

Uncovering exposure to natural hazards

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As Australian communities recover from one natural hazard and prepare for the next one, there are important questions to ask about which areas are most exposed to possible loss of life, landscape and property.

We need to understand which of our people, buildings, business, public facilities, infrastructure, agricultural areas and natural landscapes are exposed to *any* natural hazard, as well as human-induced disasters and structural failures. A clearer understanding of this exposure is a highly valuable starting point for any sector that is required to prepare for and respond to hazards, both in the response and warnings phases, but also in mitigation.

The Australian Exposure Information Platform (AEIP) is an online platform that provides an accessible snapshot of all assets within a specified area, in the form of a customised ‘exposure report’.

It was designed through a partnership between the Bushfire and Natural Hazards CRC, Geoscience Australia, University of Melbourne, University of Canberra and emergency management organisations.

Chief of Division at Geoscience Australia, Alison Rose, explained the significance of the platform to the Royal Commission into National Natural Disaster Arrangements in early June.

‘The AEIP is an all-hazards capability, which provides exposure reports on demand at any scale,’ Ms Rose told commissioners.

Lead CRC researcher, Mark Dunford from Geoscience Australia, says that these exposure reports provide a new, quick way of accessing important information that can be used for mitigation and operational decision-making for any hazard at any time within any specified area. This is essential information that helps improve safety, save lives and reduce damage to property and natural landscapes, and can be used not only by emergency management, but also researchers, town planners or anyone else who’s interested.

‘For the first time, everyone has direct 24/7 access to nationally consistent exposure information anywhere in Australia, through a user-driven, on-demand interface,’ Mr Dunford said. ‘They can readily utilise exposure information as a key piece of intel for critical pre-planning, or on-the-fly scenario event assessments.’

The reports created by the AEIP draw on a wealth of data sources out of the National Exposure Information System database, including local, state, federal and industry data; ABS demographics; environmental exposure data from the Department of Agriculture, Water and the Environment; and agriculture, business, building and institution data.

The AEIP is already being widely used across Australia, including during our most recent devastating natural hazards.

‘During the 2019–20 bushfire period, 14,400 reports were generated. On an average monthly basis, we have around 400 reports that are generated, and we currently have 244 users across 58 different entities that use the tool,’ Ms Rose told the Royal Commission.

Half of these entities are emergency management agencies, with local government authorities and electricity providers among a group of regular users.

The AEIP has proven to be invaluable in a crisis, when demand for critical information is extremely high. By speeding up the automatic delivery of vital exposure information, its nationally consistent and easily accessible format ensures that information and decision-making can be calculated and coordinated across Australia.

Access the Australian Exposure Information Platform at aeip.ga.gov.au.