ANNUAL REPORT 2013
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Introduction

The 2013 Annual Report for the Integrated Research on Disaster Risk (IRDR) programme provides an update on the activities undertaken by the programme to achieve its mission of developing trans-disciplinary, multi-sectorial alliances for in-depth, practical disaster risk reduction research studies, and the implementation of effective evidence-based disaster risk policies and practices.

Section two, “About IRDR”, explains the premise for the programme and how it works to address the major challenges of natural and human-induced environmental hazards. Sections three to five report in more detail on the results and impacts of the activities undertaken by IRDR’s four project working groups, Science Committee and International Programme Office and the strengthened networks of ICoES and NCs during the year. The reporting follows the order of the six strategic goals outlined in the IRDR Strategic Plan 2013-2017. The Strategic Plan was discussed and adopted by IRDR’s SC and Co-sponsors in 2013, and builds on ICSU’s Science Plan for Integrated Research on Disaster Risk (2008).
About IRDR

Over recent decades, our knowledge and understanding of natural hazards has grown dramatically. Far more is known today about the distribution of natural hazards and the location of high-exposure areas. Scientists can more accurately characterise the possible magnitude of hazard events and better estimate the probability of their occurrence at specific magnitudes. Forecasting capacity has also dramatically improved, especially for weather-related events. Far more is now known about the social dimensions of disasters, for instance human exposure and vulnerability (and lack of resistance and resilience) to natural hazards and places where poverty and multiple stresses shape the character and distribution of losses.

So why is it that, despite this growth in knowledge, losses associated with environmental hazards have also risen at a seemingly exponential rate? Hundreds of thousands of people are killed and millions injured, affected or displaced each year because of disasters, and the amount of property damage has been doubling about every seven years over the past 40 years, with dramatic increases seen in the 2000s.

The IRDR Science Plan has observed that there is a shortfall in current research on how science is used to shape social and political decision-making in the context of hazards and disasters. It noted that addressing this problem would require an approach that would integrate expertise in research and policy-making across all hazards, disciplines, geographic regions and political institutional frameworks.

Recognising these science needs, the International Council for Science (ICSU), the International Social Science Council (ISSC), and the United Nations International Strategy for Disaster Reduction (UNISDR)—the Co-Sponsors—created the Integrated Research on Disaster Risk (IRDR) programme, a global, trans-disciplinary research programme to address the major challenges of natural and human-induced environmental hazards. The complexity of the task is such that it requires the full integration of research expertise from the natural, socio-economic, health and engineering sciences, encompassing also areas of inquiry and practice such as policy-making, the role of communications, and public and political perceptions of and responses to risk.

The programme is guided by three research objectives:

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

Three cross-cutting themes support IRDR’s work towards these objectives:

1. Capacity building, including mapping capacity for disaster reduction and building self-sustaining capacity at various levels and for different hazards.
2. Development and compilation of case studies and demonstration projects.
3. Assessment, data management, and monitoring of hazards, risks and disasters.

Attainment of these 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; a better insight into decision-making that may increase risk exposure, as well as how choices may be influenced; and a better understanding of how new knowledge can guide disaster risk reduction efforts at all levels.
Delivering against the IRDR Strategic Goals, 2013-2017

The successful delivery of the programme’s objectives, as was made explicit in the IRDR Strategic Plan 2013-2017, will depend on the support for its implementation and active collaboration, co-operation and partnership with frameworks offered by the Co-Sponsors, as well as external networks and organisations that have related research activities or are engaged in relevant policy-and decision-making processes.

This is why IRDR is initially focusing on identifying the potential of and building such partnerships. The programme has also begun scientific analyses to be able to propose longer-term projects towards meeting its declared research objectives.

The Strategic Plan has expressed the ambitions of the programmes in six strategic goals.

Goal 1: Promoting integrated research.
Goal 2: Characterising hazards, vulnerability and risk.
Goal 3: Understanding decision-making.
Goal 4: Reducing risk and curbing losses.
Goal 5: Networking and partnership-building.
Goal 6: Supporting the science and policy dialogue.

Four core projects have been established that speak to the first four goals defined for this phase of the Strategic Plan. They bring together experts from diverse disciplines and institutional backgrounds to describe and address the shortcomings of current studies on natural hazards and human-made disasters, and to develop new and flexible approaches for research and action.

The following section reports on the different research and capacity, networking, and knowledge-sharing building activities carried out by the four projects in 2013, following the project work-plans elaborated in the course of 2011 to 2012.
Assessing and Advancing Integrated Research on Disaster Risk

GOAL 1

Promoting integrated research
Develop and promote integration and collaboration within the disaster risk reduction community to avoid unnecessary duplication and to maximise research outcomes.

Assessment of Integrated Research on Disaster Risk (AIRDR)

AIRDR has begun to undertake the first systematic and critical global assessment of integrated research on disaster risk aimed at providing a baseline of the current state of the science that can be used to identify and support a long-term science agenda for the research community and funding agencies.

During 2013, a preliminary in-depth assessment of integrated research on disaster risk was conducted of 878 peer-reviewed articles published in 35 English language scientific journals between 1999 and 2013, as well as 78 English language seminal publications from the period 1993 to 2011. The results of this assessment will be published in a peer-reviewed article, “Integrated Research on Disaster Risk: Is it really integrated?” in 2014.

![Figure 1: Word cloud showing the words most often appearing in the literature included in the assessment, with the most prominent indicating the word’s frequency.](image)

This preliminary assessment was conducted by the team from the newly-formed IRDR International Centre of Excellence on Vulnerability and Resilience Metrics (see pg. 15).
Addressing the Research Objectives

GOAL 2

Characterising hazards, vulnerability and risk

Identify hazards and vulnerability leading to risks from natural hazards on global, regional and local scales; develop the capability to forecast hazard events and assess risks as well as the dynamic modeling of risk.

Address the gaps in knowledge, methodologies and types of information that prevent the effective application of science to avert disasters and reduce risk.

Disaster Loss Data (DATA)

DATA aims to establish an overall framework for disaster loss data for all providers, to establish nodes and networks for databases, and to conduct sensitivity testing among databases to ensure some level of comparability.

To achieve this, the project conducted its second working group meeting from 29 September to 2 October 2013, hosted by IRDR ICoE-VaRM (see pg. 15) at the Hazards and Vulnerability Research Institute (HVRI), University of South Carolina, USA. One of the main outcomes of this meeting was a modified IRDR peril classification schema to serve multiple types of databases—global, national and sub-national—in order to make loss information more comparable despite different goals and objectives of individual databases. The working group will test the classification system on each of its members’ databases. The classification schema will be widely publicised in 2014.

Figure 2: Participants at the second meeting of the DATA project working group, 29 September – 2 October 2013 (Photo: Susan Cutter).

The working group agreed to encourage the Asian Disaster Reduction Center (ADRC) in Japan to continue work on the GLocal IDEntity Number (GLIDE) system, an identification system that enables linking events that have multiple impact areas; and concurred with the new definitions proposed in a joint Centre for Research on the Epidemiology of Disasters (CRED) and United Nations Development Programme (UNDP) draft Human Impact Indicators document.
The following were other DATA project working group engagements in 2013:

**DATA Project Working Group Engagements in 2013**

- Meeting at University of Munich (Munich, Germany, 5 February 2013; presenter: Angelika Wirtz)
- CIMA Foundation meeting, University of Genoa (Savona, Italy, 15 February 2013; presenter: Angelika Wirtz)
- DATA session at IRDR China’s International Workshop on Disaster Risk and Mitigation (Sanya, China, 15 November 2013; presenter: Susan Cutter)

**GOAL 3 Understanding decision-making**  
Understand effective decision-making in the context of risk management – what it is and how it can be improved; identify relevant decision-making systems and their interactions; understand decision-making in the context of environmental hazards and help improve the quality of decision-making practices.

**Risk Interpretation and Action (RIA)**

RIA’s main objective is to build a community of practice on risk perception, communication and decision-making that focuses on the question of how people make decisions in the face of risk. To that end the series of activities undertaken by the project’s working group during the year included seminars at major international events, as well as an agenda-setting workshop on the specific themes of concern to RIA.

**RIA Project Working Group Engagements in 2013**

- “Risk Interpretation and Action” An agenda setting workshop to better integrate behavioural and social science and practitioner approaches to knowledge and learning in resilience building for disaster risk management (London, UK, 16 to 17 May 2013).
- “Natural Hazards: Risk Interpretation and Action” symposium held on 18 June at the Society for Risk Analysis-Europe’s (SRA-E) annual conference (Trondheim, Norway, 17 to 19 June 2013).
- “Risk Communication and Decision-Making” session held on 16 July at the 38th Annual Natural Hazards Research and Applications Workshop (Boulder, Colorado, USA, 13 to 16 July 2013).
- RIA session “Decision-Making under Conditions of Uncertainty” at the second World Social Science Forum (Montreal, Canada, 13 to 15 October 2013).
- RIA session at IRDR China’s International Workshop on Disaster Risk and Mitigation (Sanya, China, 15 November 2013).
RIA World Social Science Fellows

In partnership with the International Social Science Council (ISSC), the RIA working group facilitated the first World Social Science Fellows Seminar on “Risk Interpretation and Action: Decision-making under conditions of uncertainty,” convened in New Zealand from 9 to 13 December 2013. The host institutions were Massey University in Wellington and Te Rūnanga o Ngāi Tahu and University of Canterbury in Christchurch.

Twenty-five World Social Science Fellows from a diverse range of disciplines, selected by the ISSC, joined a number of senior scientists—including David Johnston, Chair of the IRDR Science Committee and Director of Massey University’s Joint Centre for Disaster Research (JCDR); and Richard Eiser, RIA Project Co-Chair and Professor of Psychology at the University of Sheffield—to explore if and how the RIA framework can be integrated across scientific disciplines and cultural contexts.

One of the major outcomes of the seminar was the formation of four collaborative research projects, with seed funding provided by ISSC, on:

1. Building More Resilient Megacities in the Developing World: Exploring the Case Studies of Mexico City, Beijing, Lagos and New Delhi;
2. Integrating Indigenous Knowledge into Decision- and Policy-Making for Disaster Risk Reduction;
3. Multi-Scale Policy Implementation for Natural Hazard Risk Reduction: Preliminary Results; and

Support will be offered to 10 of the Fellows to attend the second IRDR Conference in Beijing in 2014, to present the findings from their research projects and to assist the SC Chair in preparing the final conference statements.
The seminar was co-sponsored by the ISSC’s World Social Science Fellows Programme; IRDR; IRDR ICoE-Taipei; the Global Change System for Analysis, Research and Training (START) International Secretariat; the United Nations International Short Term Advisory Resources (UNISTAR); and the Royal Society of New Zealand.

