Recent earthquake disasters in Indonesia, such as the 2006 Yogyakarta (Mw 6.3, 5749 deaths) and the 2009 Padang (Mw 7.5, over 1100 deaths) earthquakes, together with a long history of earthquake occurrence suggesting the potential for even more lethal disasters in the future, highlight an urgent need for measures to reduce earthquake fatalities. Better land use planning, emergency management training based on credible earthquake scenarios, and improved building codes are all effective means for reducing earthquake fatalities, but these all need to be underpinned by a reliable earthquake hazard assessment. Moreover, a robust and sustainable process for periodically updating such assessments is needed in order to keep pace with developments in Indonesian geology and seismology that are rapidly improving the level of knowledge of earthquake occurrence and the propagation of seismic waves.

In recognition of this need, the Australia-Indonesia Facility for Disaster Reduction, a partnership between AusAID and Indonesia’s National Agency for Disaster Management (BNPB), has initiated a 4-year project designed to strengthen the Government of Indonesia’s capacity to reliably assess earthquake hazard. This project is a collaboration of Australian institutions including Geoscience Australia and the Australian National University, with Indonesian government agencies and universities including the Agency for Meteorology, Climatology and Geophysics, the Geological Agency, the Indonesian Institute of Sciences, and Bandung Institute of Technology. The project will support research by Australian and Indonesian scientists and students to study: (1) sources of earthquakes through geological studies of active faults, (2) earthquake ground motion through the seismological analysis of strong motion data and, (3) probabilistic seismic hazard assessment (PSHA).

This presentation will summarize progress in the project to date, including the acquisition of LiDAR data over the Cimandiri and Lembang faults in west Java, a preliminary work towards developing a catalogue of strong motion data, and PSHA for central Java.