

Disaster Data Collection

Post-Disaster Data Collection

A natural disaster event can stretch emergency personnel to breaking point. However, at the very time that the community is most pre-occupied with response, important but perishable information on the event is available. The information helps us to understand how and why the event impacted on the community, and systematic efforts are needed to collect the data.

Risk managers need to base their decisions on accurate and reliable forecasting of the future. Organisations such as Geoscience Australia provide risk assessments to assist this decision making. Post-disaster data collection is essential to test risk assessment models against what has happened in real events.

Data collection technologies can also assist *response* teams by transmitting near real-time spatial information between field personnel and coordinating centres.

Geoscience Australia has developed the capability to collect post-disaster information. The technologies have been tested in Dubbo, NSW, following a windstorm that caused approximately \$50 million damage in January 2001, as seen in Figure 1. A high level of damage to commercial buildings was reported to wind engineers who will consider changes to the Australian standard for structural wind loadings. Data collection equipment also accompanied GA personnel to the scene of the devastating January, 2001, Gujarat, India, earthquake, as seen in Figure 2.



Figure 1. Wind damage - Yarrandale High school Photo courtesy of Mr Wilson - Site Foreman



Figure 2. Damage from the January 2001 Gujarat earthquake

Pre-disaster information capture is important for natural disaster mitigation. The community can make effective plans to reduce risk only if it has knowledge of the assets that are at risk. Most of the essential demographic, building and infrastructure information has a spatial context and so this information is best collected by GIS/GPS support tools.

Geoscience Australia uses data collection technologies in its natural hazard risk assessments. In the Newcastle and Lake Macquarie earthquake risk assessment project, detailed information on structural type and usage for a sample of more than 6,000 individual buildings was collected by field teams. The data were used to assess the risk of economic loss through building damage to the Newcastle and Lake Macquarie communities from earthquake.



- palm PC
- GPS positioning linked to database
- customised GIS databases
- **technologies available** include near real time telemetry to/from coordinating centre, and web data entry from the field