**GOAL 4**

*Reducing risk and curbing losses*

*Develop a methodology for implementing comprehensive, long-term vulnerability assessments and effective approaches to risk reduction, by also bringing together insights gained under Goals 2 and 3.*

Forensic Investigations of Disasters (FORIN)

The FORIN working group has produced a template that aims to guide the discovery of root causes of disasters through in-depth investigations that go beyond the typical reports and case studies conducted after disaster events. Building on the momentum of the working group’s capacity building activities in 2012, the first International Workshop on FORIN associated with landslides was held in Chiapas, Mexico, from 26 June to 4 July 2013, at the University of Sciences and Arts of Chiapas (Universidad de Ciencias y Artes de Chiapas-UNICACH) in the city of Tuxtla Gutierrez, Chiapas, Mexico.

The Workshop’s faculty included FORIN project working group Co-Chair Anthony Oliver-Smith; IRDR SC Member Irasema Alcántara-Ayala; Roberto Barrios from the Department of Anthropology at the University of Illinois, Carbondale, USA; and Leobardo Domínguez-Morales from the Meritorious Autonomous University of Puebla (BUAP).

*Figure 4: Participants and faculty members of the first International Workshop on FORIN associated with landslides, 26 June to 4 July 2013. (Photo: Irasema Alcántara-Ayala)*
The FORIN methodology was shared and discussed with 25 young scientists, all with diverse academic backgrounds in the natural and social sciences, and hailing from seven Latin American countries: Argentina, Brazil, Colombia, Guatemala, Mexico, Panama and Venezuela. The aim for participants was to better understand the complex and underlying causes of landslide disasters. The project leaders also received feedback for the review of the FORIN methodology, which will be carried out in 2014.

This workshop, the first of two, was sponsored by ICSU and the International Geographical Union (IGU) through the project, Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean (LANDSCAPE-LAC). Support was also provided by IRDR; the ICSU Regional Office for Latin America and the Caribbean (ICSU ROLAC); the Mexican Academy of Sciences; the International Consortium on Landslides; the National Autonomous University of Mexico (UNAM); the University of Sciences and Art of Chiapas; and the National Centre for Disaster Prevention (CENAPRED). The second workshop will take place in early 2014.

In the course of 2013, presentations about FORIN were also given at the following events:

<table>
<thead>
<tr>
<th>FORIN Project Working Group Engagements in 2013</th>
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<tr>
<td>• International Seminar on Applied Anthropology (Lima, Peru, 6 to 7 September 2013; presenter: Anthony Oliver-Smith)</td>
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<tr>
<td>• Ancash Network on Disaster Risk Reduction and Climate Change (Huaraz, Peru, 9 September 2013; presenter: Anthony Oliver-Smith)</td>
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<tr>
<td>• National meeting of Networks of Disaster Risk Reduction and Climate Change (Lima, Peru, 11 September 2013; presenter: Anthony Oliver-Smith)</td>
</tr>
<tr>
<td>• 2nd International Conference on Forensic Research and Technology (Las Vegas, USA, 7 to 9 October 2013; presenter: Djillali Benouar)</td>
</tr>
<tr>
<td>• FORIN session at IRDR China’s International Workshop on Disaster Risk and Mitigation (Sanya, China, 15 November 2013; presenter: Djillali Benouar)</td>
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At the request of the FORIN working group Co-Chairs, and in order to engage more of the disaster research community from many disciplines and specialities, FORIN’s online Community of Practice (CoP), http://www.irdrinternational.org/about/projects/forin/, was launched on 17 April 2013. The CoP provides an avenue to share FORIN news, proposals, results, and ideas, and facilitate the community’s growth through the addition of new researchers interested in utilising the FORIN methodology in their own research. Against the background of feedback received and as the result of ongoing research activities, 2014 will see a review of the FORIN methodology.
Connecting Science, Policy and Practice

During 2013, IRDR continued developing its internal network through the strengthening of existing and establishment of new International Centres of Excellence (ICoEs) and National and Regional Committees (NCs and RCs) as well as through the integration with the main programmes of its three Co-Sponsors, the International Council for Science (ICSU), the International Social Science Council (ISSC), and the United Nations International Strategy for Disaster Reduction (UNISDR).

**GOAL 5**

**Networking and partnership-building**

*Develop, strengthen and collaborate within the IRDR network at global, regional and national levels*

**GOAL 6**

**Supporting the science and policy dialogue**

*Enhance the utilisation of research findings.*

The collaborations with other scientific and international organisations operating in disaster risk reduction at the global, regional and national levels also advanced considerably, notably through the engagement with the Sustainable Development Goals (SDGs) process, and through a dedicated project with the World Weather Research Programme (WWRP) of the World Meteorological Organization (WMO), the Working Group on Societal and Economic Research and Applications (WG SERA), aimed at advancing the science of the social and economic applications of weather-related information and services. Another major networking and partnership building activity during the second half of the year were the preparations for the second IRDR conference to be held in Beijing in 2014.
IRDR International Centres of Excellence (ICoEs)

IRDR ICoEs are established in different parts of the world to contribute to the programme’s mission through well-defined research areas that reflect and develop IRDR’s agenda for an integrated approach to disaster risk reduction. The IRDR Science Committee (SC) decides on the acceptance of submitted applications, which provide evidence that they comply with a set of Terms of Reference for ICoEs. In 2013, three new Centres were approved by the SC (see pp. 35-36).

IRDR ICoE-Taipei

- **Home Institution**: Academy of Sciences located in Taipei, China
- **Website**: [http://irdr-icoe.sinica.edu.tw/](http://irdr-icoe.sinica.edu.tw/)

IRDR ICoE-Taipei has been in existence since November 2010, and continued to carry out activities, both within its international and domestic components, in fulfilment of its role as an IRDR ICoE, including collaborative research, the exchange of scholars between research institutions, capacity building, and training.

- **FORIN Study of Typhoon Morakot, Taiwan**: in partnership with the National Science and Technology Center for Disaster Reduction (NCDR), both the Chinese and English versions of the FORIN report, “Forensic Investigation of Typhoon Morakot Disaster: Nansalu and Daniao Village Case Study,” were completed.

- **International Young Scientists Conference on IRDR, Future Earth and Sustainability (22 to 24 October 2013)**: 42 young scientists, under 35 years of age, from 11 countries participated in this conference, which provided them the opportunity to present their research findings to one another and leading scientists in the field. Sponsored by ICoE-Taipei and organised by the International START Secretariat, the conference was intended to stimulate competition, encourage excellence, reward outstanding performance, and foster the development of personal and institutional networks.

![Figure 5: Participants of the International Young Scientists Conference on IRDR, Future Earth and Sustainability, 22 to 24 October 2013 (Photo: IRDR ICoE-Taipei).](image-url)
**GOAL 2**

- **World Social Science Seminar on “Risk Interpretation and Action: Decision-making under conditions of uncertainty” (9 to 13 December 2013):** ICoE-Taipei partnered with the ISSC’s World Social Science Fellows Programme; IRDR; START; UNISTAR; and the Royal Society of New Zealand to co-sponsor the World Social Science Seminar on “Risk Interpretation and Action: Decision-making under conditions of uncertainty” *(see pg. 10).*

- **Visiting Scholar Programme:** senior scientists, with backgrounds either in natural or social sciences working in disaster-related fields, were invited for up to one year’s visit at the Academy of Sciences located in Taipei, China, or other partner universities. A one-year visit at IRDR ICoE-Taipei was offered to Dr Kuan-Hui Lin, a research scientist from George Perkins Marsh Institute at Clark University, Massachusetts, USA.

During the year, ICoE-Taipei proposed a new project to the IRDR SC entitled “Disaster Risk Reduction and Loss Mitigation (RILM).” The proposal was discussed at the ninth SC meeting, and was further developed for discussion during the 10th SC meeting *(see pp. 35-36).*

ICoE-Taipei’s International Advisory Board (IAB) met on 25 October 2013, to discuss matters related to the ICoE’s research and training activities, its visiting scientists programme, and the strategic directions of the Centre. The IRDR SC Chair, David Johnston, is an ex-officio member on the IAB. The Chair of the IAB is Prof Gordon McBean, former Chair of the IRDR SC.

The following were ongoing IRDR-related projects within the Centre’s domestic research programme during the year:

- Mega-seismic risk and multi-geological disasters in Taiwan
- Impact of Climate and Land Use Change on Environmental Hazards and Adaptation
- Open ISDM: Open Information Systems for Disaster Management
- Vulnerability Assessment for Heat Wave and Relevant Adaptation Strategy Recommendations

**IRDR ICoE on Vulnerability and Resilience Metrics (IRDR ICoE-VaRM)**

- **Home Institution:** Hazards and Vulnerability Research Institute (HVRI), Department of Geography, College of Arts and Sciences, University of South Carolina, USA
- **Website:** [http://webra.cas.sc.edu/hvri/](http://webra.cas.sc.edu/hvri/)

In August 2013, the Hazards and Vulnerability Research Institute (HVRI) at the University of South Carolina, Columbia, USA, was formally designated the IRDR ICoE-VaRM with the signing of the Memorandum of Understanding (MoU) between IRDR and HVRI. The Chair of the IRDR SC, David Johnston, will serve on the External Advisory Committee of this new ICoE.

It is the ICoE’s overall vision to support the development of the science-basis for the methods, models and measurements that empirically support disaster risk management. The ICoE will expand ongoing work for application to other world regions in an effort to develop a more integrated approach to measuring vulnerability, resilience and helping push forward the science basis for disaster risk management.

After its establishment as an ICoE, IRDR ICoE-VaRM undertook the following activities:
• Held a one-day briefing workshop for New Zealand emergency management officials on **social vulnerability metrics**, on 16 September at GNS Science.

• Hosted the **DATA project** working group’s second meeting, 29 September to 2 October 2013 (see pg. 8).

• Led the **AIRDR project** in its preliminary assessment of publications on integrated research on disaster risk (see pg. 7).

• Collaborated with scholars from six countries (Brazil, China, Indonesia, New Zealand, Philippines and Portugal) on the creation and application of **social vulnerability metrics**. A result of this collaboration was a paper submitted to a journal examining social vulnerability in the region of Shanghai, China.

