

PRESS RELEASE

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Australian Natural Hazards: A Risk Assessment

Twenty years ago, researchers at Risk Frontiers - the internationally acclaimed and industry-funded Natural Hazards Research Centre based at Sydney's Macquarie University - began compiling an integrated database on natural hazards and their impacts in Australia. Data on over 5,000 hazard occurrences gathered from scientific reports, government papers, existing databases and newspaper accounts were brought together for the first time to provide information about human deaths and damage to the built environment resulting from nine natural perils – tropical cyclones, bushfires, floods, wind gusts, tornadoes, hailstorms, earthquakes, landslides and tsunamis. Australia now boasts an integrated database on natural perils that ranks amongst the best in the world.

Now, in a new report for the Benfield Hazard Research Centre, Professor Russell Blong - the former Director and founder of Risk Frontiers – reviews the work undertaken over the last decade and summarises the key findings.

Professor Blong describes in detail the construction of the integrated database, including the Risk Frontiers 'Damage Index' which was compiled to compare the total damage to buildings from over 1,200 events between 1900-1999. He goes on to summarise the findings into which natural hazard is the most deadly, which cause the most damage, which part of the country is the most deadly, and which natural hazard will kill the most people in the future. Finally, he offers some thoughts on where natural hazards risk assessment in Australia should progress from here.

The key findings include:

- Tropical cyclones and floods together account for more than 70 per cent of known natural hazard deaths since the start of the European colonisation of Australia in 1788. Thunderstorms, particularly lightning and bushfires, each account for 11 to 13 per cent of deaths, indicating the other hazards considered produced very few human deaths, at least in the last 200 years.
- Natural hazard death rates, per 100,000 population, have fallen by three orders of magnitude in the last two centuries
- Tropical cyclones, floods, thunderstorms and bushfires together produced 93.6 per cent of known building damage, suggesting that geological, as opposed to meteorological hazards, have been relatively unimportant – at least in the period since 1900
- Just 20 out of the 1,200 twentieth century events - six floods, five bushfire days, four tropical cyclones, three thunderstorms and two earthquakes - contributed 50 per cent of the total building damage
- Despite the wealth of data, deciding which part of Australia is the most hazardous is not simple. Similarly, determining which hazard will be the most important in the next few decades is equally difficult

Professor Blong is one of the leading natural hazards experts in Australia, with more than 30 years research into volcanic, earthquake, flood and landslide hazards and their consequences in the Asia-Pacific region.



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Professor Blong commented:

“Integrated risk assessment is extremely important for gaining a full understanding of the range of perils and their likely risks that a country could face. It is suboptimal to look at the risk of one peril at a time. It doesn’t make sense to charge premium for a house for the one in 500 year earthquake if no premium is charged for the same house when it is flooded on average every 100 years.”

Annual insured property losses vary dramatically from year to year but have averaged nearly AUD 500 million in current dollars over the last 35 years.

‘Natural Hazards Risk Assessment: An Australian Perspective’ is the latest report in the ‘Issues in Risk Science’ series produced by the Benfield Hazard Research Centre and targeted at the re/insurance community. The series aims to increase awareness of the latest academic risk and hazard research among the risk professions.

The report is online at www.benfieldhrc.org.

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Notes to Editors:

About Benfield Hazard Research Centre:

With close to 60 researchers and practitioners, Benfield Hazard Research Centre is Europe’s leading multidisciplinary academic hazard research centre. BHRC comprises three groups: Geological Hazards, Meteorological Hazards & Seasonal Forecasting, and Disaster Studies & Management. The Centre is based at University College London, one of the world’s leading universities and, along with Oxford and Cambridge, one of the UK’s top three multi-faculty teaching and research institutions.

BHRC is sponsored by Benfield, the world’s leading independent reinsurance intermediary and risk advisory business. Benfield’s customers include many of the world’s major insurance and reinsurance companies as well as Government entities and global corporations. Benfield employs over 1,700 people based in over 30 locations worldwide. www.benfieldgroup.com

About Risk Frontiers:

Risk Frontiers (formerly the Natural Hazards Research Centre) is regarded as a world leader in quantitative natural hazards risk assessment and risk management. Risk Frontiers, based at Sydney’s Macquarie University, is a not-for-profit research organization sponsored by Benfield, Aon, Guy Carpenter, QBE Insurance, IAG, Promina, RACQ Insurance, Suncorp, Swiss Re, and Employers Re.
www.es.mq.edu.au/NHRC

About Professor Russell Blong:

Emeritus Professor Russell Blong retired in July 2003 as founding Director of Risk Frontiers at Macquarie University, Australia. In February 2004 Russell came out of retirement to join Benfield, where he is based at the company's office in Sydney. He has published ten books and edited volumes and more than 200 research papers. He is a member of the New Zealand Foundation for Science, Research and Technology Natural Hazards Panel and Immediate Past President of the International Society for the Prevention and Mitigation of Natural Hazards (the Natural Hazards Society).