

# Risk Research and Earth Monitoring Fact Sheet



## OBJECTIVE

Sustain and safeguard Australian communities and infrastructure through the production of new geoscientific information and knowledge from a national Earth monitoring network, and through the assessment of risks posed by natural, environmental and technological hazards to Australian communities and associated infrastructure.

## SIGNIFICANCE FOR AUSTRALIA

Earthquakes, floods, severe winds, bushfires, and landslides are natural hazards that claim many lives and account for more than \$1.1 billion damage annually. Effects of global warming may cause increases in the frequency and magnitude of meteorological hazards such as tropical cyclones and floods. Terrorist attacks and natural hazards, such as tsunamis and earthquakes, have the potential to result in significant loss of life and property in Australia.

## DEPARTMENTAL ROLE AND CURRENT ACHIEVEMENTS

Hazards in general cannot be averted, but their impact can be reduced by identifying potential risks and vulnerable areas, and by adopting mitigation measures such as building codes and land use regulations. Geoscience Australia monitors and assesses natural and technological hazards and the risks they pose to Australia and the region.

Geoscience Australia gathers fundamental geodetic and geophysical data, monitors earthquakes, nuclear explosions, and geomagnetic storms, and provides advice on the tsunamigenic potential of earthquakes. In conjunction with other agencies, an Australian Tsunami Warning System is being established. It will contribute significantly to regional warning systems in the Indian and Pacific Oceans. Geoscience Australia also monitors subtle changes in the shape of the Earth and provides advice on the implications for precise location and mapping in the Australian region.

Geoscience Australia undertakes complementary risk assessment research and develops decision support tools including spatial information for use in assessing and mitigating risks from natural and technological hazards. An all-hazards risk assessment methodology has been developed and applied to several urban areas in support of the government-funded Disaster Mitigation Australia Package and the Critical Infrastructure Protection Modelling and Analysis Program. These initiatives assist national, state and local governments as well as private industry in developing disaster mitigation plans, responding to emergencies, and mitigating critical infrastructure vulnerabilities.

## TARGETS FOR 2007-08

- With CSIRO and the Attorney-General's Department, implement an operational critical infrastructure modelling and analysis capability in support of national initiatives in critical infrastructure protection
- Continue developing decision-support tools and databases for natural hazard risk assessment in support of the Disaster Mitigation Australia Package now administered by the Attorney-General's Department, focussing on earthquake, tsunami and severe wind hazards
- Assist the Department of Climate Change in developing a first-pass assessment of the coastal vulnerability to climate change
- Strengthen Australia's seismic and geodetic monitoring capability in the South East Asian region to better understand the region's tectonics and seismic hazards
- With the Bureau of Meteorology, Emergency Management Australia, Department of Foreign Affairs and Trade, and AusAID, implement the third year of the Australian Government's Australian Tsunami Warning System initiative.



**Australian Government**  
**Geoscience Australia**

## CONTACT

**Dr Chris Pigram, Chief**  
**Geospatial & Earth Monitoring Division**  
**Geoscience Australia**

Email: [chris.pigram@ga.gov.au](mailto:chris.pigram@ga.gov.au) Tel: +61 2 6249 9397

Web: [www.ga.gov.au](http://www.ga.gov.au)