**IRDR ICoE in Community Resilience (IRDR ICoE-CR)**

• **Home Institution**: Joint Centre for Disaster Research (JCDR), Massey University-GNS Science, Wellington, New Zealand


In November 2013, the IRDR SC approved the recognition of its third ICoE, which focuses on community resilience. The IRDR ICoE-CR is a joint initiative between New Zealand’s Joint Centre for Disaster Research (JCDR) at Massey University, the co-ordinating organisation for this network, and the Wellington Region Emergency Management Office. ICoE-CR is a region-wide centre of excellence comprising key organisations across the Wellington region to address community resilience to disasters. The work of the ICoE aims to answer the critical question: “How does a community make itself resilient to future disasters?” Through partnerships at the local, national and international levels, leading research will be applied to the practice of the Wellington Region Emergency Management Office’s Community Resilience Strategy. The implementation and outcomes of this strategy will in turn become a primary research focus of the ICoE.

**IRDR ICoE in Understanding Risk & Safety (IRDR ICoE-UR&S)**

• **Home Institution**: Disaster Risk Management Task Force, Institute of Environmental Studies (Instituto de Estudios Ambientales – IDEA), National University of Colombia (Universidad Nacional de Colombia), Manizales City, Colombia

• **Website**: [http://idea.manizales.unal.edu.co/](http://idea.manizales.unal.edu.co/)

In November 2013, the IRDR SC approved designating the Institute of Environmental Studies (IDEA) at the National University of Colombia in Manizales City, Colombia, as the IRDR ICoE-UR&S. IDEA is an interfaculty academic unit that develops interdisciplinary and interagency environmental research, including the development of models, methodologies and studies to improve sustainability and resilience. The overall vision of this ICoE is to develop and apply science-based comprehensive models, methodologies and measures that provide scientific and technical support for understanding disaster risk and safety, and assessments for management policy, planning and decision-making.
IRDR National and Regional Committees (NCs & RCs)

IRDR National and Regional Committees (NCs and RCs) support and supplement IRDR’s international research initiatives, and help to establish or further develop crucial links between national disaster risk reduction programmes and research and capacity building activities within an international framework. During 2013, two new NCs were established, bringing the total to eight, and one RC was formed. The following are brief summaries on activities conducted by these respective entities during the year under review.

IRDR National Committees (NCs)

IRDR Canada

- **Home Institution**: Science and Technology Working Group, Canada’s Platform for Disaster Risk Reduction

Under the umbrella of Public Safety Canada (PS), Canada’s Platform for Disaster Risk Reduction operates through a number of Working Groups; of these, the Science and Technology Working Group collaborates with IRDR with the objective to align national research initiatives across boundaries. Internally, this Working Group provides Canada’s Platform with informed advice on relevant science and technology (S&T) developments and leads in appropriate activities. Through structured outreach formats, the four working groups—Private Sector Partnerships; Resilient Communities; Science and Technology; and Voluntary Sector—stimulate discussions around topics in order to obtain comments from the diverse stakeholder perspectives, which then inform the work of the Platform. Externally, IRDR Canada and its participants have joined projects such as the Marine Environmental Observation Prediction and Response Network (MEOPAR), on which IRDR SC Vice-Chair, Susan Cutter, is also a member of its International Scientific Advisory Committee; and the Coastal Cities at Risk (CCaR) project, which focuses on building capacity for managing climate change in coastal megacities. In 2013, CCaR held meetings, seminars and conferences in Manila and Lagos, where they brought together scientists, planners and other professionals. The latest Lagos workshop held on 17 December 2013, was attended by, among others, four relevant ministries, two Lagos State agencies, community organisations and experts from Nigeria’s Meteorological Agency (NIMET) and Institute of Oceanography and Marine Research (NIOMR).

In 2013, PS released the All Hazards Risk Assessment (AHRA) Methodology Guidelines 2012-2013, [http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ll-hzrds-ssssmnt/index-eng.aspx](http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ll-hzrds-ssssmnt/index-eng.aspx). Recognising that understanding risks through identifying, assessing and monitoring them is key to effective emergency management planning and resilience building, the Government of Canada asked PS, in close partnership with Defence Research Development Canada – Centre for Security Science, to lead the development of the AHRA Methodology in order to support all federal government institutions in conducting mandate-specific risk assessments.
During 2013, IRDR China continued work on its six projects, which, in 2012, had received funding from CAST in the amount of two million RMB. These are:

- **FORIN Case Study of Seasonal Drought in South-western China under the Condition of Climate Change - Yunnan Province Chosen as Case Study** (Institute of Environment and Sustainable Development in Agriculture, Chinese Academy of Agricultural Sciences (CAAS))

- **Study on Data Management Model for Historical Loss Data: Flood as Showcase** (Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences (CAS))

- **Urban Disaster Resistance Capability and Risk Assessment - Wenchuan Earthquake as Case Study** (China Earthquake Disaster Prevention Center)

- **Study on the Internal Relationship between Global Change and Natural Disaster Risk Variation in China** (RADI, CAS)

- **Study on Management Mechanisms of Community-Based Mountain Hazard Risks** (Institute of Mountain Hazards and Environment, CAS)

- **Climate Change, Drought and Population Migration: Dynamic Mechanism and Risk Assessment** (Institute for Urban and Environmental Development Studies, Chinese Academy of Social Sciences (CASS))

Several IRDR China experts participated in academic conferences on disaster risk and mitigation throughout the year. Their expertise was also requested in the response activities to the Ya-an earthquake disaster, which occurred on Saturday, 20 April 2013: they provided comprehensive emergency assessments and in-situ investigations in disaster affected areas. In October 2013, IRDR China held two consultant workshops on integrated research issues on disaster risk. More than 30 Chinese experts, including both natural and social scientists, attended these workshops.

On 14 November 2013, IRDR China held its Annual Symposium in which Chinese experts from a wide variety of scientific disciplines presented their research achievements. On 15 November 2013, the Committee hosted the International Workshop on Disaster Risk Mitigation, at which sessions were dedicated to DATA, FORIN and RIA. Both events were held at RADI’s Sanya campus in Hainan Province.

IRDR China accepted to be a member of the Organising Committee for the IRDR Conference planned for 2014.
IRDR Colombia

- **Home Institution:** National Committee of Disaster Risk Knowledge, National Unit for Disaster Risk Management of the Presidency of the Republic of Colombia (Unidad Nacional de Gestión del Riesgo de Desastres, UNGRD)
- **Website:** [http://www.gestiondelriesgo.gov.co/sigpad/index.aspx](http://www.gestiondelriesgo.gov.co/sigpad/index.aspx)

At its 10th meeting in November 2013, the IRDR SC approved designating the National Committee of Disaster Risk Knowledge, within the National Unit for Disaster Risk Management of the Presidency of the Republic of Colombia (Unidad Nacional de Gestión del Riesgo de Desastres, UNGRD), as IRDR Colombia. The UNGRD’s main function is to lead and coordinate Colombia’s National System of Disaster Risk Management, as well as the three main inter-institutional processes related to disaster risk management: Disaster Risk Knowledge, Disaster Risk Reduction, and Disaster Management. With its activities it seeks to make a contribution to sustainable development. The Disaster Risk Knowledge sub-directorate of the UNGRD leads and coordinates the National Committee for Disaster Risk Knowledge, in which the objectives and goals of IRDR will be achieved.

IRDR France

- **Home Institution:** Scientific Council, French Association for the Prevention of Natural Disasters (Association Française Pour la Prevention des Catastrophes Naturelles - AFPCN)
- **Website:** [http://www.afpcn.org/](http://www.afpcn.org/)

In the course of 2013, the following activities have contributed to highlighting the role of AFPCN in French public debates and international activities on disaster risk reduction. The second nationwide consultations on natural hazards, convened from 2 to 3 December 2013 in Bordeaux under “Sharing knowledge and competences in order to reduce the impact of natural disasters,” saw AFPCN play a key role. On this occasion, the Association organised two workshops on risk governance and on the globalisation of risks. The Association also accepted to act as Chair to the committee of users of the National Observatory of Natural Hazards. With regard to domestic activities, and next to a long series of regional and local seminars and workshops, the Association found of particular value to the organisation, jointly with the Minister of the Interior and the Mayors’ association, of the Annual Day devoted to the analysis of measures necessary to protect the functioning local authorities (14 November 2013). These Annual Days are held each year in a different part of the country. In 2013 it was held in Meurthe-et-Moselle.

At the international level, AFPCN was asked to operate as secretariat to the newly established international committee of the National Steering Council for the Prevention of Natural Risks, and continued its involvement in European projects.
IRDR Germany

• **Home Institution:** German Committee for Disaster Reduction (Deutsches Komitee Katastrophenvorsorge e.V. – DKKV)
• **Website:** [http://www.dkkv.org/](http://www.dkkv.org/)

The DKKV, designated by the German Government, is the National Platform for Disaster Reduction in the framework of the UNISDR. DKKV is a non-governmental organisation, non-profit association under private law. It also serves as the German focal point institution for the Hyogo Framework for Action (HFA). As such it functions as an information hub for organisations and initiatives involved in disaster risk reduction (DRR), and promote the implementation of the HFA. It is also a centre of expertise in all matters relating to national and international disaster reduction issues.

DKKV has special strengths in linking science (theory) and practice, linking national and international aspects and initiatives, and linking public sector and private sector structures. It currently has 38 voluntary committee members and about 20 long-term observers from different Ministries. Members of DKKV range from governmental agencies, scientific institutes and organisations, media, private sector, humanitarian, and development co-operation organisations.

DKKV has built a wide and diverse network of key stakeholders within the disaster risk reduction domain at national, European and international levels, which also include the European civil protection authorities. The network’s inter-disciplinary and multi-sectorial character enables a broad and targeted dissemination of initiatives, knowledge and methodologies within the DRR community.

In 2013, DKKV partnered within the EU FP7 funded project “New Multi-Hazard and Multi-Risk Assessment Methods for Europe” (MATRIX), [http://matrix.gpi.kit.edu/](http://matrix.gpi.kit.edu/), mainly in charge of dissemination activities and the interaction with European civil protection authorities, national platforms for DRR and other organisations, including the Council of Europe (CoE), UNISDR Europe and the European Commission.

With funding from the German Federal Foreign Office, DKKV was involved in a review of 50 National Platforms for DRR under UNISDR; results of the review were presented during the meeting of National Platforms from Europe in September 2013 in Oslo, Norway. Additionally the German Federal Foreign Office funded a feasibility study, which focused on the improved coordination and cooperation of National Platforms for DRR and national international stakeholders in high risk countries. The study also received funding from the German Ministry for Economic Cooperation and Development.

