a better understanding of hazards, vulnerability and risk; an enhanced capacity to model and project risk into the future; better understanding of decision-making choices that lead to risk plus how they may be influenced; and how this knowledge can better influence disaster risk reduction.

To support these objectives, IRDR will work with global, national and local partners to develop and implement capacity building; develop of case studies and demonstration projects; and carry out the assessment, data management and monitoring of hazards, risks and disasters.

The IRDR International Programme Office (IPO) is located in Beijing, China, hosted by the Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Sciences (CAS). Operational funds are provided by the China Association of Science and Technology (CAST).

IRDR Events & Activities

IRDR Conference 2011

The inaugural Integrated Research on Disaster Risk Conference 2011 organized by the IRDR IPO and CAST was held 31 October to 2 November, at the Beijing International Convention Center. IRDR Conference 2011 brought together over 300 attendees.

The conference, themed *Disaster Risk: Integrating Science and Practice*, aimed to advance new comprehensive approaches to natural hazards research and disaster risk reduction that investigate the root causes of disasters and incorporate input from scientists, decision-makers and the public. The sessions were themed around IRDR's three main research objectives: characterization of hazards, vulnerability and risk; understanding decision-making in complex and changing risk contexts; and reducing risk and curbing losses through knowledge-based actions (the agenda is available in Annex 1).

The Chair of the IRDR Science Committee, Gordon McBean, opened the conference along with Yuan Tseh Lee, Nobel Laureate and President of the International Council for Science; Han Qide, Chair of the China Association for Science and Technology; Heide Hackmann, Executive Director of the International Social Science Council; and Margareta Wahlström, the United Nations Secretary General's Special Representative for Disaster Risk Reduction, who delivered a message via a pre-recorded video.

The former Governor General of Canada and current UNESCO Special Envoy for Haiti, Mme Michaëlle Jean, addressed delegates on the second day of the conference. The day also featured a session on the integration of policy and disaster risk research with parliamentarians from Bangladesh, Cambodia, Senegal and Uganda.

UNISDR hosted a side event on the 2013 *Global Assessment Report on Disaster Risk Reduction (GAR 2013)* during the conference. The World Weather Research Programme (WWRP) also hosted a side event meeting to develop partnership opportunities with IRDR specifically related to the co-sponsorship of the WWRP Working Group on Societal and Economic Research and Applications (SERA).

The IRDR Conference 2011 came to a successful close with the announcement of the 2011 *Beijing Declaration on Integrated Research on Disaster Risk* by the new Science Committee Chair Sálvano Briceño (Annex 2). This focused on the need for more integration and collaboration in relation to disaster risk research and links to policy and practice.

The Declaration calls for commitments in key areas identified at the conference and in previous forums, naming integration, research, collaboration, global standards, raising awareness, education, and increasing funding as priorities. It also recognizes potential applications, such as the IRDR Working Groups, policy-making and advocacy processes, recommendations from the *IPCC Special Report on Managing the Risk of Extreme Events (SREX)*, and preparation of GAR 2013. The IRDR Working Group applications include Assessment of Integrated Research on Disaster Risk (AIRDR), Disaster Impact and Loss Assessment Data (DATA) analyses, Forensic Investigations of Disasters (FORIN) case studies, and Risk Interpretation and Action (RIA) research projects.

In light of the conference's success in bringing together scientists, practitioners, and policy-makers from around the world, the 2011 Beijing Declaration for IRDR perpetuates the momentum built up before and during the meeting, and offers guidelines for moving forward that are structured on the outcomes.

ENHANS - Extreme Natural Hazards and Societal Implications

The *Extreme Natural Hazards and Societal Implications (ENHANS)* project is an initiative of the International Union of Geodesy and Geophysics (IUGG).

Following are the 2011 ENHANS events and workshops with IRDR being one of the co-sponsors. Additional events were conducted in 2010.

In 2011 the organizing committee for ENHANS invited researchers from all over the world to attend a workshop in Pretoria, South Africa on *Extreme Natural Hazards and Disasters in Africa*. The workshop provided an opportunity to the research community in Africa and other countries to discuss and analyse topics related to disaster risk. This included presentations by IRDR Science Committee members Djilalli Benouar, Coleen Vogel and Executive Director Jane E. Rovins.

During the *International Symposium on Geo-information for Disaster Management (Gi4DM)* in May 2011, another ENHANS session titled *Natural Hazards and Disaster Risks in the Middle East Region* was organized with its focus on the Middle East. Jane E. Rovins gave an introductory talk on the IRDR Programme and the importance of linking research with policy and practice.

Another ENHANS event took place at the XXV General Assembly of IUGG in Melbourne, Australia, in June-July 2011. The assembly addressed major challenges in natural hazards research, risk analysis and ways for solutions. An open forum event discussed how integration can be realized and natural disaster risk can be converted to opportunity.

To wrap up the year, ENHANS organized a natural hazards session during the American Geophysical Union (AGU) meeting, held in December in San Francisco, USA. The natural hazards session titled *Great Disasters of the XXI Century: The Lessons We Learned* focused on how humans face natural hazards at different scales in time and space. IRDR member Gordon McBean presented, while Jane E. Rovins served as a co-convenor.

Cities at Risk II, Taipei, China

The *Second International Conference on Cities at Risk: Building Adaptive Capacities for Managing Climate Change Risks in Asian Coastal Cities (CARII)* was sponsored by the IRDR International Centre of Excellence (ICoE) located in Taipei, China. CARII showcased and assessed the progress to date of CAR-engaged city research teams. Participant exercises and discussions improved understanding of the opportunities and challenges for consolidating a network of researchers, decision-makers and institutions in the region and identified priorities for CAR programming in Asia for the next several years.

IRDR Science Committee Meeting, Paris, France

The fifth meeting of the Science Committee was held at the end of April, 2011 in Paris, France hosted by the ICSU Secretariat. The meeting included updates from the co-sponsors; development of a sub-committee for IRDR Conference 2011; briefings from IRDR National Committees from Canada, Germany, Japan, and New Zealand; reports on the Great East Japan Earthquake and Tsunami (GEJET) as well as the Christchurch (New Zealand) earthquakes; and a briefing on the *1st Meeting of the International Advisory Board of ICoE and IRDR/START Cities at Risk Workshop* held at the IRDR ICoE. Additionally, each IRDR Working Group provided an update on the progress made over the last six months.

Third Global Platform for Disaster Risk Reduction, Geneva, Switzerland

The Third Session of the Global Platform brought together over 2,000 policy makers and practitioners, from governments, international organizations, NGOs, academia, and the private sectors from both developing and developed countries. They gathered to assess and share information as well as set new directions for the disaster risk reduction imperative, with emphasis on local initiatives and activities. The IRDR Executive Director presented a speech on *Integrated Disaster Risk: From Research to Practice* on the IGNITE Stage. IRDR also co-convened a side event on the issues of *Science Meets Practice – How can Science Contribute to Disaster Risk Reduction?* Science Committee member Kuniyoshi Takeuchi presented on IRDR Japan and recent activities. Jane E. Rovins presented a speech on *Forensic Investigations and Risk – Interpretation to Action Projects of IRDR*. Other IRDR Science Committee members in attendance included Djillali Benouar, Maria Patek and Angelika Wirtz.

Young Scientists Workshops, Beijing, China

The IRDR IPO and CEODE co-organized a workshop for young scientists that featured an introduction of IRDR and sessions about developing good international presentation skills, given by invited speakers from the USA – Mila Harrison, PhD, Product Development Manager, and Gina Wightman, Vice President of All About Training, Inc. The workshop provided an opportunity for CEODE's young scientists conducting disaster risk research to share their research, demonstrate what they had learned, and receive feedback to help improve their skills.

The 22nd Pacific Science Congress, Kuala Lumpur, Malaysia

The Congress, themed *Asia Pacific in the 21st Century: Meeting the Challenge of Global Change* provided an interdisciplinary platform for scientists from the region to assess and prioritize issues requiring scientific research, bring together scientists from more remote states, catalyse international and cross-disciplinary collaboration, and announce and establish new research initiatives. The Pacific Science Association (PSA) focused on those countries bordering the Pacific Ocean and the islands of the Pacific basin. IRDR convened two sessions and the Chair Gordon McBean gave a keynote address on *Integrating Research to Reduce Disaster Risk*. IRDR has also sponsored nine young scientists from China, Japan, New Zealand and the US to attend the Congress through the ICSU Annual Grant Programme.

IRDR Science Committee Meeting, Beijing, China

The sixth meeting of the Science Committee was held in conjunction with IRDR Conference 2011. The meeting included updates from the co-sponsors, each IRDR Working Group as well as updates on the IRDR conference and activities associated with the event. The Science Committee also worked to develop ideas to promote IRDR and enhance the programme over the coming year.

