

IRDR Compilation 2010-2020

A ten-year science quest for disaster risk reduction

Han Qunli on behalf of Editing Team

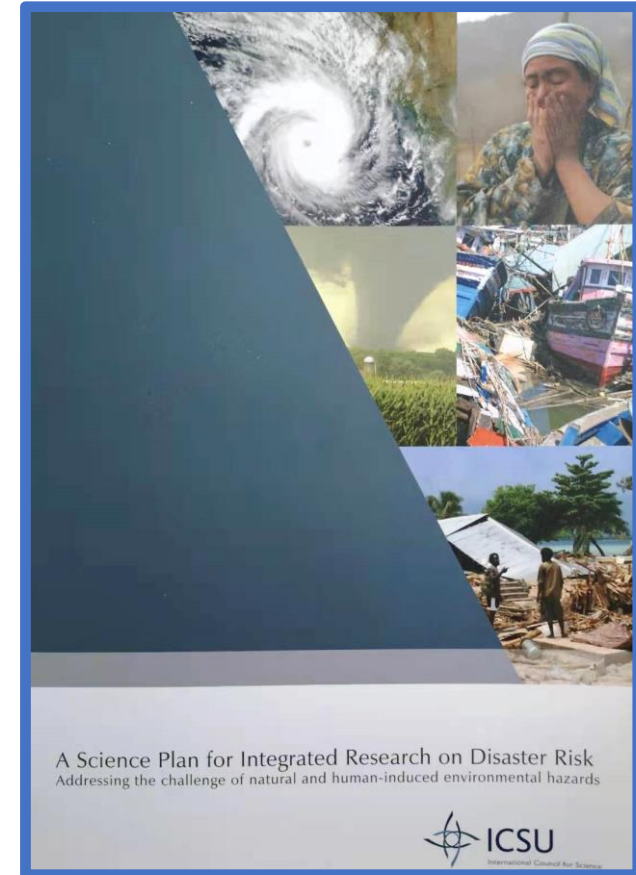
IRDR 2021 Conference

8 June 2021

1. Purpose
2. Process
3. Content
4. Acknowledgement

Purpose

- Comprehensive summary of IRDR work and contributions during the last decade.
- Clear accountability and transparency for IRDR Co-sponsors and IRDR Community.
- Demonstration of progress and experience as well as lessons learnt for future cooperation.



Process

- 29 Sept 2019, IRDR Coordination Committee decision in Geneva
- 10 Oct 2019 – 22nd IRDR SC meeting decision
- 15 Nov 2019 – Timeline established
- March-April 2020 - Calls for contributions (NCs, ICoEs, former-SC members, IRDR young scientists)
- March to Oct 2020 - Numerous individual contacts with IRDR members
- 10 Nov 2020- SC 24 endorsed draft Executive Summary
- 24 March 2021-Full draft text for SC 24 to review
- April-May 2021-Finalization of the Compilation

An extraordinary effort of all during the Pandemic!

Content

- Preface and foreword
- Executive Summary
- Chapter 1: IRDR, an Evolving Science Programme
- Chapter 2: IRDR Research Objectives and IRDR in Actions
- Chapter 3: Advancing International Scientific Cooperation and Dialogue
- Chapter 4: Programme Governance, Operational Mechanism and Management
- Chapter 5: Challenges in a Diverse and Dynamic DRR landscape
- Chapter 6: Closing remarks
- Appendix

Chapter 1, IRDR: an evolving science programme

- 1.1** Initial rationale and programme setting
- 1.2** Mission, Research Objectives and Cross-cutting Themes
- 1.3** From Hyogo to Sendai: IRDR contribution
- 1.4** Responding to the changing DRR landscape/contexts
 - 1.4.1 IRDR Strategic Plan 2013 – 2017
 - 1.4.2 IRDR Action Plan 2018-2020
- 1.5** Coherence with other UN 2030 agreements



