

UNHARMED – Considering futures of risk

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TWO DRIVING PRINCIPLES

Prevention is better than cure

“Better to build a fence at the top of a cliff, than park an ambulance at the bottom”

Helen Clark 2015 Sendai

Tomorrow’s risk is built today

“Tomorrow’s risk is being built today. We must therefore move away from risk assessments that show risk at a single point in the present and move instead towards risk assessments that can guide decision makers towards a resilient future.”

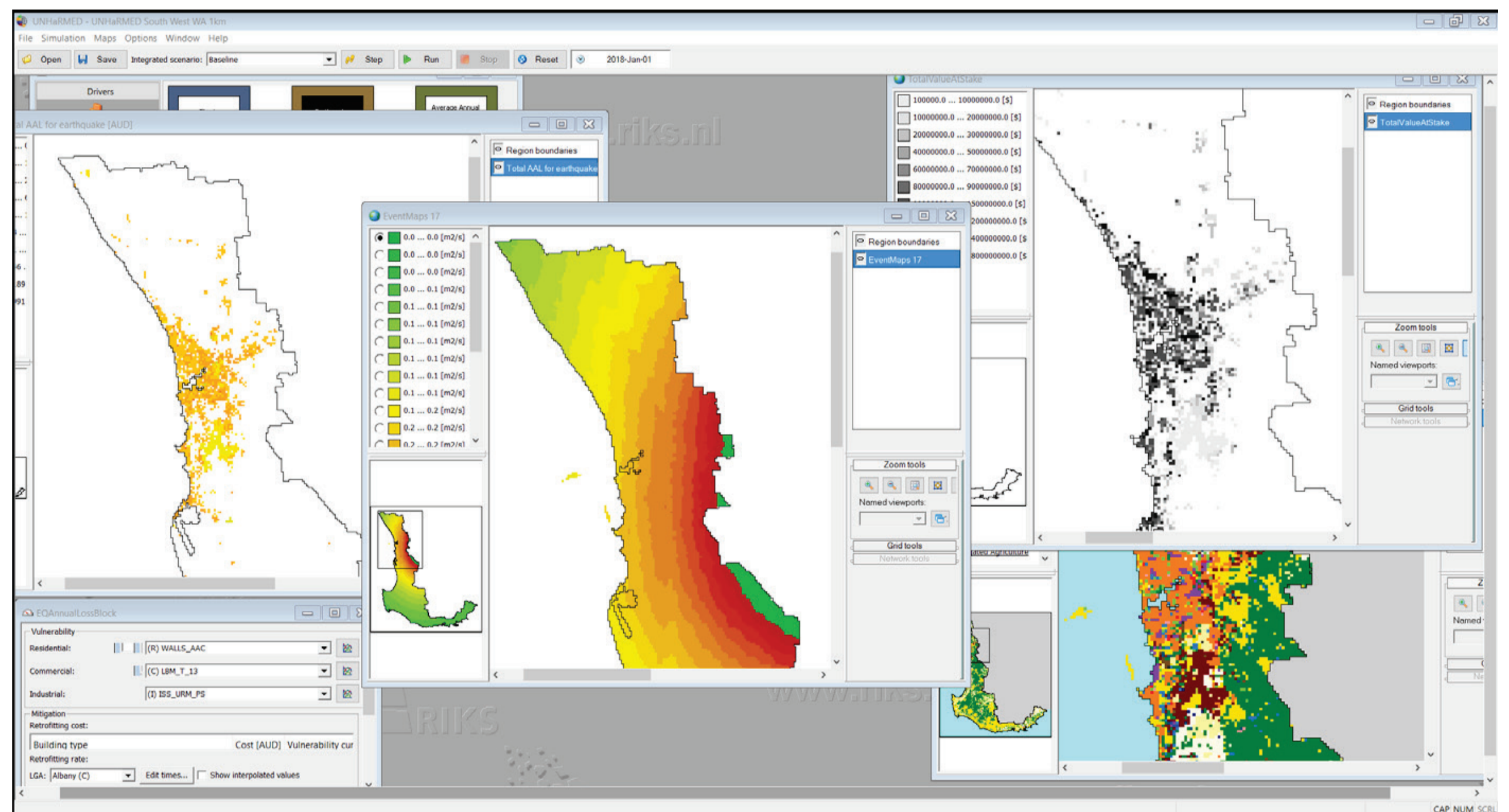
Global Facility for Disaster Reduction and Recovery (2016)

DECISION SUPPORT SYSTEM - UNHARMED

UNHARMED (Unified Natural Hazard Risk Mitigation Exploratory Decision support system) is an interactive modelling platform helping to assist decision making, focussed on:

- Improving thinking about risk into the future;
- Better managing and reducing risk;
- Positioning organisations and communities to best achieve this.

