



bushfire&natural  
**HAZARDS**CRC

# SPATIAL DECISION SUPPORT SYSTEM FOR NATURAL HAZARD RISK REDUCTION POLICY ASSESSMENT AND PLANNING

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Australian Government  
Department of Industry,  
Innovation and Science

**Business**  
Cooperative Research  
Centres Programme

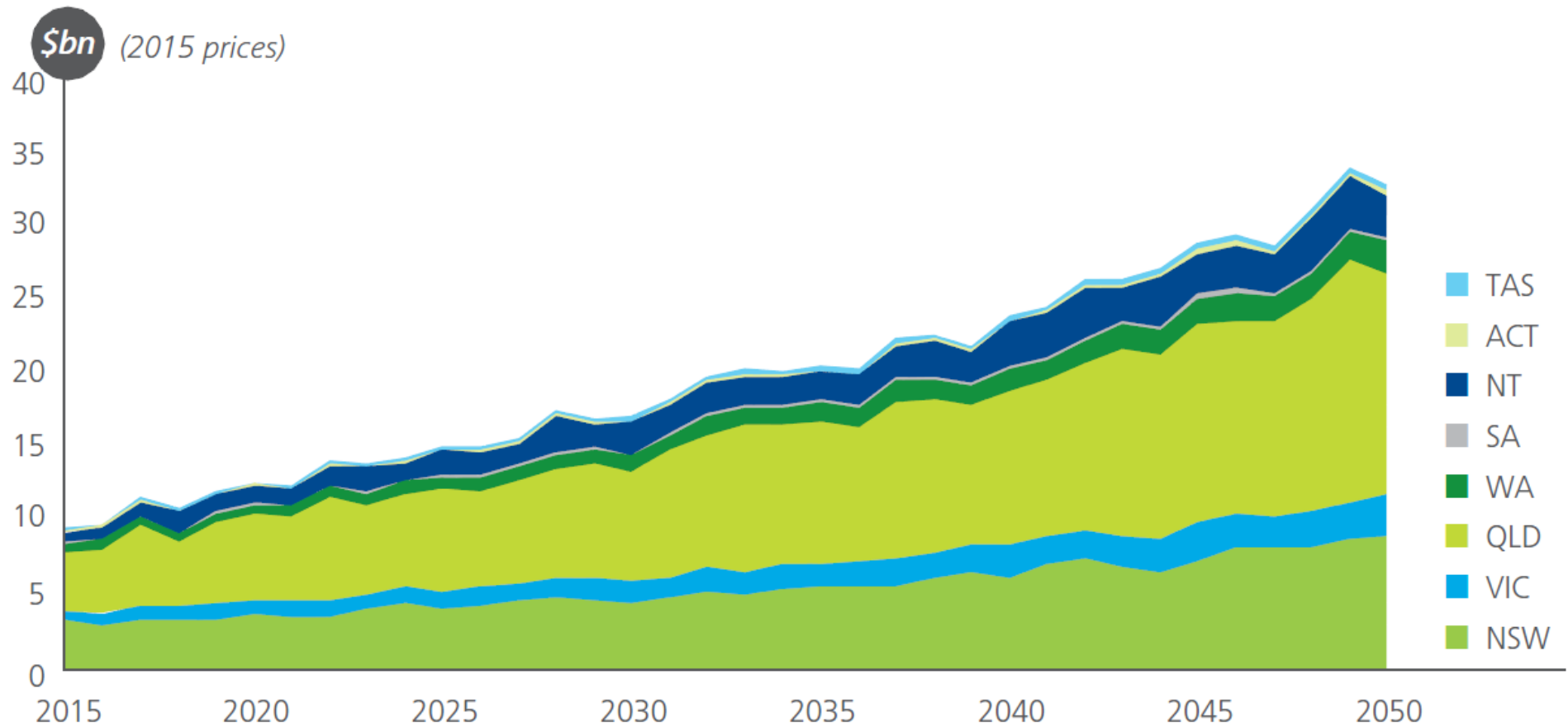


THE UNIVERSITY  
of ADELAIDE



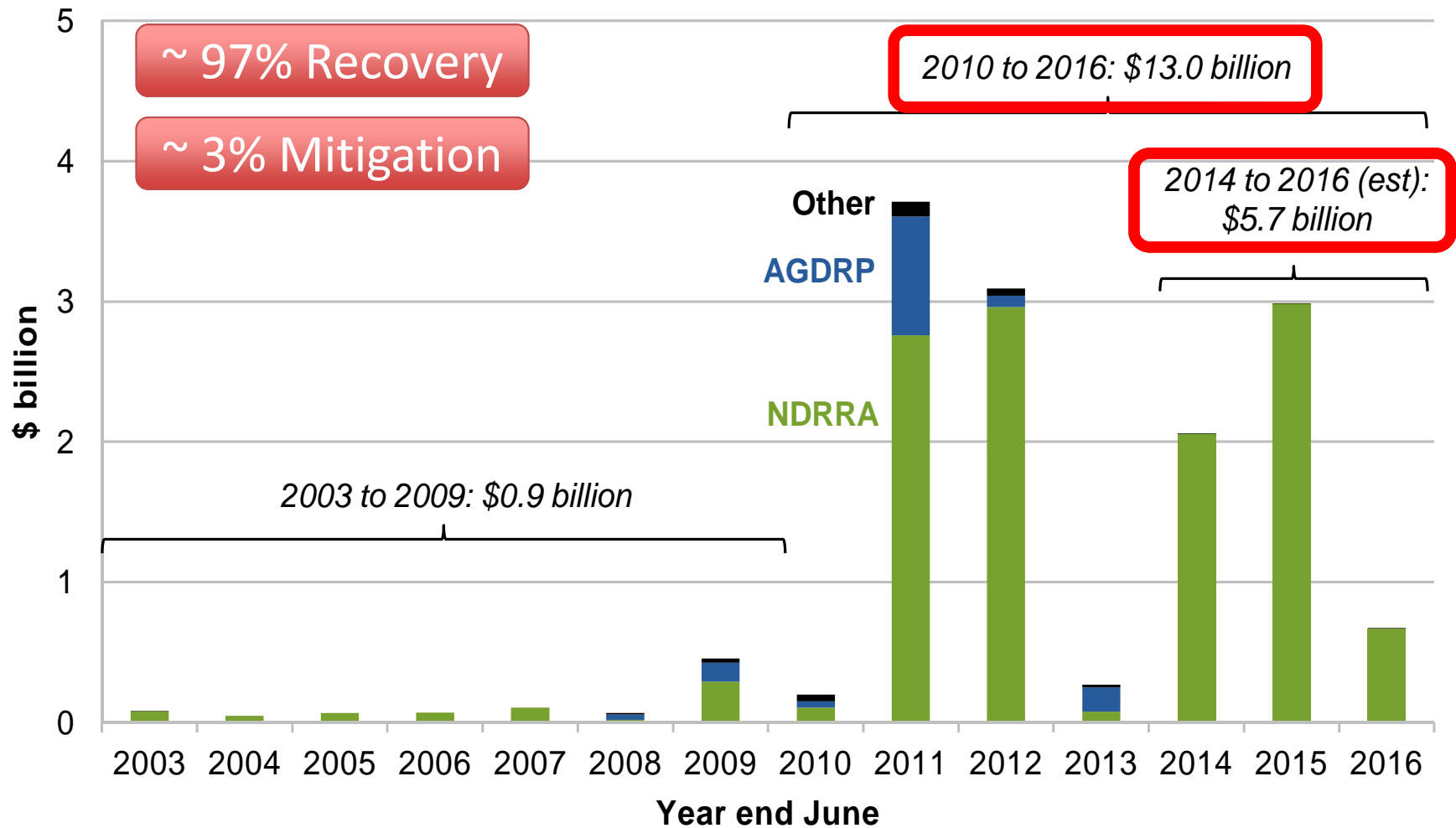
research institute for knowledge systems