New Awards

ICSU Annual Grant Programme

The IRDR IPO, in partnership with the ICSU Regional Office for Asia and Pacific (ROAP) and IRDR National Committees (Canada, China, France, Germany, Japan and New Zealand), developed a symposium on Integrated Disaster Risk Research scheduled to take place during the 22nd Pacific Science Congress in Kuala Lumpur, Malaysia, in June 2011. It was used to bring together the IRDR National Committees, regional partners, young scientists and others with an interest in disaster risk reduction. The symposium allowed for an extended network of disaster risk reduction researchers to be developed and implemented, encouraging enhanced capacity throughout the region and around the world to address hazards and make informed decisions on actions to reduce their impacts.

Additionally, funds from the ICSU Annual Grant Programme were used to bring nine young researchers to attend the 22nd Pacific Science Congress. This funding provided opportunities for young scientists to gain experience in the integrated disaster risk arena, built a network of people interested in integrated disaster risk research and increased outreach impacts of IRDR and the visibility of ICSU in Asia and the Pacific.

IRDR sponsored six young scientists to attend IRDR Conference 2011. Based on the feedback from the young scientists, IRDR offered a platform for them to meet renowned scientists in the disaster risk field, and obtain the latest knowledge and techniques in disaster risk research.

Coastal Cities at Risk: Building Capacity for Managing Climate Change in Coastal Megacities (CCaR) Project

In June 2011, CCaR project examined how to best protect people, communities and vital economic sectors like manufacturing, transportation and fisheries, which are most at risk from the effects of climate change. The team was awarded \$2.5 million by the International Development Research Centre (IDRC) of Canada and other Canadian funding agencies. IRDR is a key partner in this activity and Jane E. Rovins was appointed to the advisory board.

List of Conferences Attended in 2011

This is a list of events that IRDR participated in, providing presentations on the IRDR Programme, its activities and working groups:

- 1) Emergency Management Asia 2011, 11-14 January 2011, Bangkok, Thailand
- 2) ENHANS International Workshop on Extreme Natural Hazards and Disaster Risk, 17-20 January 2011, Pretoria, South Africa
- 3) 3rd Meeting of Earth System Visioning, 10-11 February 2011, Gouvieux, France
- 4) HASS on the Hill 2011, 22-23 March 2011, Canberra, Australia
- 5) ASSA-ISL Summit, 24-25 March 2011, Canberra, Australia
- 6) The Inaugural Meeting of IRDR New Zealand, 27 March 2011, Wellington, New Zealand
- 7) IRDR ICoE Cities at Risk II, 11-13 April 2011, Taipei, China
- 8) Rio+20 Regional Science and Technology Workshop for Asia and the Pacific, 16-18 April 2011, Kuala Lumpur, Malaysia
- 9) The Case for International Sharing of Scientific Data: A Focus on Developing Countries/An International Symposium, 18-19 April 2011, Washington DC, USA
- 10) Gi4DM 2011, 3-8 May 2011, Antalya, Turkey
- 11) Third Global Platform for Disaster Risk Reduction, 8-13 May 2011, Geneva, Switzerland
- 12) Rio+20 Regional Science and Technology Workshop for Africa, 30 May-1 June 2011, Pretoria, South Africa
- 13) GEM Outreach Meeting 2011, 6-9 June 2011, Beijing, China
- 14) 22nd Pacific Science Congress, 14-17 June 2011, Kuala Lumpur, Malaysia
- 15) World Conference on Disaster Management, 19-22 June 2011, Toronto, Canada
- 16) 36th Annual Natural Hazards Research and Applications Workshop, 9-12 July 2011, Colorado, USA
- 17) Rio+20 Regional Science and Technology Workshop for Latin America and the Caribbean, 3-5 August 2011, Mexico City, Mexico
- 18) 2011 World Cities Scientific Development Forum, 10-14 August 2011, Chengdu, China
- 19) Natural Disaster Risk Reduction and Management Workshop, 16-25 August 2011, Singapore
- 20) 1st ICSU WDS Conference, 3-6 September 2011, Kyoto, Japan
- 21) LOICZ Open Science Conference, 12-15 September 2011, Yantai, China
- 22) 30th ICSU General Assembly, 27-30 September 2011, Rome, Italy
- 23) IAEM Europa Board Meeting, 10-12 October 2011, Munich, Germany
- 24) Rio+20 Regional Workshop for Europe, 12-14 October 2011, Helsinki, Finland
- 25) CODATA 45th Anniversary, 30 October 2011, Beijing, China
- 26) IRDR Conference 2011 - Disaster Risk: Integrating Science and Practice, 31 October-2 November, 2011, Beijing, China
- 27) IAEM-USA 59th Annual Conference, 11-18 November 2011, Las Vegas, USA
- 28) ESF-COST High-Level Research Conference on Understanding Extreme Geohazards: The Science of the Disaster Risk Management Cycle, 27 November-2 December, 2011, Sant Feliu de Guixols, Spain
- 29) Conference on Vulnerability, Hazard, Risk and Disaster Management, 6-7 December, 2011, Algiers, Algeria
- 30) AFPCN/UNESCO - Predicted Disasters, Present Disasters, 12 December 2011, Paris, France
- 31) Eye on Earth Summit & Exhibition, 12-15 December 2011, Abu Dhabi, United Arab Emirates

IRDR Working Groups

The IRDR Science Committee has established four working groups and agreed to coordinate a joint Societal and Economic Research and Applications Working Group (WG SERA) with the World Weather Research Programme (WWRP). The IRDR/WWRP coordination will begin in 2012.

Assessment of Integrated Research on Disaster Risk (AIRDR)

Co-Chairs: Susan Cutter and Allan Lavell

The Assessment of Integrated Research on Disaster Risk (AIRDR) will undertake the first systematic and critical global assessment of research on disaster risk. The goals of AIRDR are to provide a baseline of the current state of the science in integrated research on disaster risk to measure effectiveness of multiple programmes; to identify and support a longer-term science agenda for the research community and funding entities; and to provide scientific evidentiary basis in support of policy and practice. The Working Group will be launched in 2012.

Disaster Loss Data (DATA)

Co-Chairs: Susan Cutter and Angelika Wirtz

When human, monetary, or environmental losses occur as a result of a disaster, extensive loss data are collected and stored, but the thoroughness and accuracy of the data vary from country to country and even among local entities. Government agencies, private companies, and other organizations may collect and manage data related to their own areas of interest using their own standards and procedures, without significant collaboration with other groups. This results in gaps, inconsistent overlaps and biases that ultimately affect the quality of research conducted and policies made based on the data. Disaster Loss Data (DATA) is meant to study these issues related to the collection, storage and dissemination of disaster loss data. The Working Group will be launched in 2012.

Forensic Investigations of Disasters (FORIN)

Co-Chairs: Ian Burton and Anthony Oliver-Smith

The Forensic Investigations of Disasters (FORIN) Working Group has proposed an approach to studying disasters that aims to uncover the root causes of the disasters through in-depth investigations that go beyond the typical reports and case studies conducted after disasters. Thoroughly analysing cases, including both success stories and failures, will help build an understanding of how natural hazards do – or do not – become disasters. Launched during IRDR Conference 2011, the Forensic Investigations of Disasters (FORIN) Report sets out the objectives, concepts and methodological guidelines and suggestions for the design and conduct of a set of internationally organized case studies of disasters. It is designed to shape and guide the case studies. The FORIN Report was prepared by an ad-hoc Working Group and approved by the Science Committee for IRDR in April 2011. Several partners have already conducted FORIN studies on various events including GEJET.

Risk Interpretation and Action (RIA)

Co-Chairs: Richard Eiser and David Johnston

The focus of the Risk Interpretation and Action (RIA) Working Group is on the question of how people – both decision-makers and ordinary citizens – make decisions, individually and collectively, in the face of risk.

There are several broad fields of work that are relevant to this question, but many of these have progressed somewhat independently of each other, typically within the framework of a single academic discipline. This has led to a number of discontinuities in how the issue of risk reduction is conceptualized, as well as gaps in the areas where research activity (and funding) is presently concentrated.

The Risk Interpretation and Action (RIA) Report (draft) was launched during IRDR Conference 2011. The emphasis in the RIA report is on the contributions that can be made to integrated risk analysis and risk reduction through the study of human behaviour and decision-making. The aim is to provide an integrated perspective on research and decision-making, offer pointers on how this can be applied to natural hazards and outline implications for practice.

IRDR International Centre of Excellence

International Centres of Excellence (ICoE) are established through the IRDR Science Committee and the relevant National Committees to provide regional and research foci for IRDR. Each ICoE research programme will embody an integrated approach to disaster risk reduction that directly contributes to the IRDR Science Plan and its objectives. The first IRDR ICoE was established at the Academy of Sciences located in Taipei, China.

