

Programme Summary

IRDR Programme

The Integrated Research on Disaster Risk (IRDR) programme is a decade-long integrated research initiative co-sponsored by the International Council for Science (ICSU), the International Social Science Council (ISSC), and the United Nations International Strategy for Disaster Reduction (UNISDR) – the Co-Sponsors. It is a global, trans-disciplinary research programme created 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 as well as policy-making, coupled with an understanding of the role of communications, and public and political responses to reduce the risk.

IRDR is governed by a 15-member Scientific Committee (SC) set up by and on behalf of the Co-Sponsors. Its responsibilities are to define, develop and prioritise plans for the IRDR, guide its programming, budgeting and implementation, establish a mechanism for oversight of programme activities, and disseminate and publicise its results. The execution of IRDR programme promotion, coordination and related functions is undertaken by the IRDR International Programme Office (IPO). The IPO is located in Beijing, China and is hosted by the Institute of Remote Sensing and Digital Earth (RADI) of the Chinese Academy of Sciences (CAS). Operational funds are provided by the Chinese Association of Science and Technology (CAST).

Mission and Research Objectives

The IRDR mission is to develop 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.

The programme is guided by three research objectives:

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

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

IRDR Working Groups

To meet its research objectives the IRDR initially established four core working groups comprising experts from diverse disciplines to formulate new methods in addressing the shortcomings of current disaster risk research. A fifth working group was later established in partnership with the World Weather Research Programme (WWRP).

- 1. *Assessment of Integrated Research on Disaster Risk (AIRDR):*** AIRDR will undertake the first systematic and critical global assessment of integrated research on disaster risk. This is in furtherance of Goal 1 (promote integrated research, advocacy and awareness-raising) in IRDR's **Strategic Plan (2013-2017)**, to which AIRDR's activities are aligned. The enormity and complexity of disaster risk requires knowledge from the natural, social, health, and engineering sciences operating in an integrative fashion, not as separate disciplines examining one aspect of the problem. Such a synthesis of perspectives is not easy, but is vital in producing the new understanding of disasters and their impacts and in achieving IRDR's objectives.
- 2. *Disaster Loss Data (DATA):*** DATA will study issues related to the collection, storage, and dissemination of disaster loss data. Recognising the need for standards or protocols to reduce uncertainty in disaster loss data, DATA intends 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. This is in furtherance of Goal 2 (characterisation of hazards, vulnerability and risk) in IRDR's **Strategic Plan (2013-2017)**, to which DATA's activities are aligned.
- 3. *Forensic Investigations of Disasters (FORIN):*** FORIN will develop, disseminate and implement a radical new approach in disaster research that seeks to identify and explain the underlying causes of disasters, including the growth in magnitude and frequency of very large disaster events. This is in furtherance of Goal 4 (reducing risk and curbing losses through knowledge-based actions) in IRDR's **Strategic Plan (2013-2017)**, to which FORIN's activities are aligned. It is intended that this research paradigm will lead to greater in-depth understanding and more enlightened and effective disaster risk reduction practices and policies. Many of FORIN's attributes have been described and published in the IRDR report, **Forensic Investigations of Disasters: The FORIN Project (IRDR FORIN Publication No. 1)**. The report is available for download from the IRDR's website. Printed copies are also available from the IRDR IPO.
- 4. *Risk Interpretation and Action (RIA):*** will focus on the question of how people — both decision-makers and ordinary citizens — make decisions, individually and collectively, in the face of risk. Decision-making under conditions of uncertainty is inadequately described by traditional models of 'rational choice.' Instead, attention needs to be paid to how people's interpretations of risks are shaped by their own experiences, personal feelings and values, cultural beliefs and interpersonal and societal dynamics. This is in furtherance of Goal 3 (understanding decision-making in complex and changing risk contexts) in IRDR's **Strategic Plan (2013-2017)**, to which RIA's activities are aligned. The first IRDR RIA project report,

Risk Interpretation and Action: A Conceptual Framework for Research in the Context of Natural Hazards (IRDR RIA Publication No. 1) provides an integrated perspective on research on risk and decision-making, offers pointers to how this can be applied to natural hazards, and outlines implications for practice. This report is available for download from the IRDR's website. Printed copies are also available from the IRDR IPO.

5. *Societal and Economic Research and Applications (SERA) Working Group*: In partnership with the WWRP, and co-chaired by representatives from both the IRDR and WWRP, SERA will advance the science of social and economic applications of weather-related information and services. This will be accomplished, in part, through the development, review and promotion of societal and economic-related demonstration projects focused on high-impact weather and information. Close collaboration and joint efforts are to be developed with the four core IRDR working groups.

IRDR International Centres of Excellence

ICoEs will provide regional and research foci for the IRDR programme. Their research programmes will embody an integrated approach to disaster risk reduction that directly contributes to the IRDR **Science Plan** (ICSU 2008) and its objectives, as well as the **IRDR Strategic Plan (2013 – 2017)**. The first IRDR ICoE was established at Academia Sinica (the Academy of Sciences) located in Taipei, China.

IRDR National Committees (NCs)

NCs support and supplement the IRDR's research initiatives, and help to establish or further develop crucial links between national disaster risk reduction programmes and activities within the IRDR international framework. There are currently six NCs located in: Canada, China, France, Germany, Japan and New Zealand.

For more information about the IRDR and its programme activities visit the IRDR's website, www.irdrinternational.org/, or contact the IRDR IPO via email at connect@irdrinternational.org.

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