Chapter 1.
IRDR: an evolving science
programme

IRDR Contribution to Sendai Framework on DRR

Organizing Partners for the Scientific and Technological Community Major Group (STMG) for the 3rd World Conference on Disaster Risk Reduction, 2014

- Independent collective response to the pre-zero draft of Sendai Framework
- Proposal of “4+2” formula to support the implementation of Sendai Framework

Co-organisers of 2016 UNISDR Science and Technology Conference on the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030

- Launch of Global Science and Technology Road Map
- Launch of Women in DRR Science platform supported by UN Women, UNISDR, and UNESCO
- Launch of Young Scientists in DRR platform coordinated by the UN Major Group for Children and Youth

Chapter 2: IRDR Research Objectives and IRDR in actions

2.1 Highlights of key results and impact of IRDR work, per the three main Research Objectives and eight Sub-objectives.

2.2 Highlight of results and impacts of IRDR work, per each of three IRDR cross-cutting themes

2.3 Important achievements of IRDR that were not covered by IRDR Science Plan 2010-2020

89 cases from IRDR WGs/NC/ICoE/YS!



Chapter 2 examples

O1.1 Identifying Hazards and Vulnerability leading to Risks

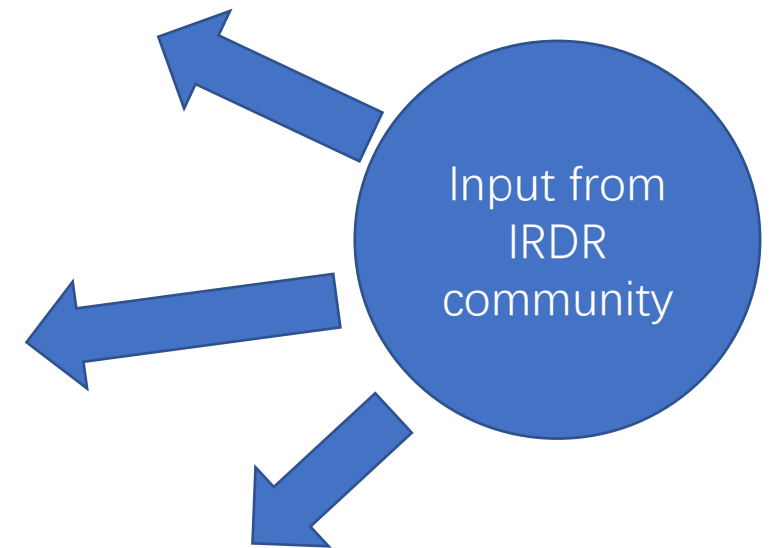
- Gaining insight into Root Causes of Risk and Risk production—Forensic Investigations of Disasters (FORIN)
- Long-term effects of Disaster Chains triggered by Mega-earthquake
- Characterisation of Hazard, Vulnerability and Exposure
- Understanding, Evaluating and Modelling Risk and Safety
- Hazard-centred Territorial Management
- What is Risk?

O1.2 Forecasting Hazards and Assessing Risks

- Typhoon monitoring and forecasting
- Improving Multihazard Risk Assessment
- National Hazard Forecasting Models in New Zealand
- How to better forecasting hazard and risk?

O1.3 Dynamic modelling of risk

- Integrated Iran Natural Hazards Risk and Resilient Model/Toolbox (IRRM)
- RiskScape + MERIT Modeling Tools for Resilience Investment
- Factors and temporal variation of emissions from dust sources in Central Asia over the past 40 years



Risk Atlas of Colombia: Revealing Latent Disasters

Toward Sendai Priority 1: the *Risk Atlas of Colombia* has been prepared by the National Unit for Disaster Risk Management (the host of **IRDR NC-Colombia**) and by INGENIAR Risk Intelligence (a leading company of risk management in the country). This publication compiles advances made in the analysis of the different hazards and presents new results of the risk in Colombia at the province (departmental) level.