IRDR ICoE successfully held *Cities at Risk: Building Adaptive Capacities for Managing Climate Change Risks in Asian Coastal Cities (CAR II)* in Taipei, China, in April 2011. Scientists and researchers from all over the world working on urban adaptation and risk, were invited to participate in the symposium. Issues related to climate change, vulnerability and adaptation of cities were discussed.

National Committees

This section provides brief summaries on activities conducted by the IRDR National Committees in 2011. The summaries were provided by the National Committees to the IPO for this report.

IRDR Canada

A Canadian DRR forum was held in October 2011. The *Coastal Cities at Risk (CCaR): Building Adaptive Capacity for Managing Climate Change in Coastal Megacities Programme* has been established with funding from the IDRC of Canada and the Canadian Tri-Councils to develop the knowledge base and enhance the capacity of mega-cities to successfully adapt to, and when necessary to cope with, risks posed by the effects of climate change, including sea level rise, in the context of urban growth and development. The CCaR project is taking an interdisciplinary approach and is partnering with IRDR and START. The cities (Bangkok, Lagos, Manila and Vancouver) were chosen to: have a range of climate-weather and socio-cultural-economic characteristics; be representative of other cities; and to provide enhanced research opportunities through ongoing efforts. A workshop was held in Vancouver (7-9 March 2012) with participants from the local government, Manila, Bangkok and the Canadian research team. CCaR Programme outcomes will include enhanced adaptation and risk reduction capacity, better-planned, safer cities and reduced socio-economic impacts as the climate changes.

IRDR China

IRDR China Expert Committee and Group Meetings

IRDR China held several expert committee and group meetings during 2011. The first IRDR China workshop was held in January. Vice Chairman Huadong Guo gave a special report on the IRDR programme. It evoked a discussion about the programme's content amongst the experts who expressed their views combining China's national conditions. Experts suggested conducting several demonstrative integrated research projects in the disaster risk field by associating social and natural sciences together. The second meeting was held in June and included discussions on the working methods, term goals, work plans of the experts committee and the strategic planning of IRDR China. The third IRDR China meeting was held in July, followed by several expert group meetings held in Beijing. These meetings discussed and adopted four previously approved research directions:

- Data sharing development and mechanisms for research of global disasters
- Extreme weather disasters (floods and droughts), FORIN research
- Major geological disasters, FORIN research
- Further research on natural disasters and climate change

IRDR China Roundtable at the 22nd Pacific Science Congress 2011

A delegation of 13 experts from IRDR China took part in the IRDR session, organized by the IRDR IPO, during the 22nd Pacific Science Congress 2011 held in Malaysia.

IRDR Science Plan – Chinese version

IRDR China secretariat translated IRDR's Science Plan, titled *A Science Plan for Integrated Research on Disaster Risk: Addressing the Challenge of Natural and Human-Induced Environmental Hazards*, into simplified and traditional Chinese language. It is available on the IRDR website.

Roundtable Meeting at IRDR Conference 2011

The Roundtable Meeting between the IRDR Science Committee members, IRDR National Committee members and IRDR IPO was held as part of IRDR Conference 2011. The meeting was co-hosted by Yonglong Lv, Director-General of CAS Bureau of International Cooperation and Vice President of IRDR China, and Huadong Guo, Director-General of CEODE and Vice President of IRDR China. Around 50 delegates from more than 10 countries were invited to the meeting; other guests included representatives from the IRDR China Expert Committee, ISSC, UK Department for International Development (DFID) and UNISDR.

Representatives from each country introduced their current IRDR activities, followed by a discussion regarding a series of issues about the implementation of IRDR projects. Representatives suggested that IRDR should make more efforts to:

- Further strengthen networking, capacity building and multilateral cooperations
- Invite more developing countries in Africa, Asia and Latin America to join the IRDR programme
- Carry out several international cooperation research projects
- Raise funds for IRDR activities

Scientific Research Update

• Adapting to Climate Change in China (ACCC) Project

ACCC is a Sino-UK-Swiss collaboration that brings together the UK DFID, the Swiss Agency for Development and Co-Operation (SDC), China's National Development and Reform Commission (NDRC) and the UK Department for Energy and Climate Change (DECC). The project works nationally and in three Chinese territories (Guangdong, Inner Mongolia and Ningxia) and focuses on four socio-economic sectors: agriculture, water resources, health and disaster risk reduction.

• Scenario Analysis Technology for Flood Risk Management in the Taihu Basin

A multi-disciplinary China-UK scientific co-operation project, *Scenario Analysis Technology for Flood Risk Management in the Taihu Basin*, has had marked progress in the past three years. The project aims to resolve how the risks of flooding might change in the Taihu Basin over the next 50 years, and what are the best options for the government and other stakeholders for responding to future challenges.

IRDR France

L'Association Française pour la Prévention des Catastrophes Naturelles (AFPCN) is the designated IRDR National Committee in France.

Scientific Research Update

AFPCN was involved directly and indirectly in four research and development projects funded both by the European Commission and national sources.

AFPCN presented the two of direct interest to IRDR: Rex-Integrated Prevention Project and Collectif d'Action de Développement des Droits de l'homme (CADHOM).

- **Rex-Integrated Prevention Project**

The Rex-Integrated Prevention Project aims to examine technical thresholds of preventive infrastructure, regarding their resilience to major hazardous events, and to identify major drawbacks in preparedness and response. It relies on the analysis of thirteen case studies on events in Czech Republic, France, Germany and Poland. The lessons learned from them will be aimed at determining failures allowing disasters to happen; improving knowledge on technical preparedness and response drawbacks; and contributing to future disaster prevention plans. The project is a partnership with the Czech, German and Polish national platforms for disaster risk reduction.

- **Collectif d'Action de Développement des Droits de l'homme (CADHOM)**

Funded by the National Agency for Research (ANR), this project addresses disasters and human rights from a law-oriented perspective. The objectives are: identifying fundamental rights applicable in case of disasters; human rights affected by disaster risk management (from prevention to relocation); rights contributing to resilience; and the impact of the project on climate refugees. It includes a comparative law study between the European Union (France) and six other countries (Argentina, Brazil, Cameroon, Turkey, Tunisia and Vietnam).

National Observatory on Risks

In 2011, the Ministry of Ecology, Sustainable Development, Transport and Housing (MEDDTL) and the insurance sector in France initiated a process to establish a National Observatory on Natural Risks (ONRN). This is an endeavour related to the IRDR work on data. The nature of the partnership supporting the observatory is still under definition. AFPCN is expected to be involved in it as the leader of the Users Committee.

Workshops and Seminars

The objective of AFPCN in organizing these workshops is to promote a multidisciplinary approach to disaster risk reduction with new paradigms, giving as much attention to “regular” events as the extreme, unpredictable events. Both events have given the opportunity to gather opinions of scientists, experts and decision-makers coming from various communities: physical, biological, human and social sciences, philosophy and policy.

Two of those events are:

- **25 Years after Chernobyl, a New Round for DRR? - 16 June 2011, Paris, France**

This event was organized on the occasion of the 10th anniversary of AFPCN. It gathered more than sixty experts, scientists and politicians, with the participation, amongst others of Mr Michel Jarraud, Secretary General of the World Meteorological Organization (WMO).

The workshop's objective was to draw lessons from GEJET and to build upon the main conclusions of the *Global Platform for Disaster Risk Reduction: Third Session*, held in Geneva in May 2011. The questions raised were:

- Forces of nature: can we control them or shall we compromise with them?
- How to alert and mobilize social forces?
- How to implicate the community leaders for that?

The report of this workshop (only in French) is available from the AFPCN secretariat.

- **Present Disasters, Predicted Disasters - 12 December 2011, Paris, France**

In December 2011, capitalizing on the publication of the summary for policy makers of the *Special Report for Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (SREX), AFPCN, supported by UNESCO, convened an international workshop consisting mainly of European national platforms. The Executive Director of IRDR participated as a speaker.

IRDR Germany

The German Committee for Disaster Reduction (DKKV) is the designated IRDR National Committee in Germany.

Key 2011 activities of DKKV in the framework of IRDR:

- Participation at the meeting of the 5th Science Committee of IRDR
- Presentation of DKKV, on-going research and research demands
- Participation at the 22nd Pacific Science Congress in Kuala Lumpur, Malaysia, during an IRDR session
- Presentation of DKKV as the National IRDR Committee
- IRDR's Executive Director participated at the Scientific Advisory Board meeting of DKKV in Bonn, Germany
- Participation in IRDR Conference 2011, Beijing, China
- Poster and presentation of on-going IRDR activities

In addition to attending several conferences and meetings, IRDR Germany had the following projects:

CapHazNet (Advisory Board Member) - 2010-2012

How can we enhance the capacities of European societies to prepare for, cope with and recover from the negative impacts of a “natural” hazard?