One of DKKV’s main activities in 2013 was the preparation for the Fourth Session of the Global Platform for Disaster Risk Reduction, which took place in May 2013 in Geneva, Switzerland. In addition to participating in a number of sessions and events, DKKV also organised a side event for the Global Initiative for Disaster Risk Management (GIDRM), “Tackling the role of governments, private sector and civil society organizations in fostering comprehensive Risk and Disaster Management,” involving representatives from China, the Philippines, Thailand, German Federal Foreign Office, German Ministry for Economic Cooperation and Development, and the German Technical Relief Service (THW).

DKKV also seeks to improve preparedness. The Committee therefore conducted a review of the preparedness and stand-by capacities of German-based relief organisations. The results were presented to the Federal Foreign Office.
IRDR Japan

- **Home Institution:** Science Council of Japan (SCJ)
- **Website:** [http://www.ifi-home.info/Japan_IRDR.html](http://www.ifi-home.info/Japan_IRDR.html)

In 2013, IRDR Japan’s proposal for an international IRDR-related conference to be held in early 2015 in Tokyo was approved by the Science Council Japan (SCJ). The “Tokyo Conference on International Study for Disaster Risk Reduction and Resilience” will be held from 14 to 16 January 2015. It aims to make an action proposal to the post-HFA and post-MDG agendas from the vantage point of IRDR. It will seek to advance and sharpen scientific approaches and methodologies and enhance the exchange of knowledge, views and visions on DRR between policy-makers and practitioners. Its foci would be on inter-disciplinarity, trans-disciplinarity and the integration and coordination with activities in the domain of global environmental change. At its 10th meeting, the IRDR SC agreed to support the conference as one of the co-organisers.

IRDR Japan proposed a “Large Scale Research Programme on IRDR” to the Large Scale Research Plan of SCJ (LSRP-SCJ). LSRP-SCJ is a recommendation from SCJ to the Government of Japan for national research priorities for the next 10 years. This programme was selected as a “special priority research project” in a category where only 27 projects in total were selected from across all domains and sectors of scientific research. Based on this special priority research project, IRDR-related researchers and institutions will be able to submit research proposals to relevant funding agencies.

IRDR New Zealand

- **Home Institution:** Natural Hazards Research Platform (NHRP)
- **Website:** [http://www.naturalhazards.org.nz](http://www.naturalhazards.org.nz)

Integrated research on disaster reduction in New Zealand comprises a blend of research and its application, which, in large part, is conducted by the Natural Hazards Research Platform (NHRP), a ‘one stop’ consortium covering seismology to sociology, landslides to land-use planning, and flooding to functioning infrastructure. The Platform collaborates extensively with other agencies conducting research related to resilience to natural hazards, including the Earthquake Commission, the Ministry of Civil Defence and Emergency Management, the Health Research Council, and with social policy agencies. During 2013 there was expanded engagement with stakeholders domestically and enhanced international collaborations. Advice was provided to many government departments to local government agencies and, in the background, to major infrastructure initiatives. The Platform was called upon to present perspectives on natural risk at many fora, and the topic of natural hazard risk and resilience was selected as one of the nation’s 10 national science challenges.

There were three significant natural hazard episodes through the year: earthquakes in Cook Strait in July and August 2013 (see figure 6), major weather events in Nelson and Bay of Plenty in April 2013 and in Canterbury in September 2013, and volcanic unrest and eruptions at White Island continuously from January to October 2013. While none of these events resulted in damage comparable to the Canterbury earthquakes of 2010 to 2011, they incurred a sum of $200 million of insured losses during the year. The Cook Strait earthquakes caused major damage in Seddon in northern South Island, but in Wellington served as a timely reminder of the need for addressing earthquake-prone building issues, for improving the resilience of infrastructure networks, and improved operational procedures for critical transport services.
The severe winds in Canterbury in September resulted in significant damage to dairy farming activities, yet the wind speeds were less (about 75 per cent) than occurred in a severe storm in 1974. The lack of preparedness in filling pivot irrigators with water (figure 7) and having backup generators for milking dairy cows greatly exacerbated the damage and economic loss.
On a positive note many New Zealand and international relationships were strengthened during the year. At the Platform’s annual stakeholder workshop in Wellington in May 2013, more than 120 representatives from 40 stakeholder agencies contributed to the day’s proceedings that began with keynote presentations from Minister Gerry Brownlee in his capacity as Minister of Canterbury Earthquake Recovery and of Transport; Fran Wilde as chair of Greater Wellington; and Roger Sutton as CEO of the Canterbury Earthquake Recovery Authority (CERA). Elsewhere, the Platform’s perspectives on the need for natural hazard risk management and resilience-building was sought in regards to public-private partnerships; NZ Transport Authority; KiwiRail; NZ Council for Infrastructure Development; CERA; Treasury; Science Communication Association of NZ; in television documentaries produced by Paua Productions for Prime Television; Insurance Brokers Association of NZ; and internationally in science collaboration with the European Commission; Japan; the USA; the Global Earthquake Model (GEM) Foundation; IRDR; and the World Bank’s Global Facility for Disaster Reduction and Recovery (GFDRR).

The momentum of engagement and influence in bringing about awareness and improvements in resilience to natural hazards in New Zealand is building substantially since the Platform was established in 2009.

**IRDR USA**

- **Home Institution**: Natural Hazards Center (NHC), Institute of Behavioral Science, University of Colorado at Boulder
- **Website**: [http://www.colorado.edu/hazards](http://www.colorado.edu/hazards)

In November 2013, the IRDR SC welcomed its ninth NC, IRDR USA, a “centre-of-centres” comprising university-based centres that specialise in different aspects of hazards and disasters and that represent diverse disciplines. The Natural Hazards Center (NHC), located within the Institute of Behavioral Science of the University of Colorado at Boulder, USA, is the host institution, and chief convener and coordinator for IRDR USA’s activities.

There are 12 founding centres: Natural Hazards Center, University of Colorado Boulder; Disaster Research Center, University of Delaware; Hazard Reduction & Recovery Center, Texas A&M University; Hazards & Vulnerability Research Institute, University of South Carolina; Center for Disaster and Risk Analysis, Colorado State University; Center for Hazards Assessment Response and Technology (CHART), University of New Orleans; Center for Public Health and Disasters, UCLA; Coastal Hazards Center, University of North Carolina; Resilience Institute, Western Washington State University; Pacific Earthquake Engineering Research Center, University of California, Berkeley; The Multidisciplinary Center for Earthquake Engineering Research, SUNY Buffalo; and National Center for Disaster Preparedness, Columbia University. As IRDR USA becomes more established, additional centres will be added. A small executive committee (two members from the founding centres, in addition to one government representative) will provide oversight and governance for IRDR USA’s activities.

Utilising an all-hazards and interdisciplinary framework, the NHC fosters information sharing and integration of activities among researchers, practitioners, and policy-makers from around the world; supports and conducts research; and provides educational opportunities for the next generation of hazards scholars and professionals. The Center hosts the Annual Natural Hazards Research and Applications Workshop, a core component of its information programme, to bring researchers and practitioners from many disciplines together for face-to-face discussions on how society deals with hazards and disasters. The RIA project working group held a “Risk Communication and Decision Making” session at the 38th Annual Natural Hazards Research and Applications Workshop in July 2013 (see pg. 9).
IRDR Regional Committee (RC)

IRDR Latin America and the Caribbean (IRDR LAC)

- **Home Institution:** ICSU Regional Office for Latin America (ICSU ROLAC)
- **Website:** [http://www.icsu.org/latin-america-caribbean/](http://www.icsu.org/latin-america-caribbean/)

Following discussions within ICSU about improved coordination of activities between its global interdisciplinary bodies, such as IRDR, and the activities at regional level promoted and supported by the ICSU Regional Offices, it was decided that an appropriate tool to advance the integration of activities in the domain covered by IRDR would be the establishment of Regional Committees.

The first IRDR RC was formed in the Latin American and Caribbean region (LAC) when the ICSU ROLAC Scientific Steering Committee for Integrated Research on Disaster Risk in LAC held its first meeting in Panama on 24 and 25 September 2013. The Terms of Reference for the Committee were discussed and the first year work plan was designed.

The establishment of this Steering Committee is part of the overall activity, begun in 2012, to harmonise the ICSU Regional Offices’ science plans on hazards and disasters with the IRDR programme (see pp. 25-26).

<table>
<thead>
<tr>
<th>Members of the ICSU ROLAC Scientific Steering Committee for Integrated Research on Disaster Risk in LAC</th>
</tr>
</thead>
</table>
| **Barbara Carby** (Chair)  
Disaster Risk Reduction Centre (DRRC), University of the West Indies (UWI), Jamaica |
| **Patricia Alvarado** (Vice-Chair)  
National University of San Juan, Argentina |
| **Allan Lavell**  
Faculty of Social Sciences (FLACSO), Costa Rica |
| **Germán Poveda**  
National University of Colombia, Colombia |
| **Irasema Alcántara-Ayala**  
National Autonomous University of Mexico, Mexico; IRDR SC Member |
| **Gabriel Vargas**  
University of Chile, Chile |
| **José Rubiera**  
Institute of Meteorology, Cuba |
| **Sálvano Briceno**  
IRDR Science Committee Vice-Chair |
| **Jonathan Baker**  
UNESCO, Costa Rica |
| **Raúl Salazar**  
UNISDR Regional Office - The Americas, Panama |

Already during the year, and prior to the establishment of the Steering Committee, ICSU ROLAC supported IRDR activities in its region *(see pp. 11-12).*
Coordination with Co-Sponsors’ Programmes

The programme Co-Sponsors establish the governance arrangements appoint the SC Chair and Members, and the Executive Director of the International Programme Office (IPO); receive and approve reports from these Officers; and assist in promoting the programme and mobilising resources for it.

In 2013, IRDR continued its interaction and alignment with the Co-Sponsors’ main activities and strategies to both benefit from their contribution and leverage their support for IRDR’s objectives.

ICSU

In 2013, IRDR expanded its interaction with different levels of ICSU’s activities, including the Paris-based secretariat and its science policy activities, the ICSU Regional Offices, and other interdisciplinary bodies as well as with the scientific unions.

A key area of engagement was efforts to align the implementation of ICSU’s regional science plans on hazards and disasters with IRDR’s priorities and activities. Preparations for expanding a meaningful portfolio of regional foci continued in 2013. It is envisaged that this harmonisation will help avoid duplication, promote cooperation and peer learning, and send consistent messages to the science community, funding agencies and other stakeholders, thus increasing their support. To this end, IRDR representatives participated in meetings organised by ICSU ROLAC and the ICSU Regional Office for Africa (ICSU ROA).