GOBIERNO DE COLOMBIA

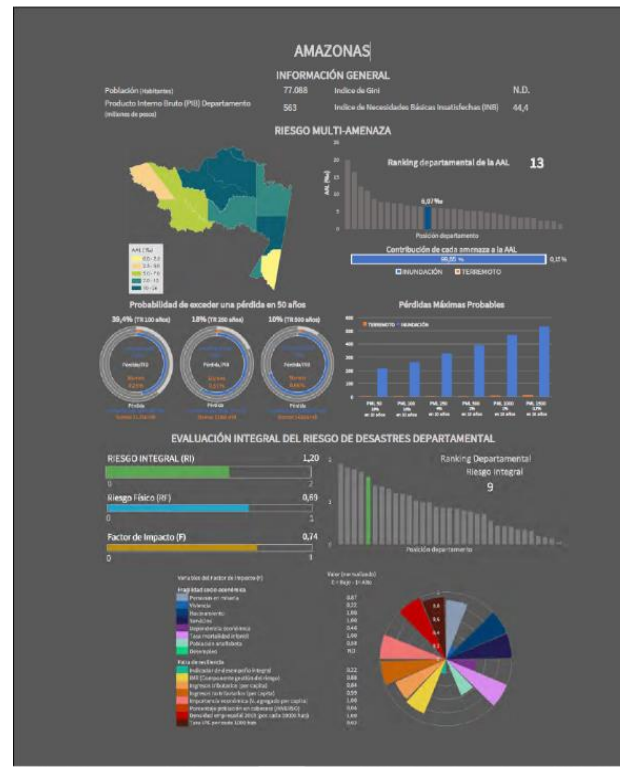


Figura 17. Escala Saffir-Simpson

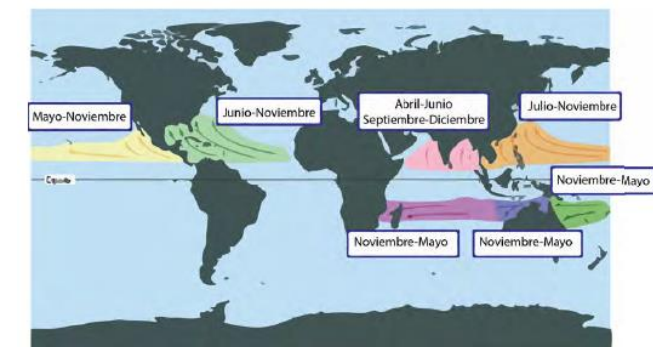


Figura 18. Regiones preferenciales, trayectorias y estaciones para el desarrollo de ciclones tropicales (<https://www.nhc.noaa.gov/climo/>)