Multi-hazard, multi-risk assessment in Europe, MATRIX (Project partner) - 2011-2013

MATRIX tackles multiple natural hazards and risks in a common theoretical framework. It integrates new methods for multi-type assessment, accounting for risk comparability, cascading hazards and time-dependent vulnerability. MATRIX identifies the conditions under which the synoptic view provides significantly different and better results-or potentially worse results-than established methods for single-type hazard and risk analysis.

REX-Integrated Prevention Project (IRDR France and IRDR Germany) - 2011

Lessons learned on threshold criteria from past disasters in four European countries (2011) were applied to FORIN. In this project, two National IRDR Committees (France and Germany) worked together to tackle the critical issue of whether the agreed and implemented thresholds are sufficient to deal with rare hazard events. Each of the partners contributed a number of relevant disasters and lessons learned. The lessons learned were presented on different time scales and for all parts of the disaster cycle separately, from the immediate reactions in the wake of the event. It seems necessary to tackle the problem of disaster prevention optimally and systematically using the experience from past disaster events.

WEXICOM - 2011-2014

WEXICOM focuses on improving the process of weather warnings and extreme weather information in the chain from meteorological forecasts to their communication for the Berlin conurbation. It is expected this will contribute to FORIN.

The project aims at assessment and optimization of warning processes including the communication of insecurities of high impact forecasts for a conurbation area in Central Europe. As an exemplary target region, the study focuses on the city-state of Berlin, especially on its civil protection infrastructure. The proposal combines expertise from meteorology, social sciences, and media practice into a research project. The initial phase of the project has a focus on extreme wind events caused by severe winter storms and will discuss the problem of hot spots with particular high risks. Past event forecasts are explored both in terms of meteorological insecurities and in terms of the perception of warnings at the stages before now-casting. Problems in the process from meteorological forecasts to warning communication are identified, and improvements both in terms of suitable forecast parameters and forecast methodologies and of communication strategies are jointly developed in close co-operation with DWD. Guidelines for best practices to develop the most suitable, end-user orientated information packages (including meteorologically derived products and their communication) will be developed. The resulting recommendations are also entering the respective practical courses on media-meteorology at Freie Universität Berlin.

Analysis of past international humanitarian disasters with regard to the triggering factors (2012)

Past international humanitarian disasters caused by a natural event in developing countries will be analysed in order to identify the trigger factors that turned the natural event into a disaster. It is expected that this will contribute to the FORIN initiative.

IRDR Japan

The activities of IRDR Japan in 2011 were centred on GEJET, FORIN and IRDR Conference 2011. Detailed reports are available at the IRDR Japan Website. (http://www.ifi-home.info/Japan_IRDR.html)

Response to GEJET

- IRDR Japan met twice in March 2011 to discuss the urgent needs in the aftermath and potential principles of recovery and reconstruction strategy
- IRDR Japan decided to establish the Japan FORIN Working Group to study GEJET

Japan FORIN Working Group for GEJET

- The IRDR FORIN Working Group met eight times to discuss the GEJET
- Meta, cause and scenario analyses have been applied to study GEJET
- The results were reported at IRDR Conference 2011 (they are available at the IRDR website)

Participation of IRDR Japan during IRDR Conference 2011 in Beijing

- Eight people participated in IRDR Conference 2011. Prof Yoshiaki Kawata presented as the keynote lecturer on reconstruction from GEJET.
- Five studies were presented during the GEJET session and FORIN session. PDF documents are available at the IRDR Japan website (http://www.ifi-home.info/Japan_IRDR.html)
- IRDR Japan participated in the IRDR National Committees Roundtable organized by the Chinese National Committee

Transition process of the IRDR Japan National Committee to the new triennial term 2012-2015

The 21st Session of the Science Council of Japan (2008-2011), the designated IRDR Japan National Committee, was terminated in November 2011. It is now undergoing re-establishment for the 22nd Session of the Science Council of Japan (2012-2015) under the leadership of Prof Toshimitsu Komatsu, a member of the SCJ representing civil engineering.

IRDR New Zealand

The Natural Hazards Research Platform (NHRP) is a new approach to research coordination funded by the Ministry of Science and Innovation (MSI). It was officially established in October 2009 as part of a programme of change to increase the long-term stability and effectiveness of research funding. The Platform is the coordinating body of IRDR New Zealand.

The Platform is essentially self-managed by senior researchers, with a management group formed from representatives of the key Platform members, currently GNS, NIWA, University of Auckland, Massey University, University of Canterbury, OPUS and MSI (as observers and advisors). A number of other research groups, other universities and consultancies, and international partners are involved as subcontractors or through alignment of research programmes.

GNS and NIWA are ‘anchors’ of the Platform, with the majority of the \$14 million per annum funding. The Platform is ‘hosted’ by GNS Science, and the Platform Manager is Dr Kelvin Berryman (formerly Hazards section manager at GNS Science).

A Strategic Advisory Group of key research users, including government departments, EQC, lifeline utilities and local government, provides advice to the management group on research direction and provides official endorsement of the research strategy. Strategic Advisory Group members are also expected to champion the platform and facilitate the application and uptake of research outcomes. The agreed goals of the NHRP are to:

- Develop strengthened relationships between research users and research teams
- Develop strong collaborations between research organizations
- Support integration across all disciplines of research relating to natural hazards
- Align hazards research with the strategic needs of government
- Ensure research capabilities are maintained and developed over the life of the platform
- Improve transfer and uptake of knowledge resulting from the research

Research Update

The aim of the research, both supported by and aligned with the platform, will be to directly contribute to improved economic, infrastructural and social resilience to natural hazards in New Zealand. The science capability supported by the platform will also be available to assist decision-makers during significant hazard events. Research is currently organized into the following interim themes:

- Geological hazard models (led by Gill Jolly)
- Predicting weather, flood, and coastal hazards (led by Mike Uddstrom)
- Resilient buildings and infrastructure (to be announced)
- Developing regional and national risk evaluation models (led by Andrew King)
- Societal resilience: social, cultural, economic and planning factors (led by David Johnston)

A key principle of the new approach by the platform is for greater cohesion and integration across areas of research, especially between the physical, engineering and social elements of hazards research. Research focus and grouping of research areas is likely to evolve as part of the development of the Platform Research Strategy.

Annual Report

Each year in April, an Annual Report (<http://www.naturalhazards.org.nz/NHRP/Publications/Annual-Report>) is produced, summarizing the year’s major achievements.

IRDR International Programme Office Operations

Secondments Report

In partnership with the IRDR New Zealand National Committee and Science Committee member David Johnston, the IPO received two secondments in 2011. Drs Sarah Beaven and Miriam Hughes were seconded to the IPO from Massey University, New Zealand. Beaven was seconded for six weeks over the period of three months and Hughes was in Beijing for one month. Their primary activities included developing and conducting the assessment of the ICSU Regional Disaster Plans with the IRDR Science Plan; assisting with the organization and review of abstracts for IRDR Conference 2011; and serving as key personnel during IRDR Conference 2011. As a result, the secondment programme and the relationship between IRDR New Zealand and the IRDR IPO were strengthened. Another secondment to the IPO was Ms Elaine Chong, Educational Coordinator from the Earth Observatory of Singapore (EOS). She worked with the IPO to develop the content for the website and arrange various logistical and conference support materials. In exchange, the IPO expanded her knowledge in disaster risk reduction. The IPO continues to look for additional secondment opportunities with its various partners.

Website Operations

In May, upon the request of the Science Committee, IRDR's website (www.irdrinternational.org) was redesigned. The new features include a colourful slideshow display on the home page; a news feed and news centre, containing press releases and copies of IRDR newsletters; and a members-only section, which was created to provide IRDR Science Committee Members, Ex-Officio Members and Working Group Co-Chairs with internal working documents.

IPO Staff Update

The IRDR International Programme Office, located in Beijing, China, is hosted by CAS CEODE, and headed by Jane E. Rovins. In 2011, the IPO recruited two additional staff members:

Ms **Anna Rudashko** was initially hired as a Communications Intern in March. After successful completion of her internship she was hired as the Communications Officer at the IRDR IPO in September. The Communications Officer is responsible for managing and distributing information concerning or produced by the IRDR programme. This includes sharing reports with members, sponsors and the public; publicizing news, events and general details about the programme's history and progress, as well as promoting the IRDR programme at global, regional and national levels.

Ms **Yaoying Cheng** was hired as a Junior Science Officer at the IRDR IPO in November. The Junior Science Officer's responsibilities are providing support and assistance to the IRDR Executive Director and developing and implementing a process to gather and widely disseminate information from the IRDR programme and its projects and initiatives.

IRDR IPO 2011 Annual Financial Statement

Overview

In 2011 the IRDR IPO participated in a variety of programs and grants. This graph illustrates the funds that are directly given to the IPO or used to engage in an IRDR project.