UNHARMED has been applied to four regions: Greater Adelaide, Greater and Peri-urban Melbourne, Tasmania, and South-west Western Australia.

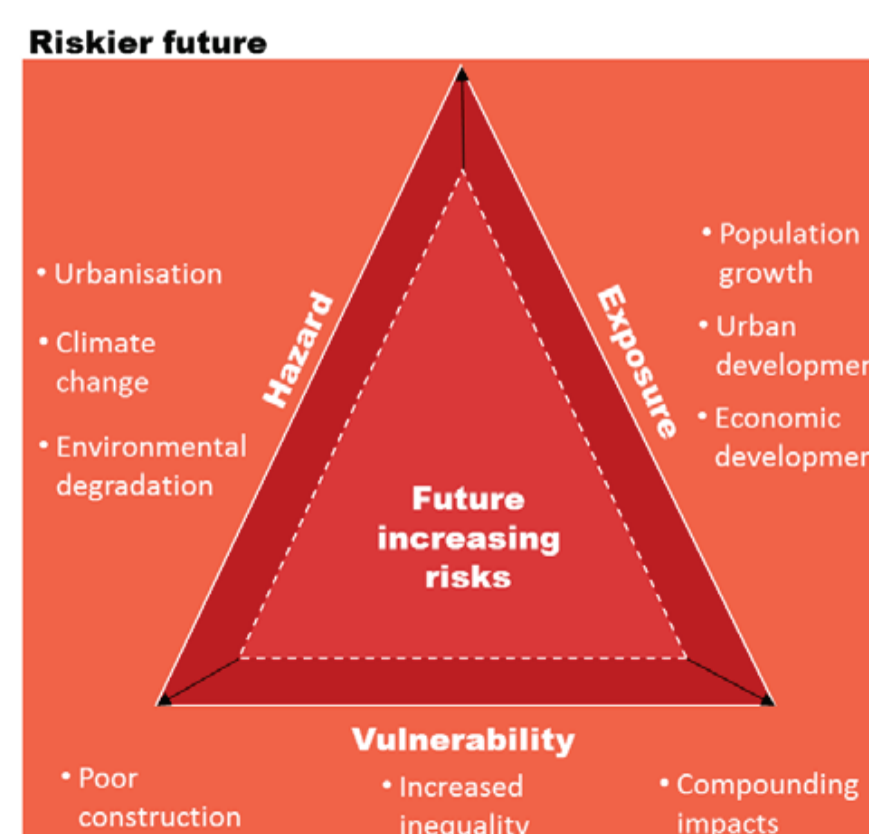


RISK MODELLING FOR STRATEGIC RISK MANAGEMENT

The figure above shows an overview of risk modelling for the Western Australia application. Shown here are maps of asset values, the magnitude of a particular earthquake hazard event and the calculated average annual loss. UNHARMED models average annual loss for each of the hazards and uses these values to compare across scenarios considering how loss varies due to external drivers and implemented risk reduction options.

The UNHARMED software considers

- Long term dynamics & uncertainties
- Asset exposure
- Hazard intensity and likelihood
- Building vulnerability
- Multiple hazards
 - Riverine flooding
 - Earthquake
 - Coastal inundation
 - Bushfire
- Risk reduction options
 - Land use planning
 - Structural measures
 - Land management
 - Education & awareness
 - Building codes



UNDERSTANDING RISK DYNAMICS

The underlying premise of UNHARMED is to consider how futures can become less risky. The figure to the left highlights the elements that contribute to current risk, and how they can change to create a riskier future. Alternatively, implementing policy options across elements of hazard, exposure and vulnerability can reduce future disaster risks.