From 21 to 22 March 2013, IRDR participated in the ICSU ROLAC meeting that launched the ICSU-ROLAC follow-up programme on risk management for the LAC region. It was decided to establish a Steering Committee responsible for the LAC region’s integrated research on disaster risk programme. In his capacity as a delegate to the Steering Committee, IRDR SC Vice-Chair, Sálvano Briceño, also joined the first meeting of this Steering Committee in Panama on 24 and 25 September 2013 (see pg. 24).
As for the ICSU ROA, IRDR participated in a two-day workshop “Natural and Human Induced Hazards and Disasters” held in Pretoria, South Africa, from 19 to 22 September 2013. On this occasion the implementation of ICSU ROA’s science plan on hazards and disasters was discussed in the format of a consortium project proposal development workshop. Discussions focused on the development of a proposal that would integrate earlier suggestions for work on geo-hazards, hydro-meteorological hazards, and assessment of vulnerability to these hazards, in alignment with IRDR’s research objectives.

The ICSU Regional Office for Asia and the Pacific (ICSU ROAP) organised the “5th ICSU Regional Consultation for Asia and the Pacific” in Seoul, Korea from 26 to 27 November 2013. IRDR participated in this meeting, the purpose of which was to discuss the implementation of the Future Earth programme in the Asia and the Pacific region.

IRDR also participated in the meeting of the Geo-Unions Cluster of ICSU’s International Scientific Unions, held in Paris, France on 28 April 2013, and used this opportunity to discuss with all the Geo-Unions the role of the AIRDR project in the International Union for Geodesy and Geophysics (IUGG) proposal for the setting up of an intergovernmental platform, akin to the Intergovernmental Panel on Climate Change (IPCC), for the assessment of disaster risk. It was considered possible that AIRDR could be championed through such an initiative.

The IUGG proposal was initially presented at the 30th ICSU General Assembly in September 2011, and was referred to the ICSU Executive Board. At its 107th session in April 2012, the Board invited IRDR to advise on the matter in consultation with ICSU’s Geo-Unions, and to present its findings at the Board’s 110th session. The resulting scoping paper on the proposed intergovernmental platform was presented at the 110th session in November 2013. The EB decided: “To commission, through IRDR and the GeoUnions, the preparation of an integrated, interdisciplinary scientific synthesis across all hazards of the state of knowledge and response, hazard occurrence and impacts and priorities for research, and that this synthesis report be completed in order to provide input to the 2015 HFA negotiations.” An ad-hoc funding group, consisting of members of the ICSU Executive Board, would be established to render this process effective.

IUGG, in partnership with the International Mathematical Union (IMU) and the International Union of Theoretical and Applied Mechanics (IUTAM), held an educational and capacity-building, “Mathematics of Climate Change, Related Hazards and Risks” workshop at the Centre for Mathematical Research (CIMAT) in Guanajuato, Mexico from 29 July to 2 August 2013. IRDR was among several supporters of this workshop.

IRDR, as a co-sponsor of the IUGG programme, Extreme Natural Hazards and Societal Implications (ENHANS), was pleased to note the publication in 2013, by Cambridge University Press, of the ENHANS volume Extreme Natural Hazards, Disaster Risks and Societal Implications.
In 2013, IRDR participated in several major events organised by the ISSC. From 9 to 12 October 2013, IRDR participated in the 29th ISSC General Assembly, held in Montreal, Canada, at which IRDR SC Chair, David Johnston, gave a report on the programme’s activities, and suggested avenues for IRDR’s greater integration with the Council’s future activities.

IRDR’s participation in the ISSC General Assembly was followed by the holding of a RIA session, “Decision-making in times of Uncertainty,” chaired by David Johnston, at the Second World Social Science Forum, also held in Montreal from 13 to 15 October 2013. The Forum was held under the theme “Social Transformation and the Digital Age.”

Presenters during the RIA Session at the Second World Social Science Forum:

- Victoria Johnson, Massey University, New Zealand
  “Displaced Children and Disaster Rumours: Impacts on Schools Outside Canterbury After the 2011 Christchurch Earthquake”

- Sara McBride, Massey University, New Zealand
  “Understanding Barriers to Earthquake Risk Reduction in Lower Seismic Hazard Zones”

- Sarah Beaven, University of Canterbury, New Zealand
  “Managing the Science/Policy Boundary After Disasters: A Case Study of the Research Response to the Canterbury Earthquake Sequence”

- David Johnston, GNS Science, New Zealand
  “Risk Interpretation and Action: Decision-making under conditions of uncertainty”

In October 2013, the ISSC selected 25 early career researchers as World Social Science Fellows to participate in a World Social Science Seminar on “Risk Interpretation and Action: Decision-making under conditions of uncertainty.” The Seminar, which reflected several of the key research areas of the RIA project, was held from 9 to 13 December 2013, in Wellington, New Zealand. IRDR was one of the co-sponsors of the seminar (see pg. 10).

On 15 November 2013, the World Social Science Report 2013 was launched at the UNESCO General Conference in Paris, France. The Report issued an urgent call to action to the international social science community to collaborate more effectively with each other, with colleagues from other fields of science, and with the users of research to deliver solutions-oriented knowledge on today’s most pressing environmental problems. The IRDR’s contributed summaries on FORIN and RIA appears in the section, “Contributions from International Social Science Council members, programmes and partners,” of the Report (pp. 540-541). The World Social Science Report 2013 can be viewed at http://www.worldsocialscience.org/activities/world-social-science-report/the-2013-report/.
IRDR was integrally involved in several major UNISDR-led activities in 2013. Within the Asian region, IRDR attended the biannual ISDR Asia Partnership (IAP) meetings, held in Bangkok, Thailand from 17 to 19 April and 5 to 7 November 2013, respectively. IRDR, represented by the IPO’s Executive Director, Jane Rovins, participated in these meetings as chair of the Scientific, Academic and Research Stakeholders group. IRDR accepted the UNISDR’s invitation to chair this stakeholders group in 2012, and was keen to use this platform to advance the agenda sketched in the statement of Scientific, Academic and Research Stakeholders group for the 5th Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) and that formed part, as Annex 10, of the 2012 Yogyakarta Declaration on Disaster Risk Reduction in Asia and the Pacific.

The substantive purpose of the two meetings in 2013 was to plan and prepare for the 6th AMCDRR, which will be held in Bangkok, Thailand from 22 to 26 June 2014, under the theme Promoting Investments for Resilient Nations and Communities.

From 18 to 23 May 2013, IRDR representatives attended the Fourth Session of the Global Platform for Disaster Risk Reduction, held in Geneva, Switzerland under the theme, Invest Today for a Safer Tomorrow. Resilient People - Resilient Planet. Jane Rovins delivered a presentation about IRDR on the Global Platform’s IGNITE Stage, a special venue where selected Global Platform participants are allowed 15 minutes to introduce an innovative approach to disaster risk reduction.

Figure 8: Members of the audience listen keenly to Jane Rovins’ presentation about IRDR on the Global Platform’s IGNITE Stage, 22 May 2013.
David Johnston was invited to speak in the featured event “Applying Science and Technology to Policy and Practice in DRR.” He gave the audience a summary of IRDR’s objectives and the ongoing research of its four core projects.

The 2013 edition of the Global Assessment Report on Disaster Risk Reduction (GAR 2013), [http://www.preventionweb.net/english/hyogo/gar/2013/en/home/index.html](http://www.preventionweb.net/english/hyogo/gar/2013/en/home/index.html), was launched during the Global Platform on 15 May 2013. IRDR contributed to GAR 2013 in the form of comments on the draft report. At the ninth SC meeting it was agreed that IRDR’s four projects would provide more substantial submissions to GAR 2015 (see pg. 35). Also in May 2013, David Johnston was appointed to the UNISDR’s Scientific and Technical Advisory Group (STAG).

**Figure 9:** David Johnston (second from right) briefs the audience about IRDR during the “Applying Science and Technology to Policy and Practice in DRR” featured event, GPDRR, Geneva, 22 May 2013.

The IRDR SC held its ninth meeting in conjunction with the Platform, from 18 to 20 May 2013 (see pg. 35). The Committee used the opportunity for interaction and discussions with other Global Platform participants and discussed its future contributions to the 2015 edition of the Global Assessment Report on Disaster Risk Reduction.
Coordination with other Intergovernmental Processes and International Programmes

Sustainable Development Goals (SDGs)

In December 2013, an ad hoc working group, comprising several members of the IRDR SC and experts associated with the programme, were invited to prepare a joint IRDR/ICSU issue brief to inform the discussions of the UN General Assembly Open Working Group (OWG) on Sustainable Development Goals.

The Issue Brief: Disaster Risk Reduction and Sustainable Development addresses the increasing recognition on the part of governments that the reduction of disaster risks is a foundation for successful sustainable development, and that disaster risk is a cross-cutting issue, requiring action across multiple sectors. The brief comprises sections on disasters and sustainable development and the status of disaster-related goals, targets and indicators, and reflects some of the key IRDR concerns about scientific and multi-sectoral interactions, as well as regarding the relations between the domains of science, policy-making, public awareness and humanitarian action.

The ICSU/IRDR Issue Brief was the first background document to appear within the disaster risk reduction cluster ahead of the OWG’s Seventh Session, which will be held in New York, USA from 6 to 10 January 2014. The Issue Brief can be downloaded from http://www.irdrinternational.org/projects/sdgs/.

IRDR will attend the meetings of the UN’s OWG on Sustainable Development Goals in 2014, representing the (S&T) community on behalf of ICSU.
In 2012, the World Weather Research Programme (WWRP) of the World Meteorological Organization (WMO) and IRDR signed a working arrangement to, among other things; jointly support the activities of the WWRP’s Working Group on Societal and Economic Research and Applications (WG SERA). The research priorities of WG SERA were reported by Nannette Lomarda, the WWRP’s Senior Scientific Officer, at the 10th IRDR Science Committee meeting and include:

- Estimation of the societal (including economic) value of weather and disaster risk reduction information;
- Understanding and improving the use of weather-related hazard information in decision-making;
- Understanding and improving the communication of weather-related hazard information and forecast uncertainty;
- Development of user-relevant verification methods; and
- Development of decision support systems and tools.

David Johnston is a member of the Working Group.

Other International Programmes

In 2013, Jane Rovins, the IRDR IPO’s Executive Director, attended meetings held by various regional and international organisations in order to promote IRDR and offer the IRDR perspective to deliberations. These included the Asia-Pacific Network for Global Change Research (APN); the Association of Southeast Asian Nations (ASEAN); the United Nations Division for Sustainable Development (DSD); and the United Nations Office for Sustainable Development (UNOSD).