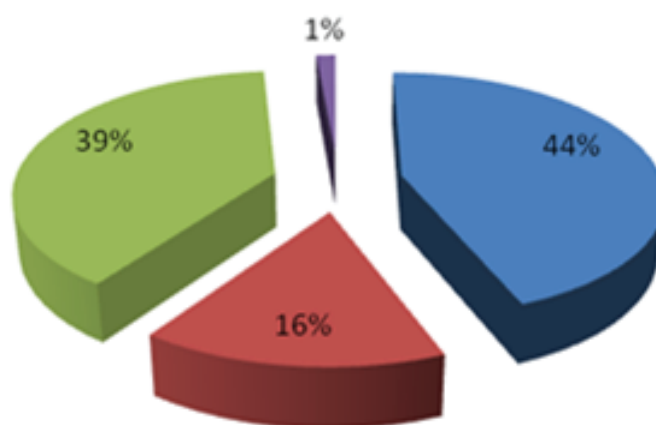
The CAST Annual contribution is 2,700,000 CNY. For the year ended 31 December 2011, the net income was 3,921,847.18 CNY (this total amount includes the balance of 2010); the total expenditures were 2,620,371.49 CNY in 2011 compared with 1,478,152.82 CNY in 2010; and the balance of 2011 was 1,301,475.69 CNY, which will go to the 2012 budget.

| Grant | Amount | Amount in USD | Rate | NOTES |
|------------------------|----------------|--------------------|----------------|--|
| CAST Annual | 2,700,000 CNY | 540,000 | 1 CNY=0.2 USD | IRDR IPO Annual Operation |
| 2010 Roll-over | 1,221,847 CNY | 244,369 | 1 CNY=0.2 USD | Roll-over from 2010 CAST Annual Award |
| ICSU Contribution | 30,000 EUR | 39,000 | 1 EUR=1.3 USD | 5 th IRDR Science Committee meeting |
| UNISDR Contribution | 30,000 USD | 30,000 | | FORIN Working Group/RIA Working Group |
| IRDR Conference Income | 56,700 CNY | 11,340 | 1 CNY=0.2 USD | Income from IRDR Conference 2011 Registration |
| CAST-Conference | 825,729 CNY | 165,146 | 1 CNY=0.2 USD | Sponsorship of IRDR Conference 2011 |
| ICSU Grant | 30,000 EUR | 39,000 | 1 EUR=1.3 USD | Sponsored young scientists to participate in IRDR activities |
| CAS/CEODE | 150,000 CNY | 30,000 | 1 CNY=0.2 USD | Sponsorship of IRDR Conference 2011 |
| ICoE | 10,000,000 NTD | 300,000 | 1 NTD=0.03 USD | IRDR ICoE events and CARII workshop |
| ENHANS | 72,400 EUR | 94,120 | 1 EUR=1.3 USD | |
| CCaR Project | 2,500,000 CAD | 2,500,000 | 1 CAD=1 USD | Coastal Cities at Risk: Building Capacity for Managing Climate Change in Coastal Megacities (CCaR) project [5year] |
| TOTAL | | \$3,992,975 | | |

The following chart summarizes total operating expenses (funds provided annually by CAST) by category:

IRDR IPO 2011 Expenses

■ Labour Cost ■ Administrative ■ Travel ■ Hospitality



The labour cost includes salary and social insurances of all IRDR IPO employees. Administrative expenses account for the cost of daily operation of the IPO. Travel expenses include business travels for IPO operations, Science Committee Meeting travels and IRDR Conference travels. Hospitality is the expenditure for meals and other costs of meetings and IRDR Conference 2011.

IRDR Conference 2011

The IRDR Conference 2011 Financial Summary shows the overall expenses that the IRDR IPO incurred for the conference organization and management. In addition, CAST contributed 825,729 CNY for the venue and facilities, airport pick-up, as well as the food and beverages. The Tibet Water company provided mineral water and gifts for all the participants (estimated value 100,000 CNY).

| Item | Amount (CNY) |
|----------------------|---|
| Accommodation | ¥133,428 |
| Venue and Facilities | ¥9,700 |
| Airfare | ¥360,260 |
| Local Transportation | ¥2,200 |
| Delegate Packages | ¥52,850 |
| Administration | ¥94,981 |
| SUB TOTAL | ¥653,419 |
| CAST | ¥825,729 |
| CAS | ¥137,500 |
| Tibet Water | ¥100,000 |
| TOTAL | ¥1,716,648 USD \$272,484 |

IRDR Science Committee Members

The Integrated Research on Disaster Risk Programme is governed by a 15-member Science Committee. The Science Committee is composed of disaster risk reduction experts from around the world. Members are chosen based on their standing in the international scientific community and their commitment to the strategic objectives of the programme. The committee aims to include a balanced representation of relevant disciplines in the natural, social and engineering sciences, taking into consideration regional and gender balances. In 2011, four new science committee members were approved by the IRDR co-sponsors. These members replaced outgoing members Richard Eiser (UK) and Gordon McBean (Canada) and filled two empty seats on the Science Committee. Sálvano Briceño succeeded Gordon McBean as the new Chair of the IRDR Science Committee effective 1 November 2011.

The new members are:

BRICEÑO, Sálvano (Venezuela) - management of environmental, sustainable developments and international programmes

FERRIGNI, Ferruccio (Italy), University of Naples Federico II - risk, local culture of risk

OLIVER-SMITH, Anthony (USA), University of Florida - anthropological research relating to disasters, FORIN WG Co-Chair

PELLING, Mark (UK), King's College, London - reader in human geography

These newly appointed members join the following current Science Committee members:

BENOUAR, Djillali (Algeria), University of Science & Technology Houari Boumediene (USTHB) - earthquake engineering

CARDONA, Omar Darío (Colombia), National University of Colombia, Manizales - earthquake engineering, risk mitigation

CHAN Kin Sek, Raymond (Hong Kong, China), Civil Engineering and Development Department of Hong Kong, China - civil engineering, landslide mitigation

***CUTTER**, Susan (USA), University of South Carolina - hazards and vulnerability, WG AIRDR Co-Chair, DATA WG Co-Chair

***JOHNSTON**, David (New Zealand), Massey University - Earth sciences, disaster management, RIA WG Co-Chair

LAVELL, Allan (Costa Rica), independent - social and developmental aspects of risk and disasters, AIRDR WG Co-Chair

PATEK, Maria (Austria), Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) - avalanches, torrents

SIWAR, Chamhuri (Malaysia), National University of Malaysia, Bangi - economics, disasters

***TAKEUCHI**, Kuniyoshi (Japan), ICHARM - hydrology, civil engineering

VOGEL, Coleen (South Africa), independent - geography, environmental studies

WIRTZ, Angelika (Germany), Geo Risks Research, Munich Re - economic data on disasters, DATA WG Co-Chair

* *Science Committee Vice Chair*

Ex-Officio

The Ex-Officio members of the IRDR Science Committee represent each of the IRDR co-sponsors and the IPO host organization.

GUO, Huadong - Center for Earth Observation and Digital Earth (CEODE)

HERNES, Gudmund - International Social Science Council (ISSC)

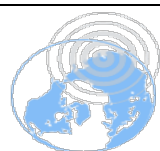
MASKREY, Andrew - United Nations International Strategy for Disaster Reduction (UNISDR)

MOORE, Howard - International Council for Science (ICSU)

- ACCC:** Adapting to Climate Change in China Project
- AFPCN:** L'Association Française pour la Prévention des Catastrophes Naturelles
- AGU:** American Geophysical Union
- AIRDR:** Assessment of Integrated Research on Disaster Risk (IRDR Working Group)
- ANR:** National Agency for Research (France)
- BISO:** Board on International Scientific Organizations, NAS (USA)
- BRDI:** Board on Research Data and Information
- CADHOM:** Collectif d'Action de Développement des Droits de l'homme
- CapHazNet:** Social Capacity Building for Natural Hazards Toward More Resilient Societies
- CAR II:** Second International Conference on Cities at Risk: Building Adaptive Capacities for Managing Climate Change Risks in Asian Coastal Cities
- CAS:** Chinese Academy of Sciences
- CAST:** China Association of Science and Technology
- CCaR:** Coastal Cities at Risk: Building Capacity for Managing Climate Change in Coastal Megacities Project
- CEODE:** Center for Earth Observation and Digital Earth (China)
- CFRS:** Committee on Freedom and Responsibility in the Conduct of Science, ICSU
- CODATA:** Committee on Data for Science and Technology
- DATA:** Disaster Loss Data (IRDR Working Group)
- DECC:** Department of Energy & Climate Change (UK)
- DFID:** Department for International Development (UK)
- DKKV:** German Committee for Disaster Reduction
- DWD:** Federal Ministry of Transport, Building and Urban Development (Germany)
- ENHANS:** Extreme Natural Hazards and Societal Implications
- EOS:** Earth Observatory of Singapore
- EQC:** Earthquake Commission (New Zealand)
- ESF-COST:** European Science Foundation-European Cooperation in Science and Technology
- FORIN:** Forensic Investigations of Disasters (IRDR Working Group)
- GAR 2013:** Global Assessment Report on Disaster Risk Reduction 2013
- GEJET:** Great East Japan Earthquake and Tsunami
- GEM:** Global Earthquake Model
- Gi4DM:** GeoInformation for Disaster Management
- GNS:** Institute of Geological and Nuclear Sciences Limited (New Zealand)
- HASS:** Humanities, Arts & Social Science
- IAEM:** International Association of Emergency Managers
- ICoE:** IRDR International Centre of Excellence
- ICSU:** International Council for Science
- ICSU ROAP:** International Council for Science Regional Office for Asia and Pacific
- ICSU WDS:** International Council for Science World Data System
- IDRC:** International Development Research Centre (Canada)
- IPCC:** Intergovernmental Panel on Climate Change
- IRDR:** Integrated Research on Disaster Risk
- IRDR IPO:** Integrated Research on Disaster Risk International Programme Office
- ISSC:** International Social Science Council
- IUGG:** International Union of Geodesy and Geophysics
- LOICZ OSC:** Land-Ocean Interactions in the Coastal Zone Open Science Conference
- MATRIX:** Multi-Hazard, Multi-Risk Assessment in Europe (2011-2013)
- MEDDTL:** Ministry of Ecology, Sustainable Development, Transport and Housing (France)
- MSI:** Ministry of Science and Innovation (New Zealand)

