

# Foreword

By Dr Neil Williams PSM; CEO, Geoscience Australia

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*Dr Neil Williams, Chief Executive Officer, Geoscience Australia.*

Australia has suffered overwhelming loss and heartbreak through the impact of the recent Victorian bushfire tragedy. This event, the worst natural disaster ever experienced in Australia, again challenges all involved in emergency management to redouble efforts to improve the future safety of Australian communities by reducing disaster risk and increasing disaster resilience.

To be successful, we will need to do work on all aspects of natural disasters to better understand how they develop and how best to lessen their impact. To help achieve this, we need reliable and valid information on hazards, society, infrastructure and the environment. Using this information we can develop an evidence-base of the risks that we face and therefore target our management of risk.

Most hazard events cannot be averted, but their consequences can be minimised by implementing mitigation strategies and reducing the potential impacts to those communities that are most at risk.

As part of its extensive work on all-hazard risk research, Geoscience Australia monitors and assesses earth-surface processes which pose a risk to Australia. We gather data and develop tools for use by governments and other authorities to help them make Australia as safe as possible from natural and human-caused hazards.

Proactive risk assessment steps against hazards include:

- Recognising areas with the greatest hazard potential;
- Measuring the likelihood of various hazard events that could occur in these priority areas;
- Modelling the impact of these events and estimating potential losses to communities; and
- Making consistent information on risk, and risk assessment tools, easily available to risk managers in government and industry.

Geoscience Australia develops models and innovative approaches with the help of our expert partner organisations EMA, the Bureau of Meteorology, CSIRO and State and Territory governments to assess potential losses to Australian communities from a range of sudden impact natural hazards including earthquakes; landslides; floods; tsunamis; severe winds; tropical cyclones; severe storms and bushfires.

This innovative approach to natural hazard management will soon be implemented internationally following the announcement from Prime Minister Kevin Rudd of a joint Australian/Indonesian Facility for Disaster Reduction to be established in Jakarta. This AusAID project will see Geoscience Australia working closely with the Indonesian Government to share our knowledge of risk and impact analysis to create a sustained, self-reliant approach to community safety from natural hazards.

The November 2008 special edition of AJEM gave many examples of methods that are used to produce risk assessment tools and information. This second special edition presents state of the art applications of these approaches by emergency managers, planners and technical specialists in risk management projects to achieve long-term risk reduction.

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