Earthquakes in New Zealand from 2011

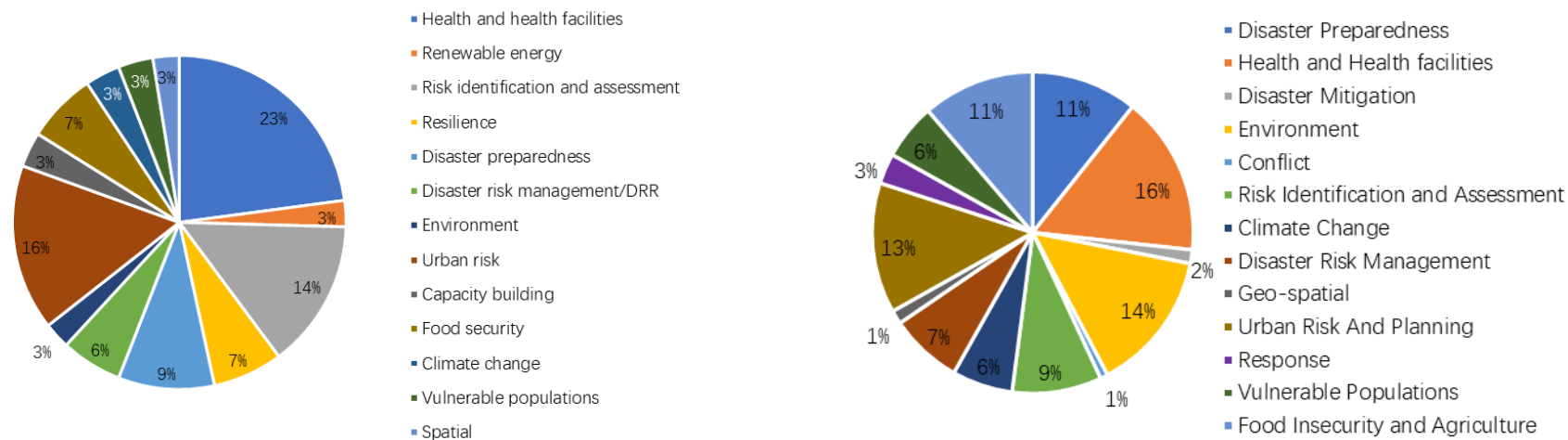
Christchurch to 2016 Kaikōura

- ✓ Earthquakes enabled to develop a comprehensive picture of landslide hazards. Extensive risk analyses were made to conduct the detailed maps of life-safety risks.
- ✓ By investigating the performance of buildings after earthquakes, the Liquefaction Resistance Index Map was published.
- ✓ The Canterbury Wellbeing Index and Survey is a global leader in post-disaster recovery indicators, and has contributed greatly to global knowledge.



ICoE REaL: Platform for university partnership in Africa

- Between 2016 – 2019, PERIPERI U (host of IRDR ICoE REaL) has expanded its academic programmes and modules boosting the consortium’s academic portfolio to 47 offerings.
- In total an estimated 3,842 (2,254 postgraduates and 1,588 undergraduate) students registered across the 12 partners between 2016 and 2019. An additional 381 students graduated, of whom 39.9% were female. A particular milestone for PERIPERI U was achieving 40.6% female student representation across its various academic offerings, a major challenge in a field which has been largely dominated by men and across a continent in which women participation in academia still face many obstacles and challenges.



Distribution of research themes of outputs produced by PERIPERI U

Chapter 3 Advancing international scientific cooperation and dialogue

3.1 The global position of IRDR in DRR

Roles and relevance of IRDR as seen by IRDR SC members and Executive Directors

3.2 IRDR as the science and policy interface

3.2.1 Dialogues through meetings and conferences

3.2.2 IRDR Policy Briefs

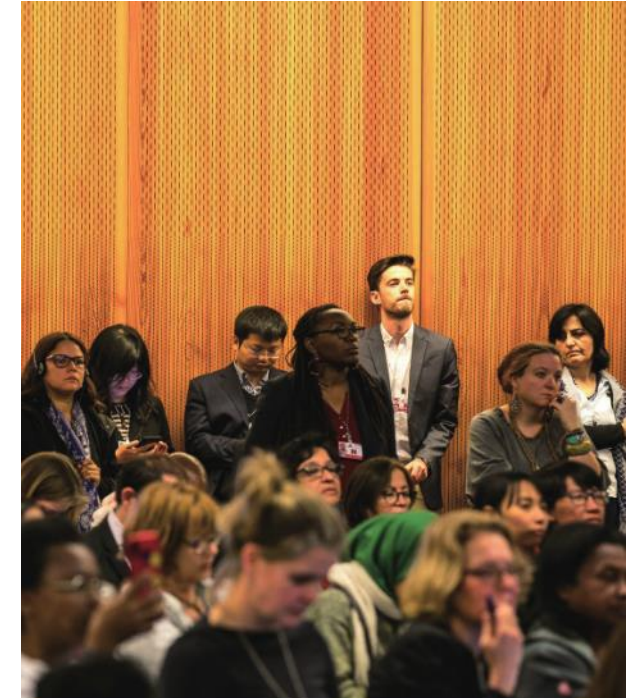
3.2.3 IRDR Working Paper Series

3.3 Cooperation with IRDR partners

3.3.1 Within ISC community

3.3.2 With UN agencies and programmes

3.3.3 Global or regional partners beyond ISC and UN community



Chapter 3.
Advancing international scientific
cooperation and dialogue

Chapter 4: Programme Governance, Operational Mechanism and Management

4.1 Structure of the IRDR Community

IRDR SC, IRDR National Committees (NCs) and Regional Committee (RC), IRDR ICoEs, IRDR WG, IRDR YSP