- NDRC:** National Development and Reform Commission (China)
- NGO:** Non-Governmental Organization
- NHRP:** Natural Hazards Research Platform (New Zealand)
- NIWA:** National Institute of Water and Atmospheric Research (New Zealand)
- ONRN:** National Observatory on Natural Risks (France)
- OPUS:** Opus International Consultants (New Zealand)
- PSA:** Pacific Science Association
- RIA:** Risk Interpretation and Action (IRDR Working Group)
- SCJ:** Science Council of Japan
- SDC:** Swiss Agency for Development and Cooperation
- SERA:** Societal and Economic Research and Applications (WWRP Working Group)
- SREX:** Special Report for Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
- START:** Global Change SysTem for Analysis, Research and Training
- UNESCO:** United Nations Educational, Scientific and Cultural Organization
- UNISDR:** United Nations International Strategy for Disaster Reduction
- WCMD:** World Conference on Disaster Management
- WCSDf:** World Cities Scientific Development Forum
- WMO:** World Meteorological Organization
- WWRP:** World Weather Research Programme

IRDR Conference 2011 - Agenda



IRDR Conference 2011 Oct. 31 - Nov. 2, Beijing Disaster Risk: Integrating Science and Practice

- Objective 1 Themes
- Objective 2 Themes
- Objective 3 Themes
- Emerging Issues of Integration
- Confirmed Speaker

Hosted by the Integrated Research on Disaster Risk Programme and
the China Association for Science and Technology



Sunday, October 30

Registration 08:30 to 17:30

Monday, October 31

Morning Sessions 09:00 to 12:00

| | |
|--|---|
| <p>09:00 to 10:15 Opening Ceremony (Hall #2)</p> <p style="text-align: center;"><i>Introduction by Gordon McBEAN</i></p> <p style="text-align: center;">Qide HAN, CAST President Margareta WAHLSTRÖM, United Nations Secretary General's Special Representative for Disaster Risk Reduction (<i>video</i>) Yuan Tseh LEE, ICSU President Heide HACKMANN, ISSC Executive Director <i>Closing by Gordon McBEAN</i></p> | <p>Gordon McBEAN</p> <p>China</p> <p>Sweden</p> <p>China: Taipei</p> <p>France</p> |
|--|---|

10:15 to 10:45 *Coffee and Tea Break*

| | |
|--|---|
| <p>10:45 to 12:00 Keynote 1 Integrated Disaster Risk (Hall #2)</p> <p style="text-align: center;"><i>Introduction by David JOHNSTON</i></p> <p style="text-align: center;">Speaker: Heide HACKMANN</p> <p style="text-align: center;"><i>Introduction by David JOHNSTON</i></p> <p style="text-align: center;">Speaker: Jane ROVINS</p> <p style="text-align: center;"><i>Closing by David JOHNSTON</i></p> | <p>David JOHNSTON</p> <p>France</p> <p>China/USA</p> |
|--|---|

Knowledge Production Across Fields, Sectors and
National Borders: The Implications and Challenges
of Integrated Research

Disaster Risk: From Research to Practice –
A Summary of the IRDR Programme

Lunch 12:00 to 13:30

Afternoon Sessions 13:30 to 18:35

| | |
|---|--|
| <p>13:30 to 15:15 Keynote 2 Cases for Integrated Research (Hall #2)</p> <p style="text-align: center;"><i>Introduction by Sálvano BRICEÑO</i></p> <p style="text-align: center;">Yoshiaki KAWATA</p> <p style="text-align: center;">Randoloh KENT</p> <p style="text-align: center;"><i>Closing by Sálvano BRICEÑO</i></p> | <p>Sálvano BRICEÑO</p> <p>Japan</p> <p>UK</p> |
|---|--|

Towards Reconstruction after The Great East Japan
Earthquake and Tsunami

Emerging Risks: The Case for Integrated Research

15:15 to 15:45 *Coffee and Tea Break*

| | |
|--|---|
| <p>15:45 to 18:35 Keynote 3 Reading International Events in the IRDR Perspective (Hall #2)</p> <p style="text-align: center;"><i>Introduction by Allan LAVELL</i></p> <p style="text-align: center;">John HANDMER</p> <p style="text-align: center;">Huadong GUO</p> <p style="text-align: center;">Wadid ERIAN</p> <p style="text-align: center;"><i>Discussion/Closing by Allan LAVELL</i></p> | <p>Allan LAVELL</p> <p>Australia</p> <p>China</p> <p>Egypt</p> |
|--|---|

Reading International Events in the IRDR
Perspective – Hazards and Politics
Recent Progress of Disaster Risk Research and
Mitigation in China
Living with Drought: Challenges and Solutions

Welcoming Banquet 19:00

IRDR Conference 2011 - Agenda

| Tuesday, November 1 | | |
|--|---|---|
| Morning Sessions | | 08:30 to 12:15 |
| 08:30 to 10:00 | Keynote 4 Integrated Disasters and the Role of Science (Hall #2) <i>Introduction by Gordon McBEAN</i> MME Michaëlle JEAN, UNESCO Special Envoy for Haiti and Former Governor General of Canada Guoxiong WU, Ordinary member of ICSU Executive Board, Chairman of Science Steering Group of National Key Science Research Program on Global Change <i>Closing by Gordon McBEAN</i> | Gordon McBEAN Canada China |
| 10:00 to 10:30 | Plenary 1 Characterization of Hazards, Vulnerability and Risk (Hall #2) <i>Introduction by Omar Darío CARDONA</i> Speaker: Susan CUTTER <i>Closing by Omar Darío CARDONA</i> | Omar Darío CARDONA USA |
| 10:30 to 11:00 <i>Coffee and Tea Break</i> | | |
| 11:00 to 12:15 | Plenary 2 Understanding Decision-Making in Complex and Changing Risk Contexts (Hall #2) <i>Introduction by Djillali BENOUAR</i> Speaker: Allan LAVELL Plenary 3 Reducing Risk and Curbing Losses through Knowledge-Based Actions (Hall #2) <i>Introduction by Djillali BENOUAR</i> Speaker: Andrew MASKREY <i>Closing by Djillali BENOUAR</i> | Djillali BENOUAR Costa Rica Switzerland |
| Lunch | | 12:15 to 13:30 |
| Afternoon Sessions | | 13:30 to 19:00 |
| 13:30 to 15:15 | Breakouts A1 - Identifying Hazards and Vulnerabilities Leading to Risks (100 ppl) <i>Introduction by Ferruccio FERRIGNI</i> Sven FUCHS Ken HO Liliana CARREÑO Mohamed FARSI <i>Discussion/Closing by Ferruccio FERRIGNI</i> | Ferruccio FERRIGNI Austria Honk Kong Mexico Algeria |
| 13:30 to 15:15 | B1 - Improving the Quality of Decision-Making Practice - Japanese Earthquake (120 ppl) <i>Introduction by Kuniyoshi TAKEUCHI</i> Tadashi NAKASU Naoki FUJIWARA Takashi FURUYA Munenari INOUCHI <i>Discussion/Closing by Kuniyoshi TAKEUCHI</i> | Kuniyoshi TAKEUCHI Japan Japan Japan Japan |
| 13:30 to 15:15 | C1 - Vulnerability Assessments (100 ppl) <i>Introduction by Joern BIRKMANN</i> Jakob RHYNER Joern BIRKMANN Nishara FERNANDO Omar Darío CARDONA <i>Discussion/Closing by Joern BIRKMANN</i> | Joern BIRKMANN, UNU Germany Germany Sri Lanka Columbia |