**IRDR’s Engagement with other International Organisations in 2013**

- UNOSD Expert Consultation on Knowledge and Capacity Needs for Sustainable Development in Post-Rio+20 Era (Incheon, Republic of Korea, 6 to 8 March 2013).
- ASEAN Capacity-Building Forum on Risk Assessment “Bridging Science and Practice in Disaster Risk Management to Build Community Resilience” (Bangkok, Thailand, 19 to 22 March 2013).
- 3rd International Conference on Disaster Management and Human Health: Reducing Risk, Improving Outcomes (A Coruña, Spain, 9 to 11 July 2013).
- “Climate Adaptation, Disaster Risk Reduction and Loss + Damage — Linkages, Priorities, Limitations” Asia-Pacific Network for Global Change Research (APN) Workshop (Kobe, Japan, 21 to 23 August 2013).
- 8th International Symposium on Digital Earth (ISDE) (Sarawak, Malaysia, 26 to 29 August 2013).
- “Disaster Governance: The Urban Transition in Asia” conference (Singapore, 7 to 8 November 2013).
From 28 to 30 January 2013, David Johnston attended the Wilton Park conference, “Building global resilience to natural disasters: Translating science into action.” The conference was the first in a series initiated by the Science and Innovation Network (SIN) of the UK’s Foreign and Commonwealth Office in response to the growing need to identify how science can play a consistent and substantive role in reducing vulnerabilities to hazards and promote sustainable resilience. David Johnston, who chaired several small group discussions, as well as former SC Chair, Gordon McBean, who was also in attendance, was able to speak about the IRDR programme and its links to the Wilton Park agenda.

From 11 to 13 March 2013, Sá lvano Briceño, attended the International Forum on Research Institutes for Disaster Risk Reduction (DPRI International Forum), held at the Kyoto University’s Uji Campus, Japan. Salvano gave a keynote address about IRDR on 12 March, during the Forum’s Symposium on Collaborative Research and Education in Safety and Security Areas.

Later in March 2013, Sá lvano Briceño also attended the ICSU ROLAC meeting in Panama to follow-up on the recommendations coming out of the September 2012 “Regional Workshop on Disaster Risk Management in LAC: Towards a project plan for integrating Science and Risk Management for the Region.” The meeting participants agreed to set up a steering committee for the LAC region’s disaster risk programme, based on the IRDR programme, and the key institutions to be involved (see pg. 24).

From 8 to 11 July 2013, Sarb Johal from Massey University’s Joint Centre for Disaster Research (JCDR), Wellington, New Zealand, represented IRDR on behalf of SC Chair, David Johnston, at the Joint Meeting of the Pacific Platform for Disaster Risk Management and Pacific Climate Change Roundtable, held on Denarau Island, Nadi, Fiji. Sarb delivered a presentation entitled “Integrated Research on Disaster Risk” during the side event, Combining the Sciences for Risk Management.
IRDR Conference 2014

Led by its 15-Member SC, the IRDR Programme, in partnership with the China Association for Science and Technology (CAST), will host the second IRDR Conference at the Beijing International Convention Center (BICC) in Beijing, China, from 7 to 9 June 2014.

Under the theme, *Integrated Disaster Risk Science: A Tool for Sustainability*, the IRDR Conference 2014 will place emphasis on the importance of science as a tool to address hazard risks and issues of sustainable development. It will also put emphasis on fostering science and policy dialogues, and other inter-sectorial exchanges between academia and other sectors of civil society.

This will be accomplished through a series of plenaries and breakout sessions dealing with the challenges of implementing integrated disaster risk research, inter-organisational collaboration and policy, as well as the interaction with sustainable development activities. The sessions will address a wide range of environmental hazards, vulnerabilities, and sustainability issues, in both global and local contexts.

Topics to be explored include, but are not limited to:

- Water and disasters
- Risk reduction science and national politics
- Risk reduction science and the media
- Role of science in the 2015 agendas (post-HFA; post-MDGs; GAR)
- Empowering local officials with science
- Capacity building for integrated research
- Links between risk research and sustainable development
- Assessing risk
- Integrated risk governance

The organising committee for the Conference include: IRDR; CAST; ICSU; ISSC; UNISDR; Chinese Academy of Sciences (CAS); RADI; China International Conference Center for Science and Technology (CICCST); and IRDR China.

Programme Governance: the Science Committee

The IRDR programme is governed by a 15-Member Science Committee (SC) set up by and on behalf of the Co-Sponsors. As IRDR’s principal governing body its responsibilities are to define, develop and prioritise plans for IRDR, to guide its programming; budgeting and implementation; to establish a mechanism for oversight of programme activities; and to help disseminate and publicise its results.

The SC approves the inclusion of projects and initiatives under the IRDR umbrella, and helps liaise and co-operate with relevant national, regional and international programmes, organisations and institutions involved in natural hazards and disaster risk management, and raises additional funding for programme activities.

The SC also adopts and applies guidelines for the establishment of IRDR-designated International Centres of Excellence (ICoEs) and National and Regional Committees (NCs and RCs), and strives to mobilise funds for implementation of the overall IRDR programme.
The IRDR programme held its ninth SC meeting from 18 to 20 May 2013, in Geneva, Switzerland, in conjunction with the Fourth Session of the Global Platform for Disaster Risk Reduction (see pp. 28-29). Day one of the meeting was devoted to internal discussions; while days two and three were open to attendees from all programme bodies. These two days were also an opportunity for attendees of the wider Global Platform to join the meeting and find out more about IRDR through interactions with the SC Members and perusal of IRDR literature on display.

Support for the holding of the meeting was provided by a grant from UNISDR, which stipulated the SC Members discuss, during the meeting, an IRDR contribution to the study on vulnerability assessment for the 2015 edition of the Global Assessment Report on Disaster Risk Reduction (GAR 2015). Having limited its input to comments on the draft report for GAR 2013, the Committee discussed the scope of IRDR’s contribution to GAR 2015, and the Co-Chairs of IRDR’s four projects submitted proposals for the UNISDR’s consideration. This process was conducted in close co-ordination with representatives from UNISDR’s Risk Knowledge Section, who participated in the session for this purpose.

During the meeting updates were provided on the activities of the four IRDR core projects by their respective Co-Chairs. The SC discussed in detail the overall strategy for the projects in terms of funding opportunities and envisaged future developments. A proposal for a new IRDR activity was submitted by IRDR ICoE-Taipei, which was referred for further discussion to the 10th SC meeting. The proposal sought to offer a framework for the integration of the existing projects in specifically selected contexts. The IPO informed the Committee about its recent staff changes, including the upcoming end of the Executive Director’s contract, presented the operational budget. The SC also discussed the communication strategy for the programme.

Representatives from China, Japan and New Zealand National Committees (NCs), and from ICoE-Taipei presented on their past and planned future activities for their respective entities. The SC also approved the admittance of two new ICoEs: IRDR ICoE in Community Resilience (IRDR ICoE-CR), and IRDR ICoE in Vulnerability and Resilience Metrics (IRDR ICoE-VaRM) (see pp. 15-16).
Deliberations of the 10th SC Meeting

The 10th meeting of the IRDR SC was held at the Sanya campus of the Institute of Remote Sensing and Digital Earth (RADI), in Hainan Province, China from 12 to 14 November 2013. It coincided with two IRDR China events: its Annual Symposium, and International Workshop on Disaster Risk and Mitigation (see pg. 18).

Day one of the meeting was restricted to SC Members, while days two and three were open to invited guests and partner organisations. The SC welcomed two new Members, S.H.M. Fakhruddin and Virginia Jiménez Díaz, while one Member, Djillali Benouar, accepted the Co-Sponsors’ invitation to serve a second term. The Committee discussed the ongoing activities and implementation strategies of the four core projects, and the SC requested a report preparing a final decision on ICoE-Taipei’s proposal for a new IRDR project.

The Committee was informed of the UNISDR’s decision to fund contributions by AIRDR, FORIN and RIA to the development of GAR 2015. The IPO gave an update on the state of preparations for the second IRDR Conference, including the responses received to the call for abstracts, which were reviewed by the Members and invited guests on day two of the meeting. The meeting was also informed of the IPO’s budget, the search for a new Executive Director and the hiring of a new Communications Officer.

Representatives from the ICoEs in Taipei, Wellington and South Carolina, as well as delegates from China, Japan and New Zealand NCs presented on their recent activities and on their future plans and upcoming events. During the meeting the SC approved one new ICoE, which will have a research focus on understanding risk and safety (see pg. 16), as well as the establishment of two new NCs in Colombia and USA (see pp. 19 and 23). The SC also agreed to support IRDR Japan’s “International Study Conference on Disaster Risk Reduction,” to be held in Tokyo, Japan from 14 to 16 January 2015, as a co-organiser (see pg. 21).

Presentations were also given by three invited organisations concerning their specific work and relationship to IRDR. The representative from the European Union’s Joint Research Centre (JRC) informed the meeting of the JRC’s crisis management activities and its work to produce a loss data standard for Europe, which will be facilitated through its involvement in the DATA project working group (see pg. 8). The representative from the Global Volcano Model (GVM) project provided an overview of the project’s progress to date and expressed their interest in brokering a relationship with IRDR. The speaker from the World Meteorological Organisation’s (WMO) World Weather Research Programme (WWRP) gave an update of the WWRP’s activities and its relationship with IRDR through the Working Group on Societal and Economic Research Applications (WG SERA) (see pg. 31).
Composition of the IRDR Science Committee

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 2013, one Member, Djillali Benouar, accepted the invitation of the Co-Sponsors to serve on the SC for a further three years; and two new Members, S.H.M. Fakhruddin and Virginia Jiménez Diaz, were approved by the Co-Sponsors to replace outgoing Members Chamhuri Siwar (Malaysia) and Angelika Wirtz (Germany). SC Members shall serve for an initial term of three years, renewable once.