# FORECAST ANNUAL COST OF NATURAL HAZARDS



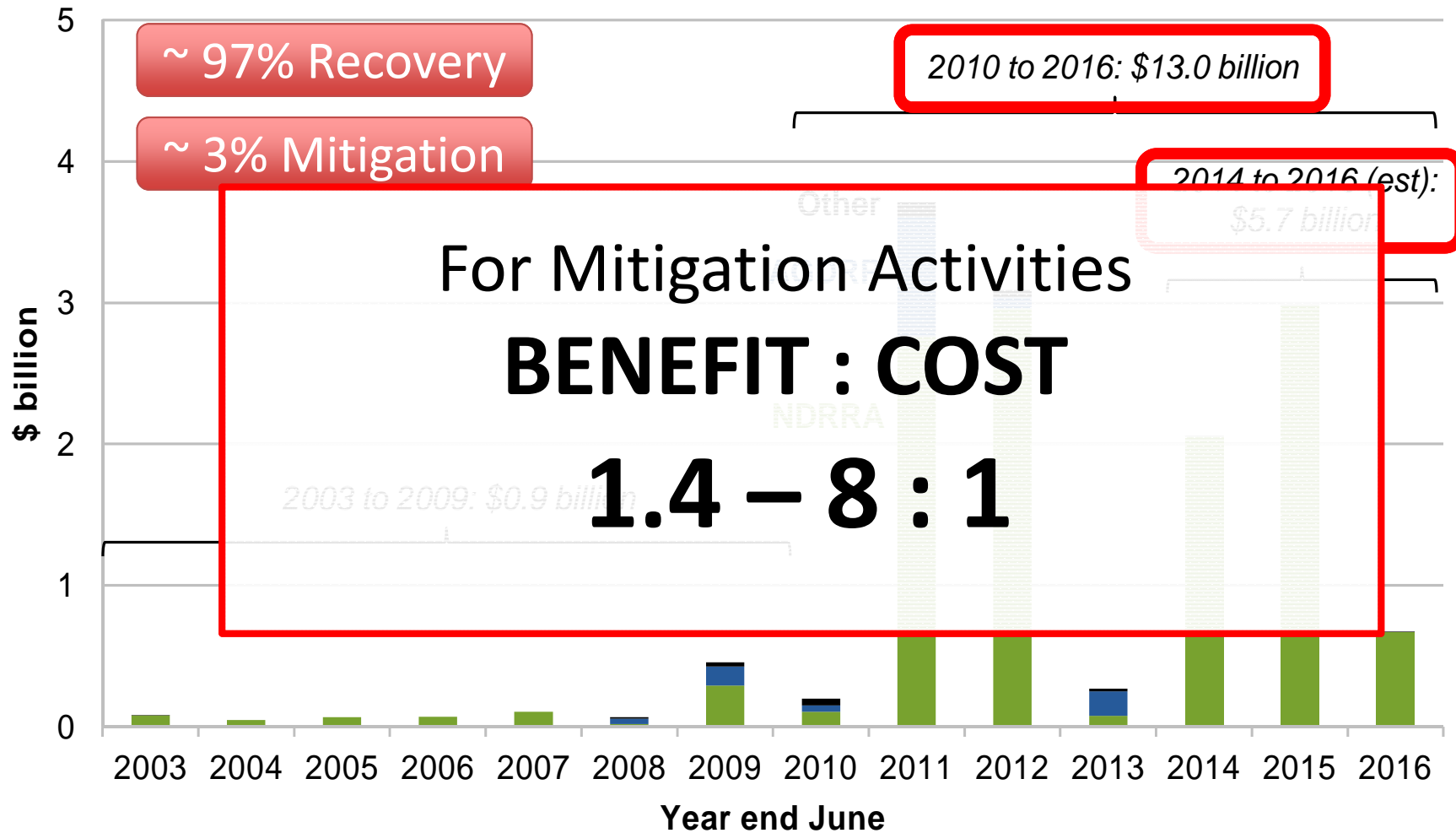
Source: Deloitte Access Economics analysis

# THE MAJORITY OF SPENDING IS ON RECOVERY



(Source: Productivity Commission Draft Report)

# PREVENTION IS BETTER THAN CURE



(Source: Productivity Commission Draft Report)

[bnhcrc.com.au](http://bnhcrc.com.au)



Australian Government  
Productivity Commission

## Natural Disaster Funding Arrangements

Productivity Commission  
Draft Report  
Volume 1

September 2014

*“On balance, total **mitigation expenditure** across all levels of government is more likely to be **below the optimal level** than above it, given the biased incentives towards recovery under current budget treatments and funding arrangements.”*

The Australian Government *“...should **increase annual mitigation expenditure gradually to \$200 million**, distributed to the states and territories on a per capita basis.”*



Australian Government  
Productivity Commission

## Natural Disaster Funding Arrangements

Productivity Commission  
Draft Report  
Volume 1

September 2014

*“Natural disaster risk management is **complex**, and decision makers need to deal with **uncertainty**, **long time frames**, **unquantifiable costs and benefits**, and **stakeholder values and expectations**”*

(Source: Productivity Commission Draft Report)



Australian Government  
Productivity Commission

Natural Disaster Funding

Productivity

## DECISION SUPPORT SYSTEM

Provide a computational framework to assess policy efficacy and aid decision making

*“Natural disaster risk management is complex, and decision makers need to balance multiple time frames, unquantifiable costs and benefits, and societal values and expectations”*

(Source: Productivity Commission Draft Report)

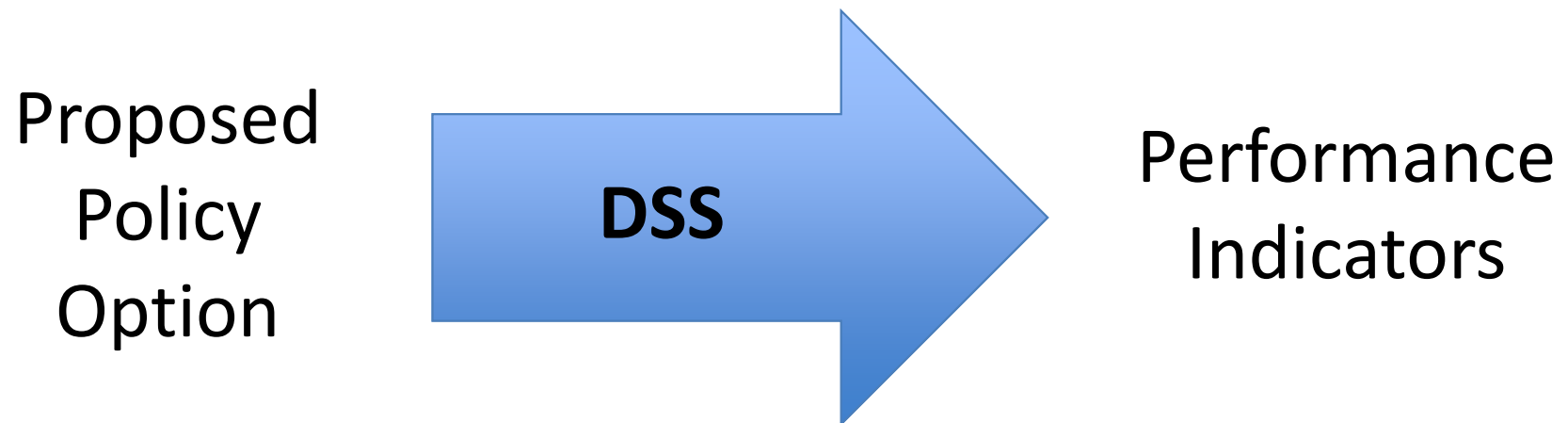
# OVERVIEW

- Decision Support System Framework
  - Model Framework
  - Evaluation Framework
  - Software Framework
- Case-studies
  - Greater Adelaide
  - Greater Peri-Urban Melbourne
  - Tasmania
- Project Phase 2
- Future Opportunities



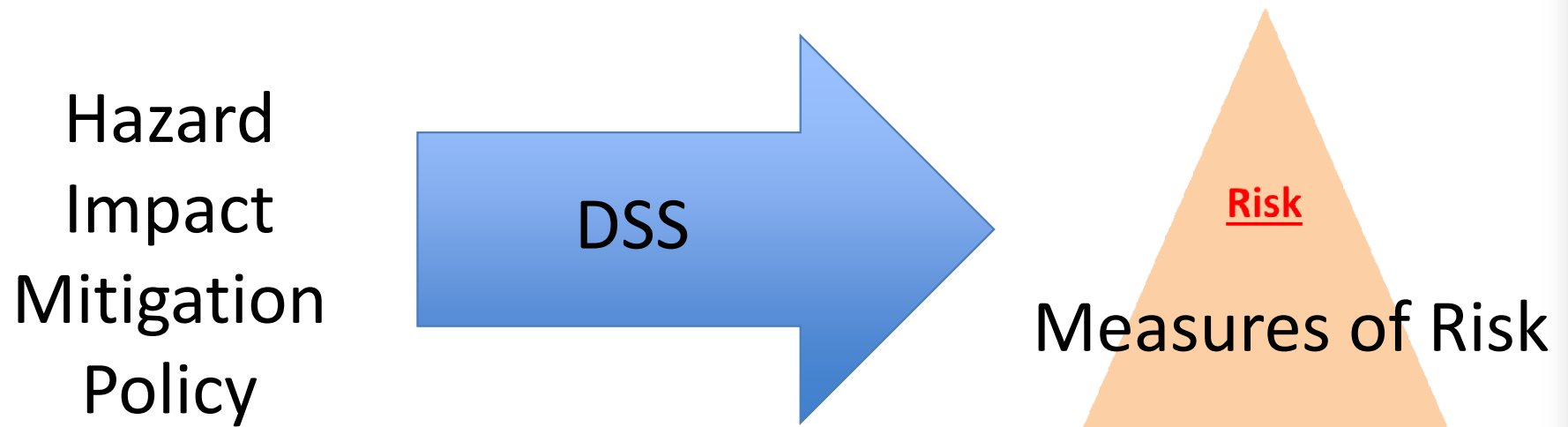
# DECISION SUPPORT SYSTEM FRAMEWORK

A DSS is a software tool that enables the exploration of the impacts of policy decisions