IRDR Conference 2011 - Agenda

| | | | |
|--|--|--|--|
| 13:30 to 15:15 | D1 - Capacity Building for Integrated Research (#307) <i>Introduction by Djillali BENOUAR</i> Chris ORACH Chao-Han LIU Roland J. FUCHS Sven HALLDIN <i>Discussion/Closing by Djillali BENOUAR</i> | Periperi U Mission and Operation of the IRDR International Centre of Excellence Adaptation to Climate Change in Asian Coastal Cities (IRDR ICoE project) Centre for Natural Disaster Science (CNDS) – A Swedish Initiative to Improve Security and Disaster Management | Djillali BENOUAR Uganda China: Taipei USA Sweden |
| 13:30 to 15:15 | E1 - Monsoon Asia Integrated Regional Study (MAIRS - #310) <i>Introduction by Aili KUN</i> Somchai BAIMOUNG Aili KUN Anisah Lee ABDULLAH Chuan-Yao LIN <i>Discussion/Closing by Aili KUN</i> | The Impact of Climate Change/Variability in Urbanization Areas of Thailand: Case of Extreme Events for Chilling Cold Weather in Upper and Very Heavy Rainfall in Lower Parts, Thailand Introduction of MAIRS Megacity Study Patterns of pH, Temperature and Salinity in the Straits of Malacca and the South China Sea with Possible Relation to Riverine Run-Offs in the Region Impact of Urban Heat Island Effect on the Precipitation over Complex Geographic Environment in Northern Taiwan | Aili KUN, MAIRS Thailand China Malaysia China: Taipei |
| 15:15 to 15:45 <i>Coffee and Tea Break</i> | | | |
| 15:45 to 17:30 Breakouts | A2 - Forensic Investigations of Disasters (FORIN) Working Group (100 ppl) <i>Introduction by Allan LAVELL</i> Allan LAVELL Djillali BENOUAR Torsten SCHLURMANN Junko SAGARA <i>Discussion/Closing by Allan LAVELL</i> | FORIN Template FORIN or Far-out? Exploring Multiple Drivers of Disaster Risks in Africa Return on Experience for Enhanced Integrated Prevention - REX-INTEGRATED-PREVENTION Critical Cause Analysis of Delayed Evacuation in the Great East Japan Earthquake and Tsunami | Allan LAVELL Costa Rica Algeria Germany Japan |
| 15:45 to 17:30 | B2 - Understanding Decision-Making in the Context of Environmental Hazards (100 ppl) <i>Introduction by David JOHNSTON</i> Qi ZHU Francis J. SOLOMON Jimena CUEVAS PORTILLA Claudia KUENZER <i>Discussion/Closing by David JOHNSTON</i> | The Establishment of Health Vulnerability Assessment Methods in the Context of Climate Change and its Application on Heat Wave Events in Guangdong Province Examining the Feasibility of Informal Settlement Flood Early Warning Systems: Focus on the Urban Flood-Risk Experience in Kosovo and Masiphumelele Residents, Cape Town South Africa Spatial Strategies and Practices to Address Hydrometeorological Phenomena in the City of Campeche, Mexico Asian River Deltas experiencing slow-onset Hazards: Vulnerability, Resilience and Adaptation to Environmental Degradation and Climate Change | David JOHNSTON China South Africa Mexico Germany |
| 15:45 to 17:30 | C2 - Integrated Disaster Data in Support of Integrated Disaster Research (120 ppl) <i>Introduction by Robert CHEN</i> Farrokh NADIM Jan-Ming HO Koki IWAO Robert CHEN <i>Discussion/Closing by Robert CHEN</i> | Importance of High Quality Data for Calibration and Verification of Hazard and Risk Models OpenISDM: An Open Framework for Disaster Information Systems GEO Grid Disaster Response Task Force Activity for the 2011 Tohoku, Japan Earthquake Progress and Challenges in Integrating Disaster-Related Data and Information | Robert Chen, CODATA Norway China: Taipei Japan USA |

IRDR Conference 2011 - Agenda

| | | | |
|-------------------------------------|--|---|--|
| 15:45 to 17:30 | <p>D2 - Integration of Politicians and Disaster Risk Research (#307)</p> <p><i>Introduction by Sálvano BRICEÑO</i></p> <p>Abdou SANÉ</p> <p>Byarugaba Alex BAKUNDA</p> <p>Saber Hossain CHOWDHURY</p> <p>Saumura TIOULONG</p> <p><i>Discussion/Closing by Sálvano BRICEÑO</i></p> | <p>The Hyogo Framework for Action</p> <p>Integration of Politicians and Disaster Risk Research</p> <p>Politics and Disaster Risk Reduction – Connecting the Dots</p> <p>Politics and Disaster Risk Reduction</p> | <p>Sálvano BRICEÑO</p> <p>Senegal</p> <p>Uganda</p> <p>Bangladesh</p> <p>Cambodia</p> |
| 15:45 to 17:30 | <p>E2 - Monsoon Asia Integrated Regional Study (MAIRS - #310)</p> <p><i>Introduction by Aili KUN</i></p> <p>Kanchana NAKHAPAKORN</p> <p>Tianbao ZHAO</p> <p>Jie WEI</p> <p>Jieming CHOU</p> <p>Shuyu WANG</p> <p><i>Discussion/Closing by Aili KUN</i></p> | <p>The Relation between Land Cover and the Urban Heat Island Using Geoinformatics Applications</p> <p>Probability Distribution of Minimum/Maximum Temperature and Response to Urbanization over China During the Last 50 years</p> <p>The Severe Drought in the Yangtze River Basin in the Spring of 2011</p> <p>An Economic Assessment Method for the Impact of Climate Change</p> <p>Multi-Model Projection of Asian Climate Change</p> | <p>Aili KUN, MAIRS</p> <p>Thailand</p> <p>China</p> <p>China</p> <p>China</p> <p>China</p> |
| 17:30 to 18:00 | Young Scientists Posters (Poster Session Area) | | Sarah BEAVEN |
| 17:30 to 19:00 | SC IRDR NC, ICoE Round Table (Invite Only) | | IRDR - China |
| Dinner (Invite Only) | | | 19:00 |
| Wednesday, November 2 | | | |
| Morning Sessions | | | 08:30 to 12:30 |
| 08:30 to 10:15 | <p>Breakouts A3 - Dynamic Modeling of Risk (100 ppl)</p> <p><i>Introduction by Omar Darío CARDONA</i></p> <p>Rui PINHO</p> <p>Joanne C. ROBBINS</p> <p>Pascal PEDUZZI</p> <p>Luis E. YAMÍN</p> <p><i>Discussion/Closing by Omar Darío CARDONA</i></p> | <p>The Global Earthquake Model (GEM) Risk and Impact Modeling Tools for Weather Related Hazards</p> <p>Mapping and Understanding Global Disaster Risk and Trends: the GAR Analysis</p> <p>CAPRA - Comprehensive Approach to Probabilistic Risk Assessment:</p> <p>International Initiative for Disaster Risk Management Effectiveness</p> | <p>Omar Darío CARDONA</p> <p>Italy</p> <p>UK</p> <p>Switzerland</p> <p>Colombia</p> |
| 08:30 to 10:15 | <p>B3 - Risk Interpretation and Action (RIA) Working Group (#307)</p> <p><i>Introduction by Richard EISER</i></p> <p>Dick EISER</p> <p>John McClURE</p> <p>Mathew WHITE</p> <p><i>Discussion/Closing by Richard EISER</i></p> | <p>RIA Report</p> <p>Judgments of Earthquake Risk Before and After the Canterbury Earthquake: Do they Relate to Preparedness?</p> <p>Building and Losing Public Trust in Disaster Risk Management</p> | <p>Richard EISER</p> <p>UK</p> <p>New Zealand</p> <p>UK</p> |
| 08:30 to 10:15 | <p>C3 - Long Term Disaster Data Archiving and Sharing for Scientific Research (120 ppl)</p> <p><i>Introduction by Guoqing LI</i></p> <p>Guoqing LI</p> <p>Pakorn APAPHANT</p> <p>Chuang LIU</p> <p>Carol SONG</p> <p><i>Discussion/Closing by Guoqing LI</i></p> | <p>Data Management in Natural Disaster Mitigation</p> <p>WGISS report on space based disaster data activities</p> <p>Open Knowledge and Data Environment for Disaster Mitigation for Developing Countries</p> <p>Cyber technical opportunity for Global disaster management</p> | <p>Guoqing LI, CEODE</p> <p>China</p> <p>Thailand</p> <p>China</p> <p>China</p> |
| 08:30 to 10:15 | <p>D3 - Poverty, Economics and Disasters (100 ppl)</p> <p><i>Introduction by Chamhuri SIWAR</i></p> <p>Evans JADOTTE</p> <p>Mohsen GHAFORY-ASHTIANY</p> <p>Stefan HOCHRAINER</p> <p>Paul KOVACS</p> <p><i>Discussion/Closing by Chamhuri SIWAR</i></p> | <p>Poverty, Vulnerability, and Resilience</p> <p>Disaster Risk Insurance in Iran and Building Insurance Risk Index</p> <p>Modelling the Economic Effects of Disaster Risk in Nepal</p> <p>The Role of Insurance</p> | <p>Chamhuri SIWAR</p> <p>Haiti</p> <p>Iran</p> <p>Austria</p> <p>Canada</p> |
| 10:15 to 10:45 Coffee and Tea Break | | | |