Figure 14: Regional Distribution of IRDR SC Members

Figure 15: Gender Distribution of IRDR SC Members
<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>Years</th>
<th>Position/Institution</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irasema Alcántara - Ayala</td>
<td>Mexico</td>
<td>2012-2015</td>
<td>Director, Institute of Geography, National Autonomous University of Mexico, Mexico City</td>
<td>geography; geomorphology; landslides</td>
</tr>
<tr>
<td>Djillali Benouar</td>
<td>Algeria</td>
<td>2010-2016</td>
<td>Director, Built Environment Research Laboratory (LBE), University of Bab Ezzouar, Algiers</td>
<td>earthquake engineering</td>
</tr>
<tr>
<td>Ann Bostrom</td>
<td>USA</td>
<td>2012-2015</td>
<td>Associate Dean of Research and Professor, Daniel J. Evans School of Public Affairs, University of Washington, Seattle</td>
<td>decision and risk analysis; environmental policy; perception and communication of risk</td>
</tr>
<tr>
<td>Sálvano Briceño</td>
<td>Venezuela</td>
<td>2011-2014</td>
<td>Former Director, UNISDR Secretariat, Geneva</td>
<td>environmental education; law; disaster risk reduction</td>
</tr>
<tr>
<td>Omar Darío Cardona</td>
<td>Colombia</td>
<td>2009-2015</td>
<td>Professor, Integrated Disaster Risk Management, National University of Colombia, Manizales City</td>
<td>earthquake engineering; disaster prevention; risk mitigation</td>
</tr>
<tr>
<td>Susan Cutter</td>
<td>USA</td>
<td>2009-2015</td>
<td>Carolina Distinguished Professor and Director, Hazards and Vulnerability Research Institute, University of South Carolina, Columbia</td>
<td>geography; post-event field studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SC Vice-Chair; DATA Project Co-Chair; Director, IRDR ICoE-VaRM</td>
<td></td>
</tr>
</tbody>
</table>
IRDR SC Members as of 31 December 2013

S.H.M. Fakhruddin  
(Bangladesh, 2013-2016)  
- Consultant hydrologist based in Thailand  
- Disciplines: water engineering and management

Ferruccio Ferrigni  
(Italy, 2011-2014)  
- Professor, Management of Urban and Regional Systems, University of Naples Federico II, Naples  
- Disciplines: cultural aspects of disasters

Virginia Jiménez-Díaz  
(Venezuela, 2013-2016)  
- Coordinator, Network of Social Studies in the Prevention of Disasters in Latin America (LA RED), Panama City, Panama  
- Disciplines: integrated risk management in urban areas

David Johnston  
(New Zealand, 2009-2015)  
- Director, Joint Centre for Disaster Research, Massey University, Wellington  
- Disciplines: earth sciences; volcanology; disaster management  
- SC Chair; Director, IRDR ICoE-CR

Shuaib Lwasa  
(Uganda, 2012-2015)  
- Lecturer, Department of Geography, Makerere University, Kampala  
- Disciplines: urban land management; application of GIS

Anthony Oliver-Smith  
(USA, 2011-2017)  
- Professor Emeritus, Department of Anthropology, University of Florida  
- Disciplines: social vulnerability; post-event studies  
- FORIN Project Co-Chair
IRDR SC Members as of 31 December 2013

Mark Pelling (UK, 2011-2017)
- Professor, Human Geography, King’s College London, London
- Disciplines: disaster risk reduction
- RIA Project Co-Chair

Kuniyoshi Takeuchi (Japan, 2009-2015)
- Director, International Centre for Water Hazard and Risk Management (ICARM), Tsukuba
- Disciplines: hydrology; civil engineering
- SC Vice-Chair

Sisi Zlatanova (The Netherlands, 2012-2015)
- Associate Professor, OTB Research Institute for the Built Environment, Delft University of Technology, Delft
- Disciplines: remote sensing and GIS technologies
- DATA Project Co-Chair

Ex-officio members

Ex-officio members represent each of IRDR’s three Co-Sponsors and the IPO host organisation.

- Huadong Guo, RADI, CAS
- Gudmund Hernes, ISSC
- Andrew Maskrey, UNISDR
- Howard Moore, ICSU
Programme Management: the International Programme Office

The execution of IRDR programme promotion, coordination and related functions is undertaken by the IRDR International Programme Office (IPO). The IPO is composed of an Executive Director and a number of supporting scientific and administrative personnel, all of whom are formally employed by the IPO’s host institution.

The IPO is located in Beijing, China, hosted by the Institute of Remote Sensing and Digital Earth (RADI), Chinese Academy of Sciences (CAS). Operational funds are provided by the China Association for Science and Technology (CAST).

Integrated Research on Disaster Risk | IPO
c/o RADI/Chinese Academy of Sciences (CAS)
Room B713, No 9 Dengzhuangnan Lu
Haidian District, Beijing, China 100094
Tel.: +86 10 8217 8917 and +86 10 8217 8913
Fax: +86 10 8217 8913
Email: connect@irdrinternational.org
Website: www.irdrinternational.org
IRDR’s Host Institution

The Institute of Remote Sensing and Digital Earth (RADI), under the Chinese Academy of Sciences (CAS) was established in 2012 through the consolidation of two CAS institutes: the Institute of Remote Sensing Applications (IRSA) and the Center for Earth Observation and Digital Earth (CEODE).

In mid-2013, the SC’s Chair and Vice-Chair, David Johnston and Sálvano Briceño, were appointed members of RADI’s International Expert Committee. Their presence on the International Expert Committee will further deepen the collaboration between IRDR and RADI.

In October 2013, RADI was awarded the title of “Model Base of International S&T Cooperation” in China’s earth observation field by the Ministry of Science and Technology of China (MOST). As the Base for China’s International S&T co-operation, RADI will draw upon its advantages in the field of remote sensing and Earth observation, to coordinate domestic and international S&T resources, keep developing the channels for and scale of China’s international S&T cooperation, strengthen global data and information sharing, and promote the development of remote sensing and digital Earth.
In January 2013, Kerry-Ann Morris joined the IPO as the new Junior Science Officer, replacing the former Officer who came to the end of her contract in November 2012. Kerry-Ann comes from Jamaica and holds a Master of Science degree in Disasters, Adaptation and Development from King’s College London, and a Bachelor of Arts in History from the University of the West Indies (UWI). Prior to joining the IPO, Kerry-Ann worked as the Information Officer in Jamaica’s national disaster preparedness and emergency management agency, the Office of Disaster Preparedness and Emergency Management (ODPEM), and as a Research Fellow with UWI’s Disaster Risk Reduction Centre (DRRC).

On 31 November 2013, Jane Rovins’ contract with the IPO as its Executive Director came to an end. The search for a new Executive Director began in June 2013. Interviews with short-listed candidates were held at RADI in September 2013, but the selected candidate eventually declined the offer. The vacancy announcement was republished in December 2013. At the 10th IRDR SC meeting in November 2013, it was agreed that the Chair, David Johnston, would manage the IPO remotely from New Zealand until a new Executive Director was recruited.

A new Communications Officer, Charina Cabrido, was hired in December 2013, replacing the former Officer who resigned in April 2013. Charina comes from the Philippines and has a double Masters degree in Environmental Management and Science from the University of San Francisco, USA, and a postgraduate diploma in Integral Water Management from Saxion Hogescholen in The Netherlands. Prior to joining the IPO, Charina worked as a Communications Specialist consultant at the Asian Development Bank (ADB).

### Composition of the IRDR IPO as of 31 December 2013

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Director</td>
<td>(vacant)</td>
<td></td>
</tr>
<tr>
<td>Communications Officer</td>
<td>Charina Cabrido</td>
<td><a href="mailto:charina.cabrido@irdrinternational.org">charina.cabrido@irdrinternational.org</a></td>
</tr>
<tr>
<td>Administrative Officer</td>
<td>Lang Lang</td>
<td><a href="mailto:lang.lang@irdrinternational.org">lang.lang@irdrinternational.org</a></td>
</tr>
<tr>
<td>Junior Science Officer</td>
<td>Kerry-Ann Morris</td>
<td><a href="mailto:kerry-ann.morris@irdrinternational.org">kerry-ann.morris@irdrinternational.org</a></td>
</tr>
<tr>
<td>Executive Assistant</td>
<td>Tracy Zhao</td>
<td>(resigned in 2014)</td>
</tr>
</tbody>
</table>
The 2013 consolidated financial statement reflects the combined operations of the IRDR’s IPO. The IPO’s main funding in 2013 came from the China Association for Science and Technology (CAST). The contribution from CAST was earmarked for staff salaries and to meet the overall cost of the IPO’s operations, including international travel.

### Financial Summary 2013

<figure>
<figure17>
</figure>
</figure>

<table>
<thead>
<tr>
<th>Income</th>
<th>RMB (Renminbi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAST annual allotment</td>
<td>2,700,000.00</td>
</tr>
<tr>
<td>2012 roll-over</td>
<td>1,524,901.30</td>
</tr>
<tr>
<td>Total income</td>
<td>4,224,901.30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>73,935.38</td>
</tr>
<tr>
<td>Hospitality</td>
<td>9,992.70</td>
</tr>
<tr>
<td>IPO Staff</td>
<td>1,802,497.50</td>
</tr>
<tr>
<td>SC and IPO travel</td>
<td>766,926.22</td>
</tr>
<tr>
<td>Local transportation</td>
<td>68,758.00</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>2,722,109.80</strong></td>
</tr>
<tr>
<td>Balance (will roll-over into 2014)</td>
<td>1,502,791.50</td>
</tr>
</tbody>
</table>

**Notes:**

1. Administrative expenses include costs incurred for the Secretariat’s operations and related fees.
2. Hospitality expenses include costs incurred locally for tea breaks and meals during governance and scientific meetings, workshops and other such occasions.
3. IPO staff expenses include annual salaries, health and social insurance contributions, costs related to obtaining international employee work permits and visas, lunch allowances, on board and demission fees, and contractually agreed home leave expenses.
4. SC and IPO travel expenses include inbound and outbound business travel, and travel of SC members under IPO rules.
5. Local transportation include costs incurred for taxis for work-related transfers and/or car rentals as appropriate.

**Figure 17:** Distribution of IRDR IPO’s expenses in 2013
Additional Project Funding

The International Council for Science (ICSU) and the International Geographical Union (IGU) financed the first International Workshop on FORIN associated with landslides, held in Chiapas, Mexico, from 26 June to 4 July 2013. The workshop was co-funded through the *Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean* (LANDSCAPE-LAC) project (see pg. 11).

Funding was provided by UNISDR for the holding of the ninth IRDR SC meeting in Geneva, Switzerland, from 18 to 20 May 2013, in order to discuss, among other things, IRDR’s contributions to GAR 2015 (see pg 35).

ICSU sponsored the DATA project working group’s second meeting held from 29 September to 2 October 2013 (see pg. 8).