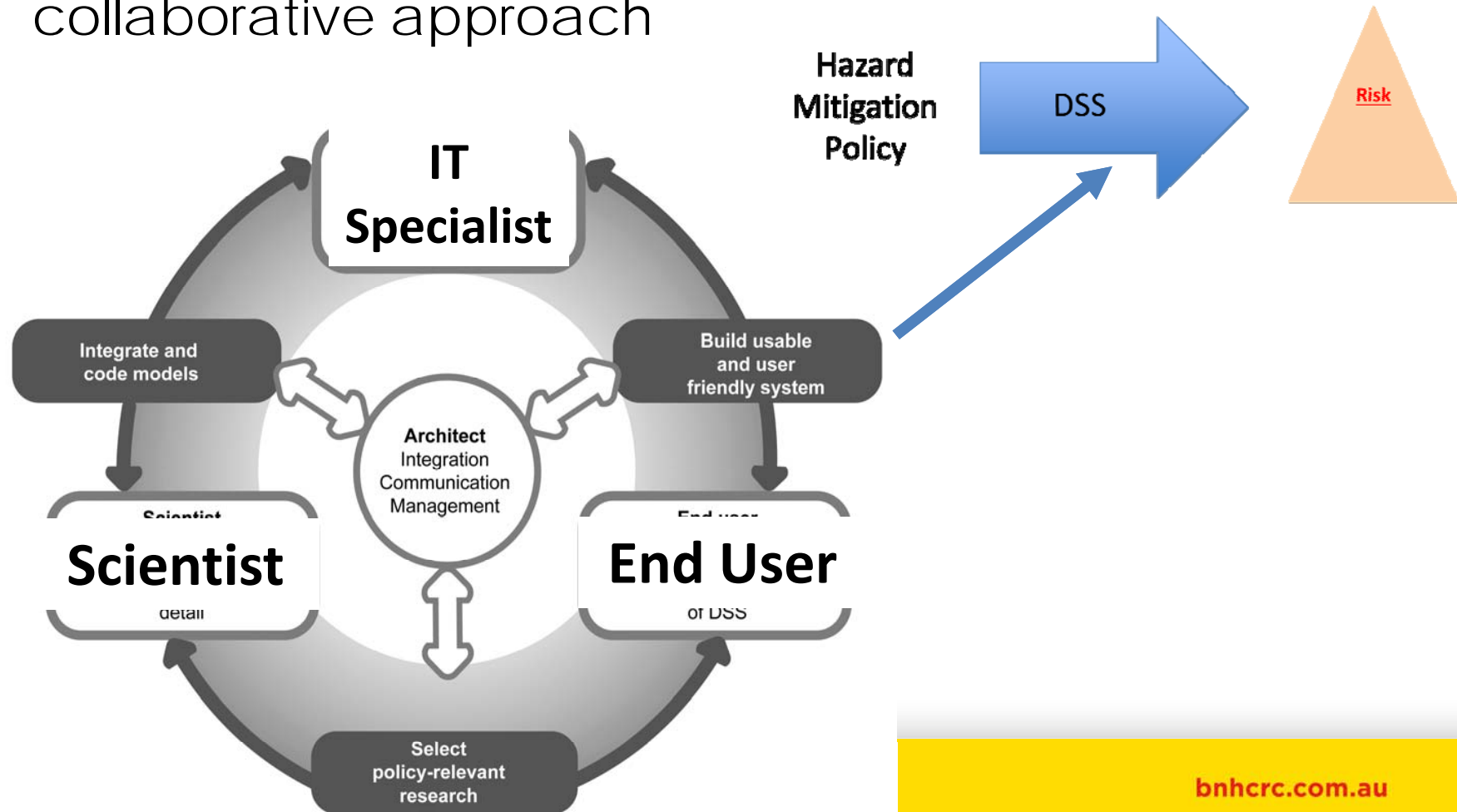
# DECISION SUPPORT SYSTEM FRAMEWORK

A DSS is a software tool that enables the exploration of the impacts of policy decisions