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| 10:45 to 12:30 | Breakouts A4 - Forecasting Hazards (100 ppl) <i>Introduction by Raymond CHAN</i> Antonius RATDOMOPURBO Jing XU Mark SVOBODA Nick ROBERTS <i>Discussion/Closing by Raymond CHAN</i> | Long- and Short-Range Forecasting of Volcanic Eruptions Forecasting and Warning of Tropical Cyclones in China Building an Enhanced Drought Early Warning System: Contributions and Collaborations toward a Global Drought Early Warning System Landslide Forecasting and its Role in Risk Reduction | Raymond CHAN Singapore China USA Canada |
| 10:45 to 12:30 | B4 - Identifying Relevant Decision-Making Systems and their Interactions (100 ppl) <i>Introduction by Anthony OLIVER-SMITH</i> Douglas PATON Jiahua PAN David JOHNSTON Jean Christophe GAILLARD <i>Discussion/Closing by Anthony OLIVER-SMITH</i> | Community Preparedness for Natural Hazards: Cross Cultural and Cultural Perspectives Climate Capacity as an Indicator for Adaptation Planning The Role of Multidisciplinary Research and Collaboration for Improving the Resilience of Communities to Natural Hazards Integrating Knowledge and Actions in Making Decision for Disaster Risk Reduction: A Road Map | Anthony OLIVER-SMITH Australia China New Zealand New Zealand |
| 10:45 to 12:30 | C4 - Effective Approaches to Risk Reduction (#307) <i>Introduction by Maria PATEK</i> Raymond CHAN John SCHNEIDER Miguel MORA Mabel MARULANDA <i>Discussion/Closing by Maria PATEK</i> | Landslide Risk Management in Hong Kong Natural Hazard Risk Assessment in the Australasian Region: Informing Disaster Risk Reduction and Building Community Resilience Cost-Benefit Probabilistic Ratio of Seismic Retrofitting Design and Implementation of Seismic Risk Insurance to Cover Low-Income Homeowners by Cross-Subsidy Strategy | Maria PATEK Hong Kong Australia Colombia Spain |
| 10:45 to 12:30 | D4 - Disaster Loss Data (DATA) Working Group (120 ppl) <i>Introduction by Angelika WIRTZ</i> Angelika WIRTZ Regina BELOW Carlos VILLACIS Julio SERJE <i>Discussion/Closing by Angelika WIRTZ</i> | The Need of Loss Data Global Loss Databases, Methodologies, Uncertainties National and Local Databases: Implementation in Decision Making Processes Usage of National Disaster Loss Data in the Global Assessment Report | Angelika WIRTZ Germany Belgium Ecuador Switzerland |
| Lunch | | | 12:30 to 13:30 |
| Afternoon Sessions | | | 13:30 to 17:00 |
| 13:30 to 15:15 | Breakouts A5 - Assessment of Integrated Research on Disaster Risk (AIRDR) Working Group (100 ppl) <i>Introduction by Susan CUTTER</i> Susan CUTTER Andrew MASKREY <i>Discussion/Closing by Susan CUTTER</i> | What is AIRDR? Global Assessment Report | Susan CUTTER USA Switzerland |
| 13:30 to 15:15 | B5 - Disaster Risk and Climate Change Adaptation (120 ppl) <i>Introduction by Kuniyoshi TAKEUCHI</i> Yan ZHENG Changgui WANG Gordon MCBEAN Yinlong XU <i>Discussion/Closing by Kuniyoshi TAKEUCHI</i> | Climate Change and Migration - Evidence and Policy in Northern China Applications of PRECIS for Assessing Extreme Climate Events IPCC/SREX How Climate-related Disasters Exacerbate Poverty? | Kuniyoshi TAKEUCHI China UK Canada China |

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| 13:30 to 15:15 | C5 - Young Scientists (# 307) | Richard EISER |
| | <i>Introduction by Richard EISER</i> | |
| | Amy R. DONOVAN | UK |
| | Funda ATUN | Turkey |
| | Zach WHITMAN | USA/New Zealand |
| | Alonso BRENES | Costa Rica |
| | Wentao YANG | China |
| | <i>Discussion/Closing by Richard EISER</i> | |
| 13:30 to 15:15 | D5 - Barriers and Bridges (100 ppl) | Anthony OLIVER-SMITH |
| | <i>Introduction by Anthony OLIVER-SMITH</i> | |
| | Alik ISMAIL-ZADEH | Russia/Germany |
| | Jo-Ting HUANG | China: Taipei |
| | Samuel R. WINNINGHAM | USA |
| | Christopher M. LAVELL | Costa Rica |
| | <i>Discussion/Closing by Anthony OLIVER-SMITH</i> | |
| 15:15 to 15:45 | <i>Coffee and Tea Break</i> | |
| 16:00 to 17:00 | Plenary 4 Summary of Conference Outcomes, Moving Forward (Hall #2) | Jane ROVINS |
| | <i>Introduction by Jane ROVINS</i> | |
| | Speaker: Sálvano BRICEÑO | Venezuela |
| | <i>Discussion/Closing by Jane ROVINS</i> | |

The 2011 Beijing Declaration on Integrated Research on Disaster Risk



The 2011 Beijing Declaration on Integrated Research on Disaster Risk

The 300+ participants at the inaugural Integrated Research on Disaster Risk (IRDR) Conference organized by IRDR and the China Association of Science and Technology (CAST) and held in Beijing, China from 31 October to 2 November 2011, acknowledge that to address disaster events requires a more strategic integrated approach of all scientists and engineers with policy makers, the insurance industry and the mass media to make disaster risk reduction a reality. The impacts of disasters triggered by natural hazards continue to grow and reduce the capacity for countries of the World to move towards sustainable development.

The Conference provided a platform from which to launch trans-disciplinary, multi-sectorial alliances for the advancement of disaster risk research. Individual Conference events facilitated information sharing and knowledge transfer between researchers, practitioners and policy makers.

The 2011 Beijing Declaration on IRDR:

recognizing the IRDR Science Plan and the outcomes of this Conference and the valuable contributions made by participants; and

being fully aware of the international policy guidance provided by the *Hyogo Framework for Action (2005-2015):*

Building the Resilience of Nations and Communities to Disasters, and other major policy and technical initiatives; *calls* for commitments to:

1. RESEARCH: Promote and advance research on natural, social, engineering and technology aspects of disaster risk in an integrated environment and enhance team efforts in hazard and disaster risk research, building on existing research networks and initiatives, and integrating various stakeholder needs at all levels
2. INTEGRATION: Ensure that disaster risk research programmes and policies are integrated across disciplines, and contribute to enhancing policy-making and capacity building for reducing risk in the face of natural hazards
3. GLOBAL STANDARDS: Develop and coordinate globally standardized open source information, disaster loss data, event documentation and analysis procedures, guidelines and frameworks for integrated and effective disaster risk management
4. AWARENESS RAISING: Raise awareness of decision-makers and the public by promoting effective, integrated, demand-driven, evidence-based disaster risk initiatives and increased advocacy
5. EDUCATION: Promote a holistic approach in natural hazards and disasters risk education and training by promoting integration of risk into various curricula
6. INCREASE FUNDING: Motivate funding sources (public, private, humanitarian, development, scientific, etc.) to allocate priority funding to address the urgent need for applied integrated research on disaster risks
7. AND specifically for the:
 - Promotion of Forensic Investigations of Disasters (FORIN) by scientists, politicians and decision makers for a sound integrated disaster risk reduction through the development of a series of case studies with partners.
 - Advancement of better integration of social sciences into disaster risk research, especially with regard to decision-making leading to Risk Interpretation to Action (RIA) research projects.
 - A concise analysis of existing and applied methodologies of disaster data collection and impact assessment leading to standardized and transparent data collaboration under the Disaster Impact and Loss Assessment Data (DATA) project.
 - Establishment of an Assessment of Integrated Research on Disaster Risk (AIRDR), a first systematic and critical global assessment of research on disaster risks.
 - Enhanced and focused interaction between scientists, politicians and policy-makers, by introducing as project's input the search of success by political actors.
 - Contributions to the dissemination and implementation of recommendations stemming from the IPCC's Special Report on Managing the Risk of Extreme Events (SREX), and the preparation of the 2013 UN Global Assessment Report on Disaster Risk Reduction.



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