4.2 Institutional capacity gaps: views and comments from members of IRDR Community

4.3 Assessment and important recommendations from the mid-term review of 2016 and the Action Plan 2018-2020



Chapter 4.
Programme Governance,
Operational Mechanism and
Management

Chapter 5: Challenges in a diverse and dynamic DRR landscape

5.1 Insights from NCs and ICoEs on key challenges and lessons learnt

5.2 Comments on key challenges and lessons learnt, and directions for future cooperation **from SC members and EDs**

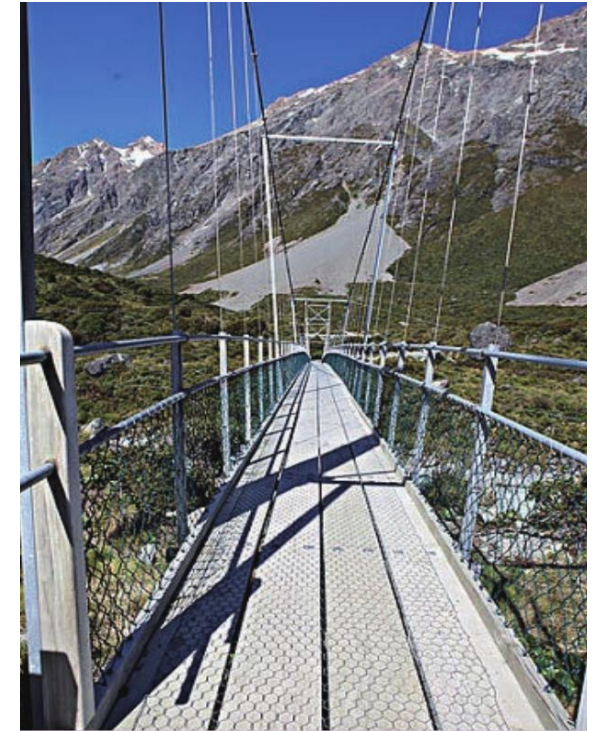
5.3 Preparation of the new DRR research agenda



Chapter 5.
Challenges in a diverse and
dynamic DRR landscape

Chapter 6: Closing remarks

- Re-emphasis the **value and relevance** of IRDR mission over last ten years
- Highlight the ways that IRDR Community as whole has been **engaged and interacting** in DRR at global, regional, national and local **contexts**
- Underline the **institutional capacity building** through ICoEs, NCs and YSP
- The new challenges and opportunities in the **changing risk landscape**



Chapter 6.
Closing remarks

Acknowledgement with sincere thanks

To the collective contributions from ALL members of IRDR community:

- ❖ Co-sponsors, host and *Ex-officios*
- ❖ Members of Scientific Committee (2010-2020)
- ❖ Executive Directors of IPO (2010-2020)
- ❖ 13 IRDR National Committees
- ❖ 17 IRDR ICoES
- ❖ 164 IRDR Young Scientists
- ❖ Individual experts

- ❖ A special thank to young scientists Lian Fang of IPO, Song Wanjuan, Zhang Haiying and Wang Lei of IRDR China for their hard work as the editing team members throughout the compilation process.

2010-2020

COMPILATION: A TEN-YEAR SCIENCE QUEST
FOR DISASTER RISK REDUCTION

Mobilizing Science for
Disaster Risk Reduction and Development Safety

IRDR Compilation 2010-2020 is now online for
download at the Conference website
<http://conference.irdrinternational.org/#page6>

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