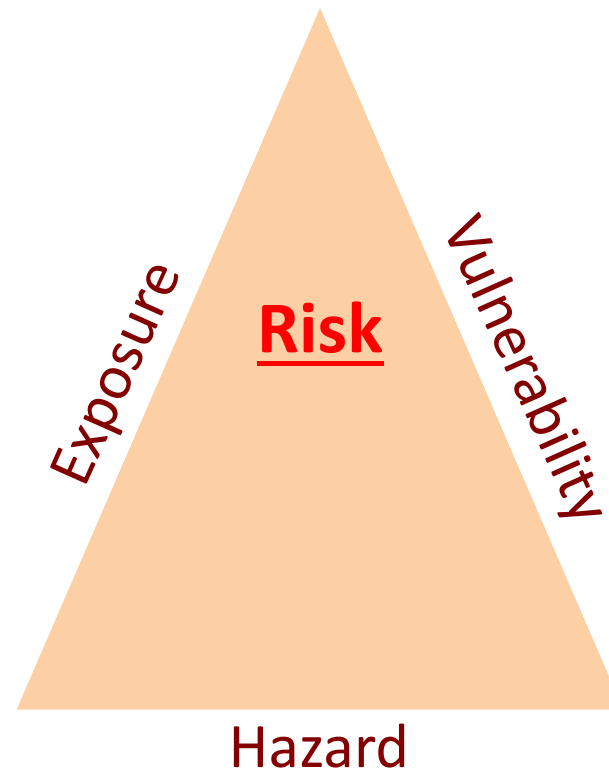


# DECISION SUPPORT SYSTEM FRAMEWORK

Complexity of problem necessitates a collaborative approach

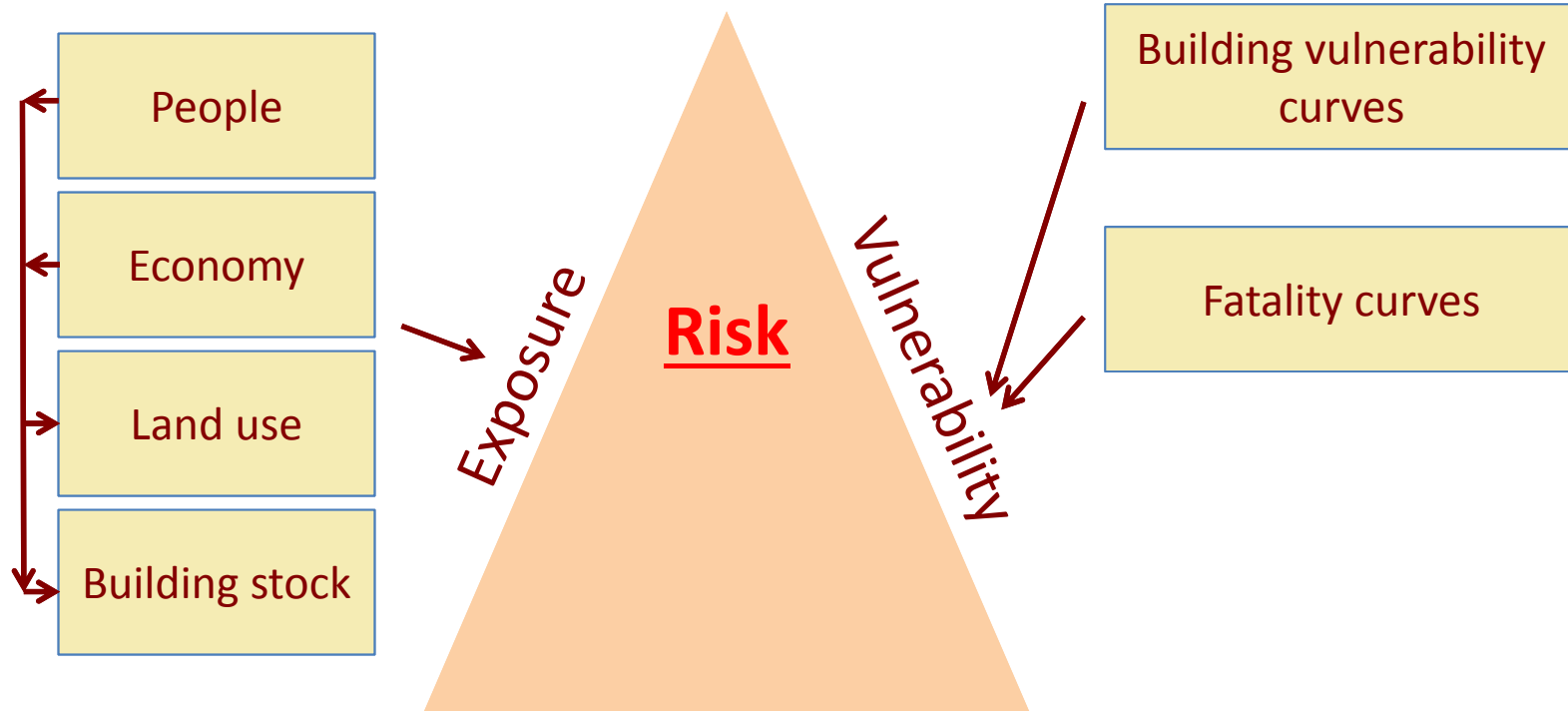


# DECISION SUPPORT SYSTEM FRAMEWORK *MODEL FRAMEWORK*



# DECISION SUPPORT SYSTEM FRAMEWORK

## MODEL FRAMEWORK



Hazard

Hazard Model

Heatwave

Flooding

Bushfire

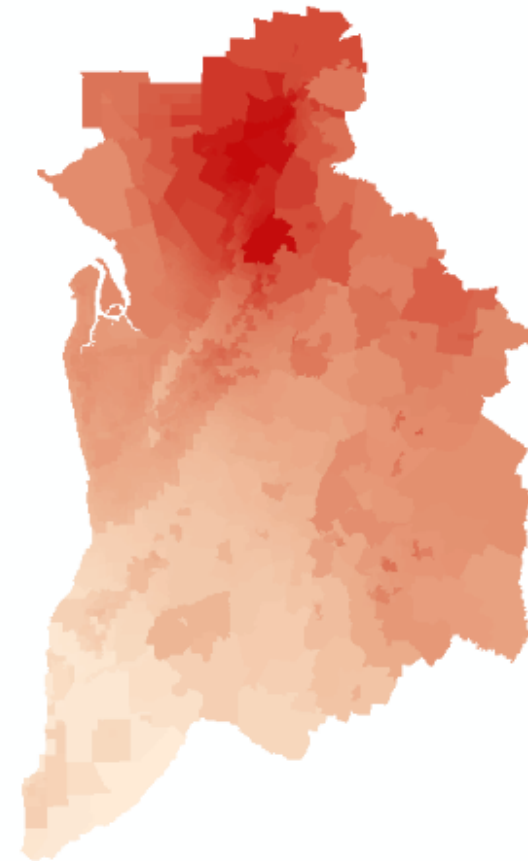
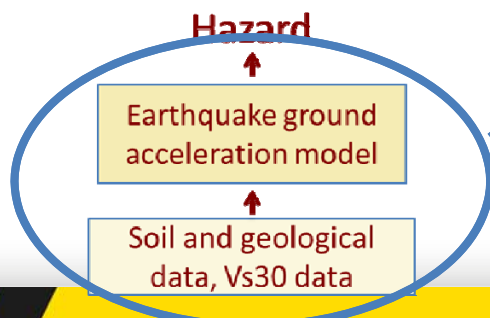
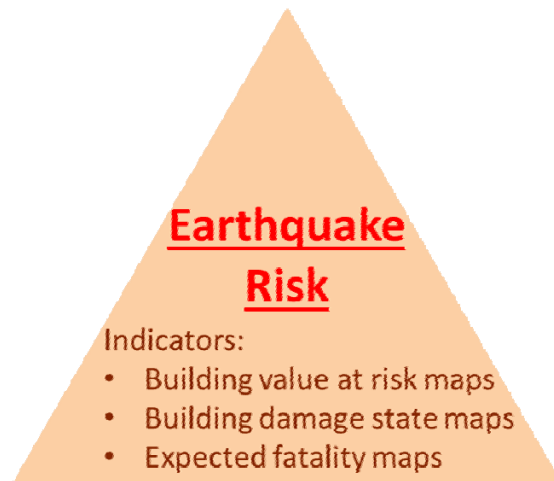
Coastal  
Inundation

Earthquake

# DECISION SUPPORT SYSTEM FRAMEWORK

## *MODEL FRAMEWORK*

Hazard Modelling  
(e.g. earthquake)



# DECISION SUPPORT SYSTEM FRAMEWORK

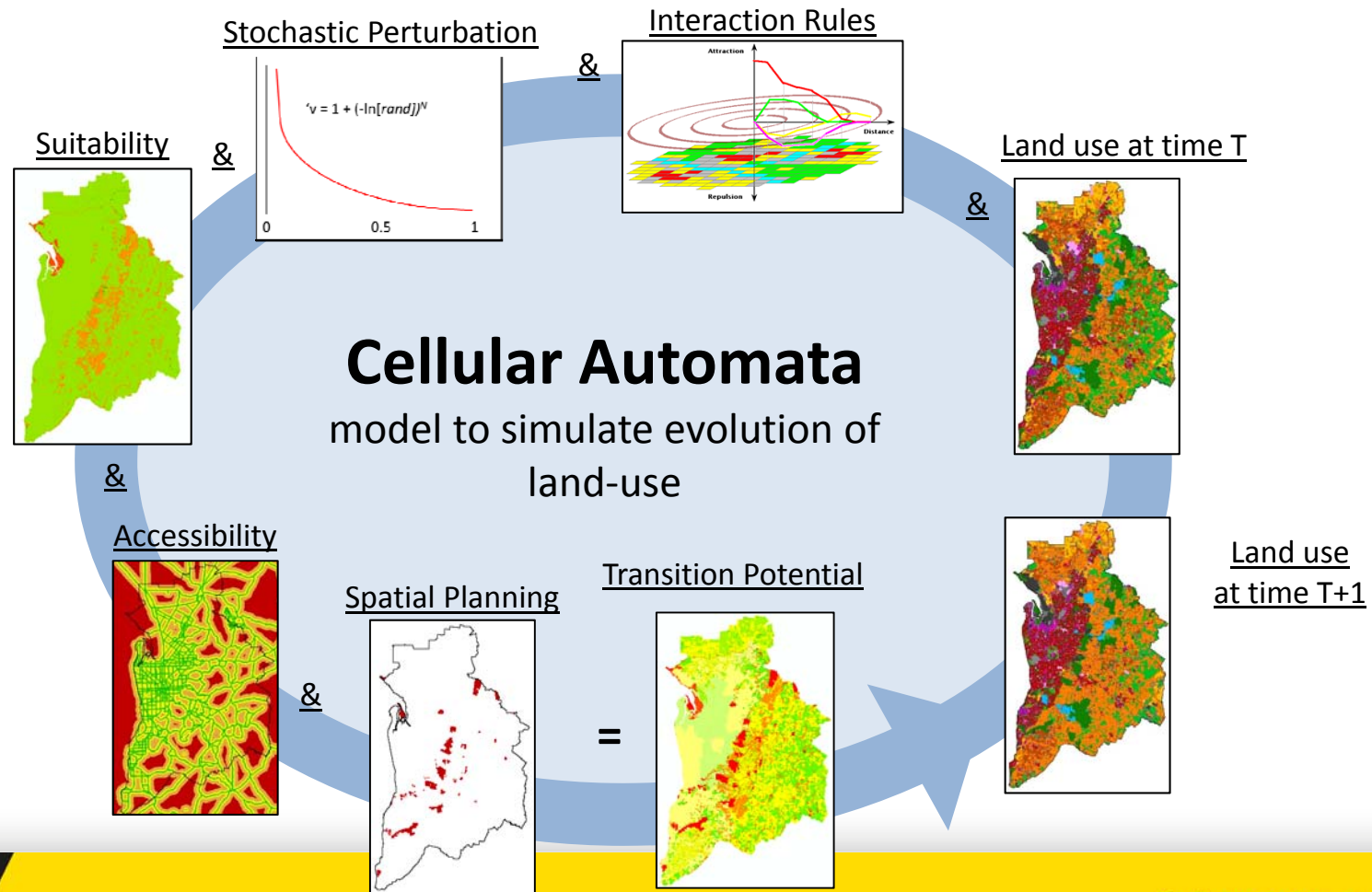
## MODEL FRAMEWORK

Exposure Model: Land use and associated building stock



# DECISION SUPPORT SYSTEM FRAMEWORK MODEL FRAMEWORK

## Exposure Model

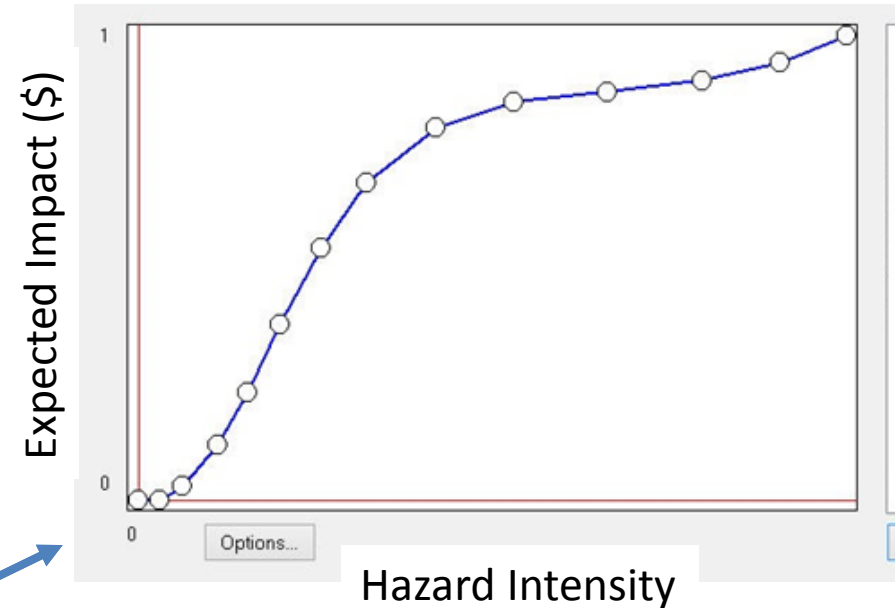
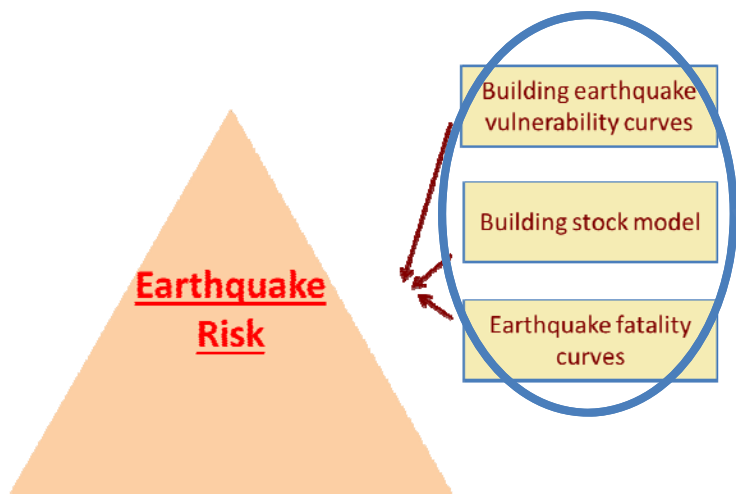