<table>
<thead>
<tr>
<th>Project</th>
<th>Granting Agency</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANDSCAPE-LAC</td>
<td>ICSU</td>
<td>€30,000</td>
</tr>
<tr>
<td>26 June - 4 July 2013</td>
<td>IGU</td>
<td>€5,000</td>
</tr>
<tr>
<td>Chiapas, Mexico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scoping interdisciplinary research and methodologies that will be applied for GAR 2015 (ninth IRDR SC Meeting, 18 - 20 May 2014)</td>
<td>UNISDR</td>
<td>US$30,000</td>
</tr>
<tr>
<td>Geneva, Switzerland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second DATA Project Working Group Meeting, 29 September to 2 October 2013</td>
<td>ICSU</td>
<td>€6,800</td>
</tr>
<tr>
<td>South Carolina, USA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Annex 1: IRDR Project Working Group Members

<table>
<thead>
<tr>
<th>IRDR Project</th>
<th>Working Group Members</th>
</tr>
</thead>
</table>
| **AIRDR**    | 1. Susan L. Cutter (Co-Chair; SC; Director, ICoE-VaRM, USA)  
2. Allan Lavell (Co-Chair; FLACSO, Costa Rica)  
3. Ian Burton (Professor Emeritus, U. of Toronto, Canada)  
4. Anthony Oliver-Smith (SC; University of Florida, USA) |
| **DATA**     | 1. Regina Below (CRED, Belgium)  
2. Lucia Bevere (Swiss Re, Switzerland)  
3. Robert S. Chen (CO-DATA; Columbia U., USA)  
4. Susan L. Cutter (Co-Chair; SC; Director, ICoE-VaRM, USA)  
5. Daniele Ehrlich (Co-Chair; JRC)  
6. Jan Eichner (Munich Re, Germany)  
7. Melanie Gall (Ex-officio, U. of South Carolina, USA)  
8. Francis Ghesquiere (GFDRR, The World Bank, USA)  
9. Wei-Sen Li (NCDR, located in Taipei, China)  
10. Maria Patek (Federal Ministry of Agriculture, Forestry, Environment and Water Management Control, Austria)  
11. Julio Serje (UNISDR, Switzerland)  
12. Adam Smith (U.S. National Climatic Data Center/NOAA, USA)  
13. Carlos Villacis (UNDP, France)  
14. Frederic Zanetta (International Federation of Red Cross and Red Crescent Societies – IFRC, Switzerland)  
15. Ricardo Zapata-Marti (United Nations Economic Commission for Latin America – UNECLAC, Mexico)  
16. Sisi Zlatanova (SC, Co-Chair; Delft University of Technology, The Netherlands) |
| **FORIN**    | 1. Irasema Alcántara-Ayala (SC, National Autonomous University of Mexico, Mexico City)  
2. Djillali Benouar (SC, University of Bab Ezzouar, Algiers)  
3. Ian Burton (Co-Chair; Professor Emeritus, U. of Toronto, Canada)  
4. Allan Lavell (FLACSO, Costa Rica)  
5. Anthony Oliver-Smith (Co-Chair; SC, University of Florida, USA)  
6. Kuniyoshi Takeuchi (IRDR, International Centre for Water Hazard and Risk Management, Tsukuba, Japan) |
| **RIA**      | 1. Ann Bostrom (SC, University of Washington, Seattle, USA)  
2. Britt-Marie Drottz-Sjoberg (Norwegian U. of Science and Technology, Norway)  
3. J. Richard Eiser (Co-Chair; U. of Sheffield, UK)  
4. David Johnston (SC; Director, ICoE-CR)  
5. John McClure (U. of Victoria, New Zealand)  
6. Douglas Paton (U. of Tasmania, Australia)  
7. Mark Pelling (Co-Chair; SC)  
8. Joop van der Pligt (U. of Amsterdam, Netherlands)  
9. Emma Visman (King’s College London, UK)  
10. Mathew P. White (U. of Exeter, UK) |
### Annex 2: Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRC</td>
<td>Asian Disaster Reduction Center</td>
</tr>
<tr>
<td>AFPCN</td>
<td>Association Francaise Pour la Prevention des Catastrophes Naturelles</td>
</tr>
<tr>
<td></td>
<td>(French Association for the Prevention of Natural Disasters)</td>
</tr>
<tr>
<td>IRDR AIRDR</td>
<td>IRDR Assessment of Integrated Research on Disaster Risk Project</td>
</tr>
<tr>
<td>AMC</td>
<td>Academia Mexicana de Ciencias (Mexican Academy of Sciences)</td>
</tr>
<tr>
<td>AMCDRR</td>
<td>Asian Ministerial Conference on Disaster Reduction</td>
</tr>
<tr>
<td>APN</td>
<td>Asia-Pacific Network for Global Change Research</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td></td>
<td>BUAP Benemérita Universidad Autónoma de Puebla (Meritorious Autonomous University of Puebla)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chinese Academy of Sciences</td>
</tr>
<tr>
<td>CASS</td>
<td>Chinese Academy of Social Sciences</td>
</tr>
<tr>
<td>CAST</td>
<td>China Association for Science and Technology</td>
</tr>
<tr>
<td>CENAPRED</td>
<td>Centro Nacional de Prevención de Desastres (National Centre for Disaster Prevention)</td>
</tr>
<tr>
<td>CERA</td>
<td>Canterbury Earthquake Recovery Authority</td>
</tr>
<tr>
<td>CICCST</td>
<td>China International Conference Center for Science and Technology</td>
</tr>
<tr>
<td>CoE</td>
<td>Council of Europe</td>
</tr>
<tr>
<td>CRED</td>
<td>Centre for Research on the Epidemiology of Disasters</td>
</tr>
<tr>
<td>IRDR DATA</td>
<td>IRDR Disaster Loss Data Project</td>
</tr>
<tr>
<td>DDKV</td>
<td>Deutsches Komitee Katastrophenvorsorge e.V. (German Committee for Disaster Reduction)</td>
</tr>
<tr>
<td>DRR</td>
<td>Disaster Risk Reduction</td>
</tr>
<tr>
<td>DSD</td>
<td>United Nations Division for Sustainable Development</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>EU JRC</td>
<td>European Commission Joint Research Centre</td>
</tr>
<tr>
<td>IRDR FORIN</td>
<td>IRDR Forensic Investigations of Disasters Project</td>
</tr>
<tr>
<td>GAR</td>
<td>Global Assessment Report on Disaster Risk Reduction</td>
</tr>
<tr>
<td>GEM</td>
<td>Global Earthquake Model</td>
</tr>
<tr>
<td>GFDRR</td>
<td>Global Facility for Disaster Reduction and Recovery</td>
</tr>
<tr>
<td>GLIDE</td>
<td>GLobal IDEntifier Number</td>
</tr>
<tr>
<td>GVM</td>
<td>Global Volcano Model</td>
</tr>
<tr>
<td>HVRI</td>
<td>Hazards and Vulnerability Research Institute</td>
</tr>
<tr>
<td>IAI</td>
<td>Inter-American Institute for Global Change Research</td>
</tr>
<tr>
<td>IAP</td>
<td>ISDR Asia Partnership</td>
</tr>
<tr>
<td>ICL</td>
<td>International Consortium on Landslides</td>
</tr>
<tr>
<td>ICoE</td>
<td>International Centres of Excellence</td>
</tr>
<tr>
<td>ICSU</td>
<td>International Council for Science</td>
</tr>
<tr>
<td>ICSU ROA</td>
<td>ICSU Regional Office for Africa</td>
</tr>
<tr>
<td>ICSU ROAP</td>
<td>ICSU Regional Office for Asia and Pacific</td>
</tr>
<tr>
<td>ICSU ROLAC</td>
<td>ICSU Regional Office for Latin America and the Caribbean</td>
</tr>
<tr>
<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
</tr>
<tr>
<td>IGU</td>
<td>International Geographical Union</td>
</tr>
<tr>
<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td>IRDR IPO</td>
<td>IRDR International Programme Office</td>
</tr>
<tr>
<td>IRDR</td>
<td>Integrated Research on Disaster Risk</td>
</tr>
</tbody>
</table>
IRDR ICoE-CR  IRDR International Centre of Excellence in Community Resilience
IRDR ICoE-UR&S  IRDR International Centre of Excellence in Understanding Risk and Safety
IRDR ICoE-VaRM  IRDR International Centre of Excellence on Vulnerability and Resilience Metrics
ISSC  International Social Science Council
IUGG  International Union for Geodesy and Geophysics
JCDR  Joint Centre for Disaster Research
LANDSCAPE-LAC  Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean
NHC  Natural Hazards Center
NHRP  Natural Hazards Research Platform
NIMET  Nigerian Meteorological Agency
NIWA  National Institute of Water and Atmospheric Research, New Zealand
NC  IRDR National Committee
NCDR  National Science and Technology Center for Disaster Reduction
OWG  Open Working Group
PS  Public Safety Canada
RADI  Institute of Remote Sensing and Digital Earth
RC  IRDR Regional Committee
IRDR RIA  IRDR Risk Interpretation and Action Project
IRDR SC  IRDR Science Committee
SCJ  Science Council of Japan
SIN  Science and Innovation Network
STAG  UNISDR’s Scientific and Technical Advisory Group
START  Global Change System for Analysis, Research and Training
UNAM  Universidad Nacional Autónoma de México (National Autonomous University of Mexico)
UNDP  United Nations Development Programme
UNCLAC  United Nations Economic Commission for Latin America
UNESCO  United Nations Educational, Scientific and Cultural Organization
UNGRD  National Unit for Disaster Risk Management, Colombia
UNISDR  United Nations International Strategy for Disaster Reduction
UNISTAR  United Nations International Short Term Advisory Resources
UNOSD  United Nations Office for Sustainable Development
WG SERA  Working Group on Societal and Economic Research and Applications
WMO  World Meteorological Organisation
WSSF  World Social Science Forum
WWRP  World Weather Research Programme
Cover Photo Credits:

Left to Right (Top Photos)
1. In Muzaffarabad all schools and most hospitals and medical centres were destroyed.
   Photo: Wikimedia Commons.
   Photo: Wikimedia Commons
3. A boy is rescued as part of an emergency simulation on Manila Bay involving the
   Philippine Coast Guard, Philippine Navy, the National Disaster Coordinating Council and
   the Japanese Coast Guard. The sea demonstration involved passengers jumping from a
   distressed vessel in to Manila Bay followed by the Philippine coast Guard dropping rescue
   divers from a helicopter to their aid. Once brought to shore a medical team provided
   immediate assistance. The simulation was part of an ASEAN disaster response exercise.
   Photo: Wikimedia Commons

Left to Right (Bottom Photos)
1. Photo sent by IRDR SC Member Irasema Alcántara Ayala, Director, Institute of Geography,
   National Autonomous University of Mexico, Mexico City to represent FORIN project.
3. Virunga National Park, Nyiragongo Lava lakes. Photo: Wikimedia Commons