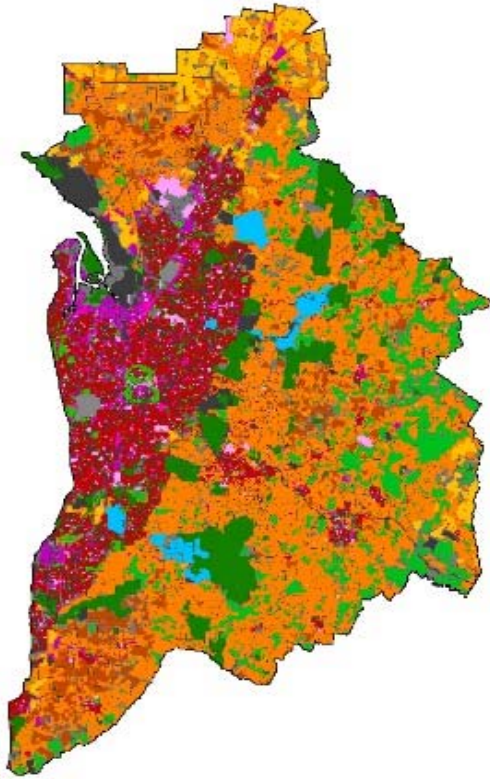


# DECISION SUPPORT SYSTEM FRAMEWORK

## MODEL FRAMEWORK

Vulnerability Modelling  
(Vulnerability Curves)





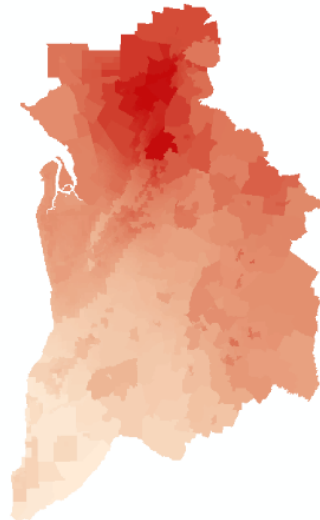
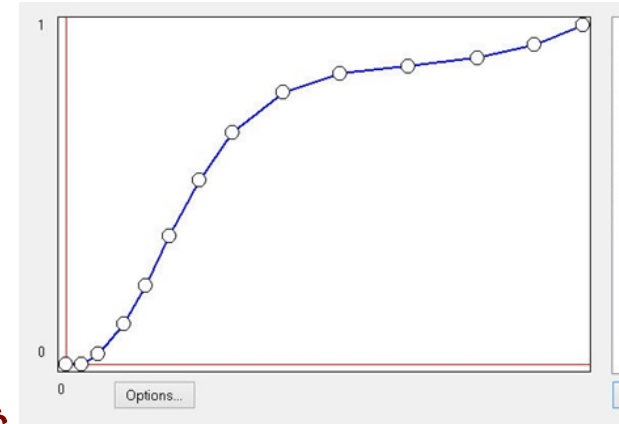
Exposure

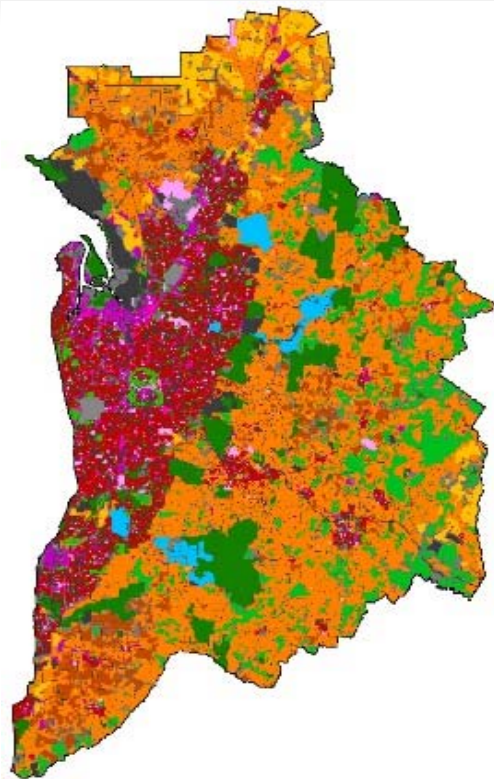
## Earthquake Risk

Vulnerability

Indicators:

- Building value at risk maps
- Building damage state maps
- Expected fatality maps

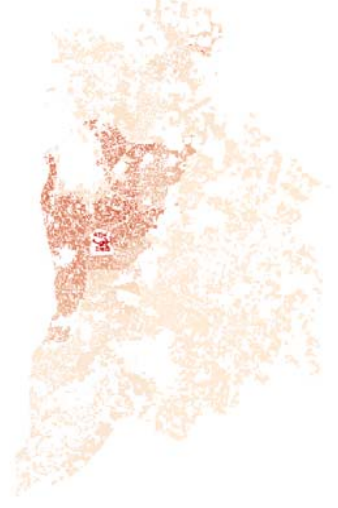




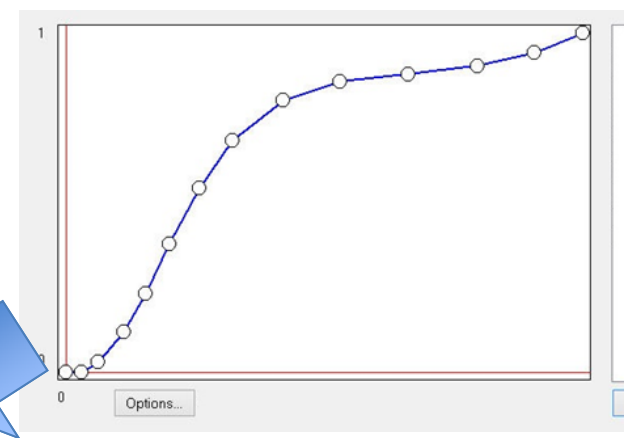
Exposure



Risk



- Indic
- B
  - B
  - E

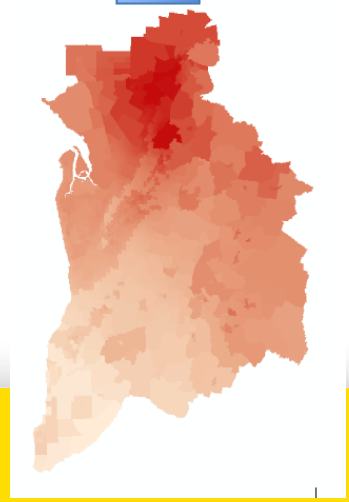


Vulnerability

maps  
e maps  
ps



Hazard



# DECISION SUPPORT SYSTEM FRAMEWORK

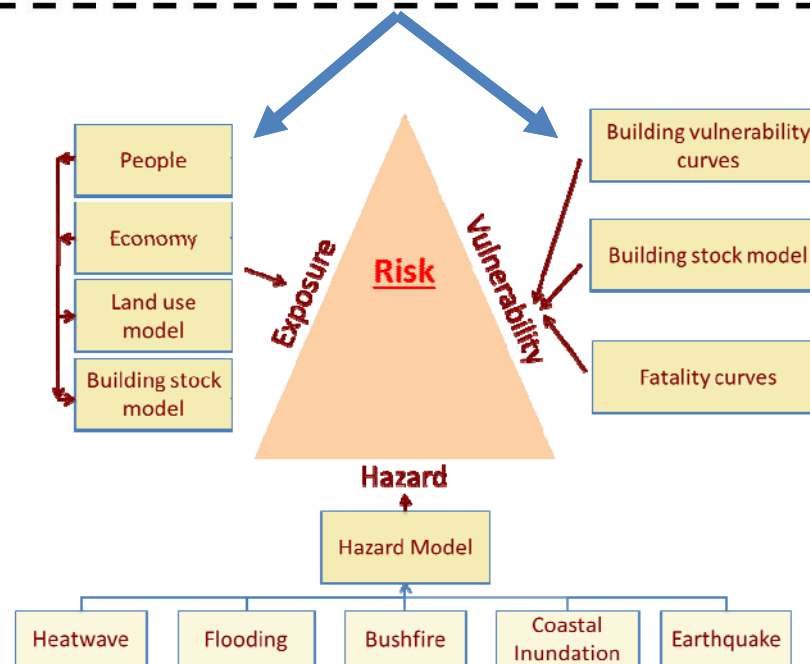
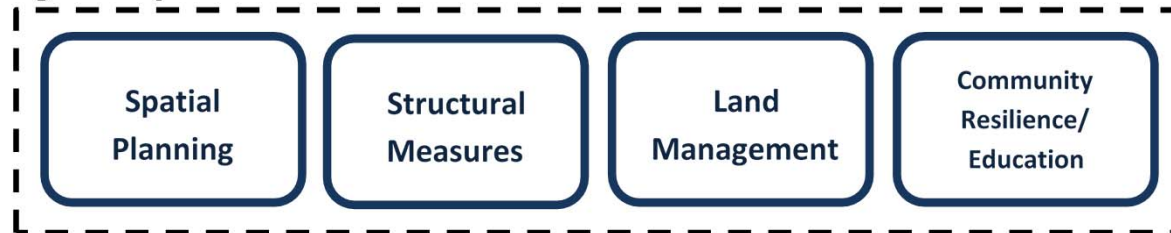
## *MODEL FRAMEWORK:*

More General Array of indicators considered:

- Risk
  - Average annual loss: Map + Table with total per LGA
  - Number of fatalities / casualties: Map + Table with total per LGA
- Cost benefit analysis
  - Cost of mitigation options selected
  - Reduction in average annual loss from a reference base
- Social impacts
  - Side effects of mitigation options, e.g. land use planning impacts on average distance from residential locations to CBD, services and recreation
- Environmental impacts
  - Side effects of mitigation options, e.g. land use planning impacts on total natural area and connectivity of natural area

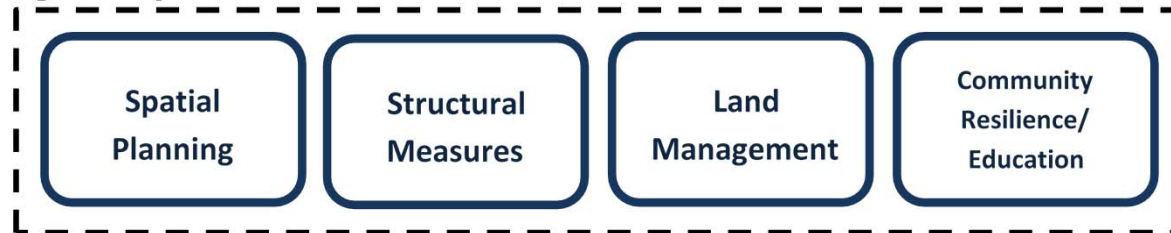
# DECISION SUPPORT SYSTEM FRAMEWORK EVALUATION FRAMEWORK

## Mitigation Options

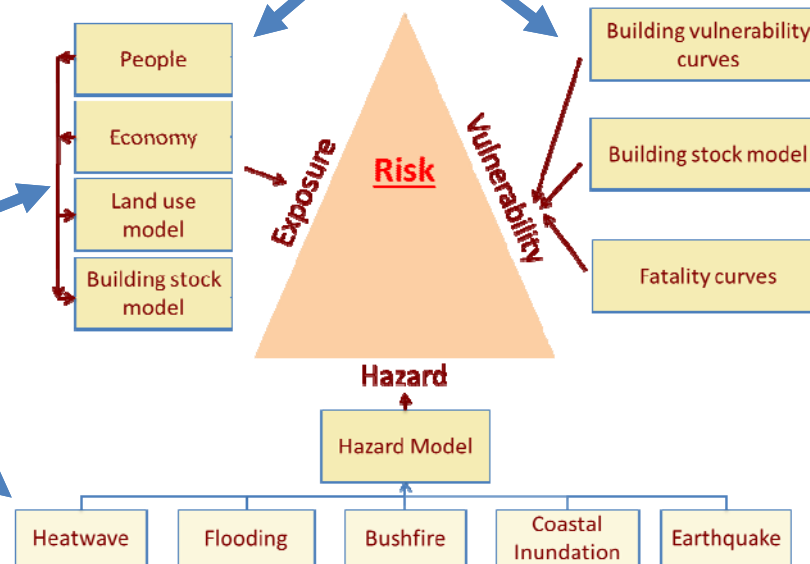
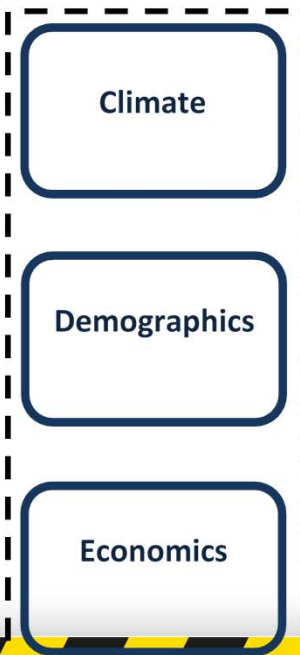


# DECISION SUPPORT SYSTEM FRAMEWORK EVALUATION FRAMEWORK

## Mitigation Options



## External Drivers

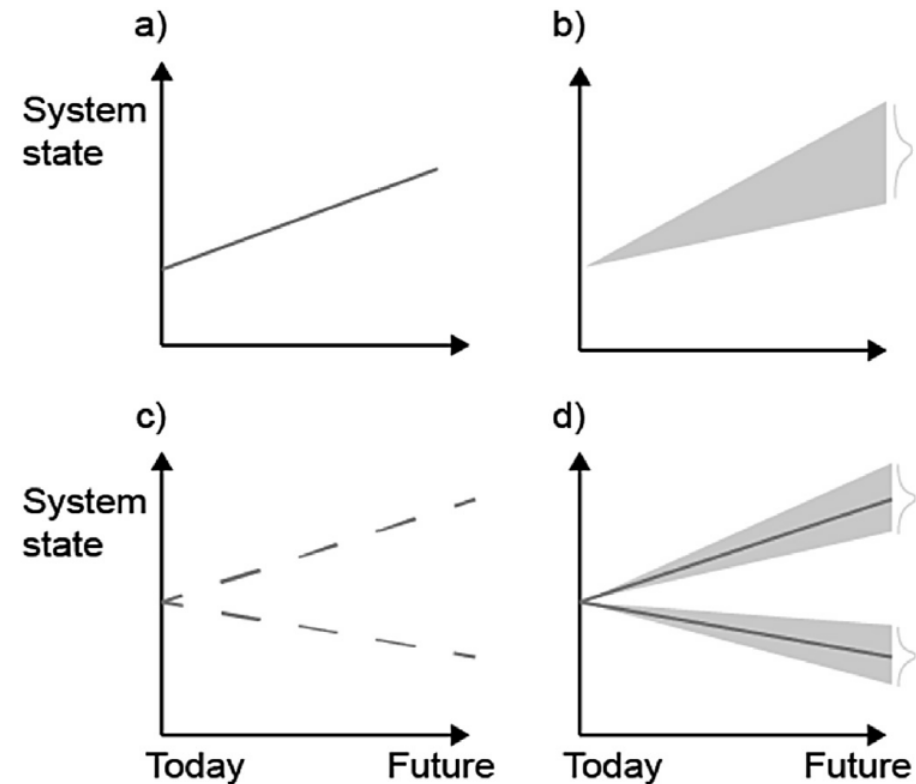


# DECISION SUPPORT SYSTEM FRAMEWORK *EVALUATION FRAMEWORK*

Deep uncertainty in external drivers necessitates an *exploratory scenario* based approach:

*What are plausible futures for the drivers?:*

- Climate
- Demographics
- Economy

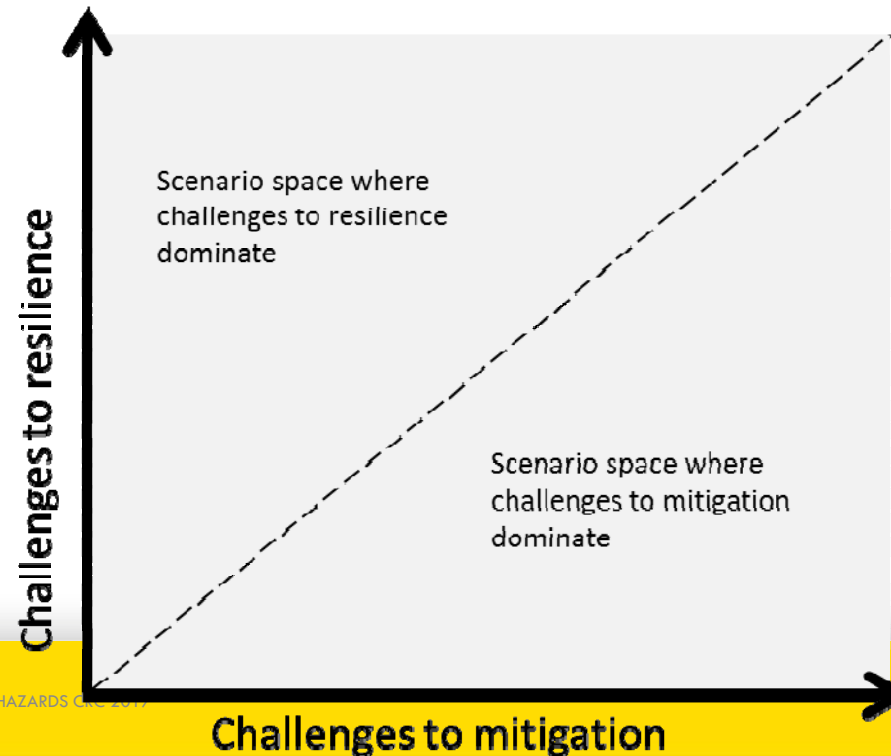


# DECISION SUPPORT SYSTEM FRAMEWORK *EVALUATION FRAMEWORK*

Scenario framing around challenges to policy efficacy

*What driver trends present challenges for:*

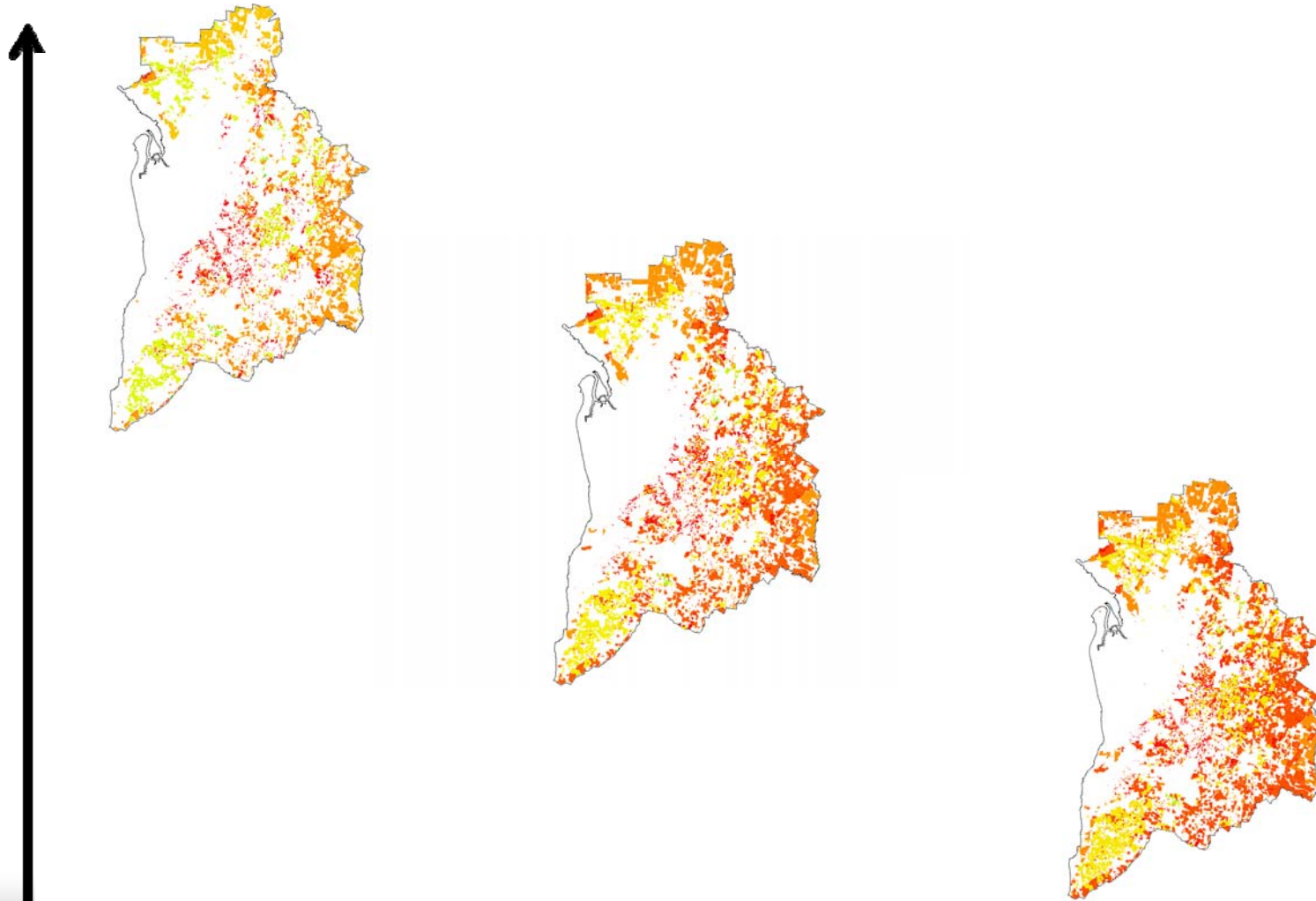
- *Community resilience initiatives*
- *Government mitigation policy interventions*



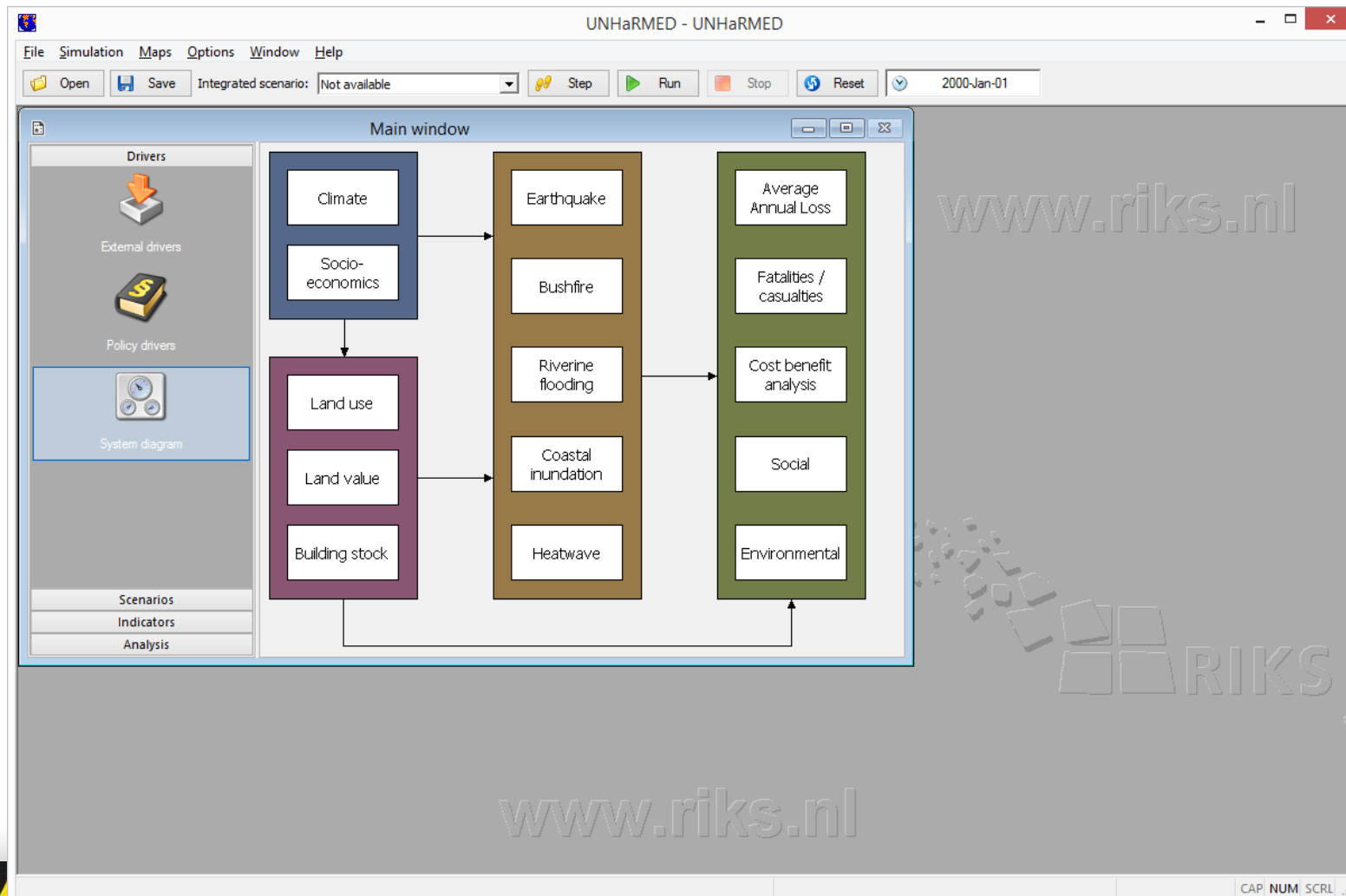


# DECISION SUPPORT SYSTEM FRAMEWORK *EVALUATION FRAMEWORK*

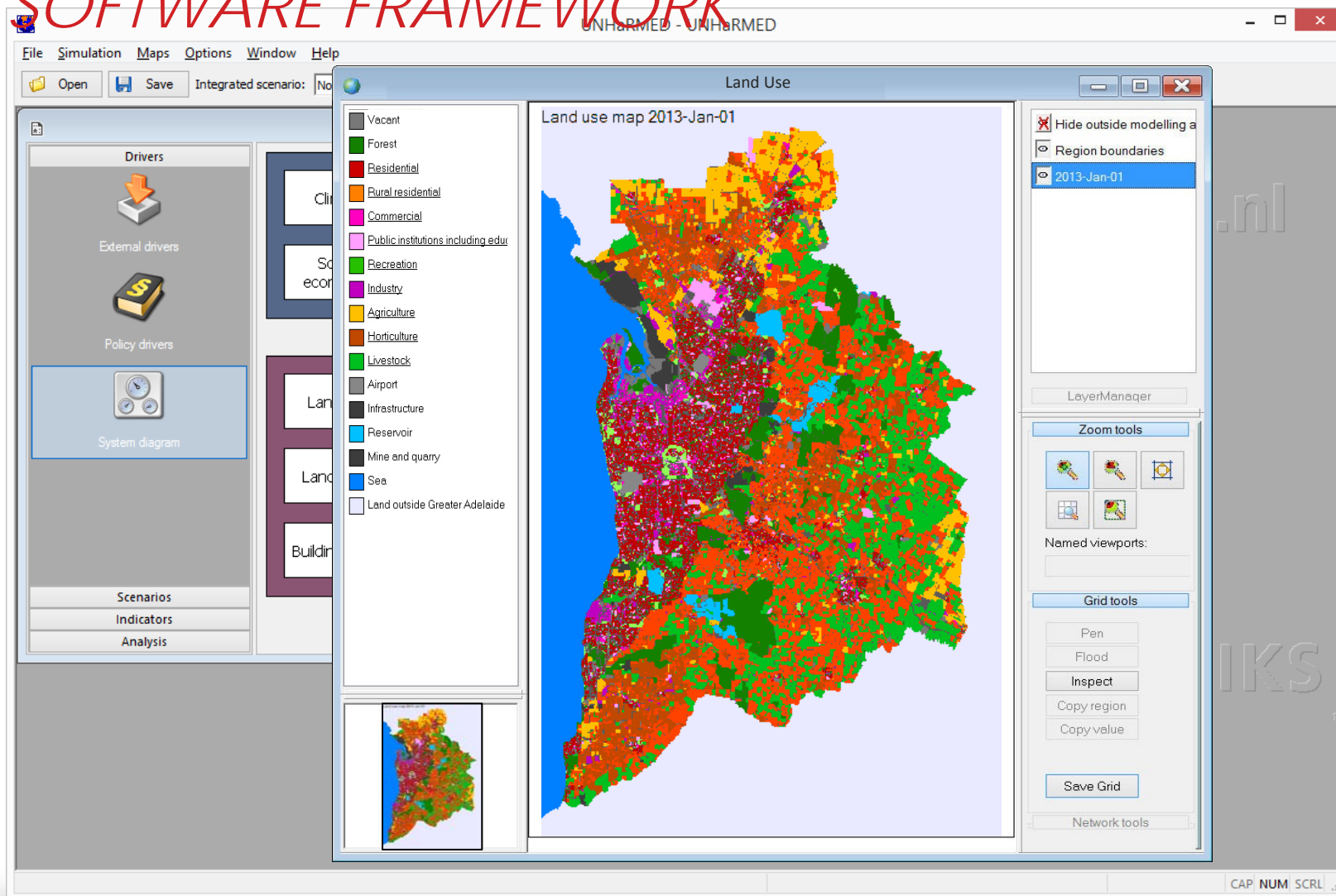
**Future challenges for resilience**

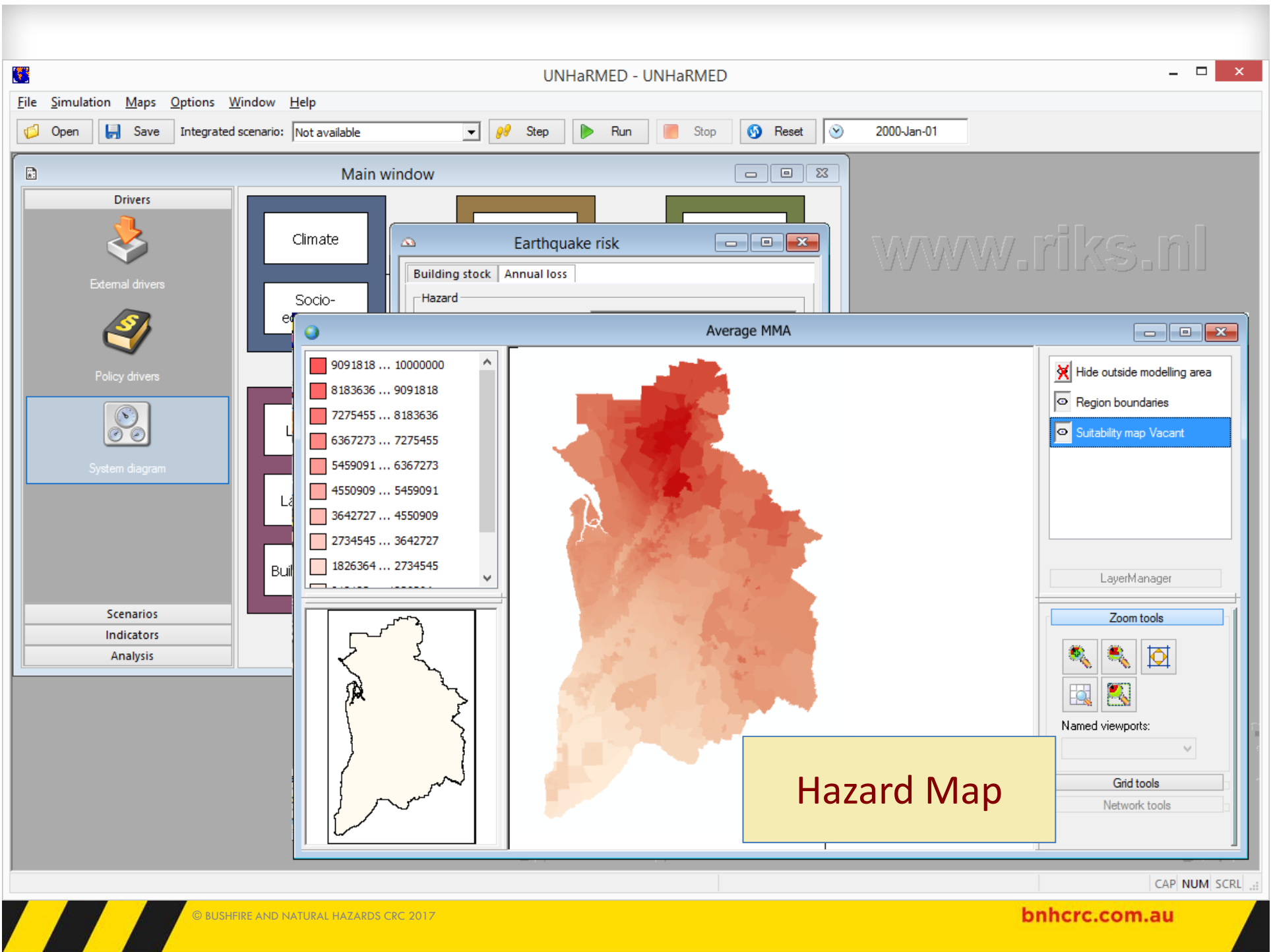


# DECISION SUPPORT SYSTEM FRAMEWORK *SOFTWARE FRAMEWORK*

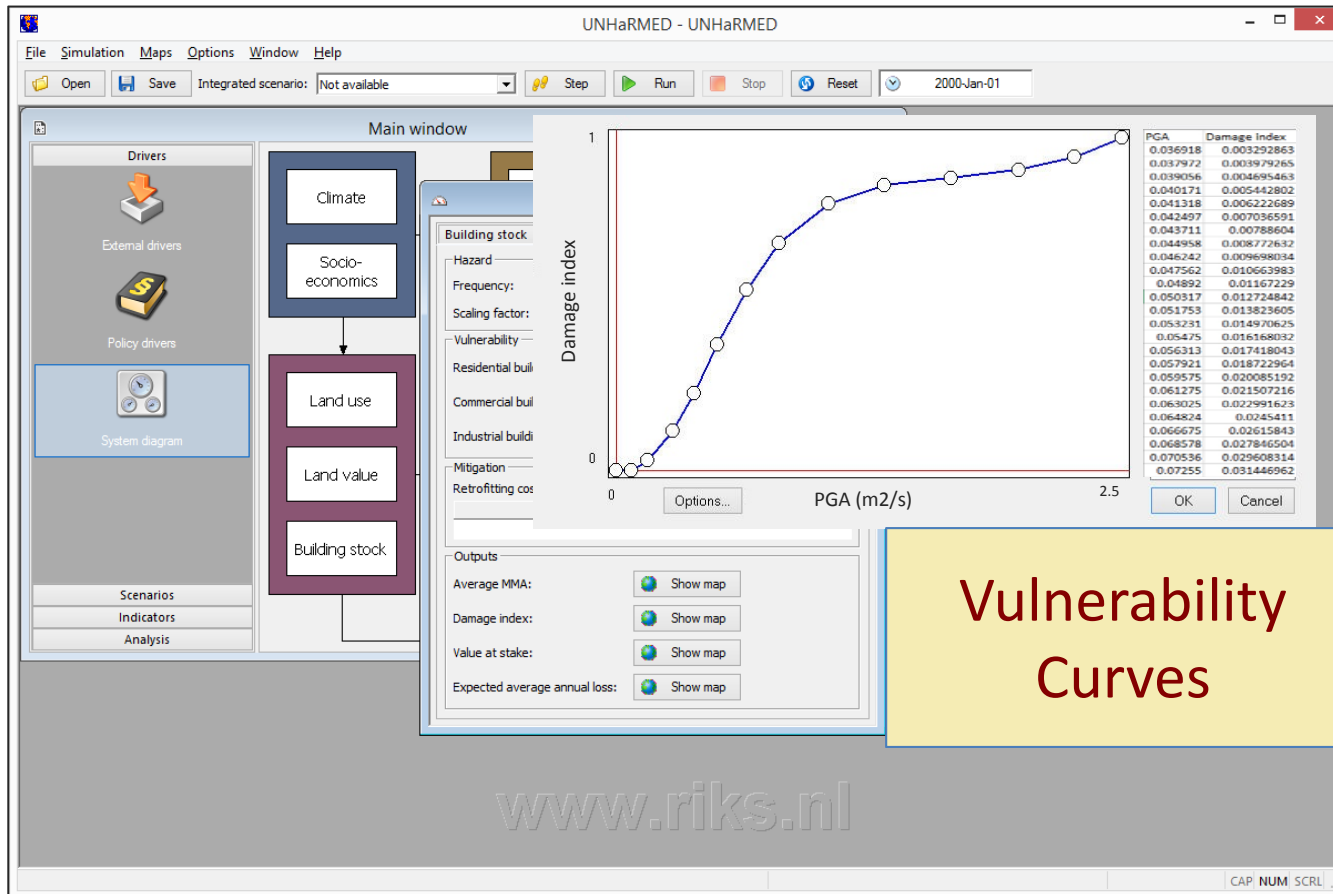


# DECISION SUPPORT SYSTEM FRAMEWORK SOFTWARE FRAMEWORK

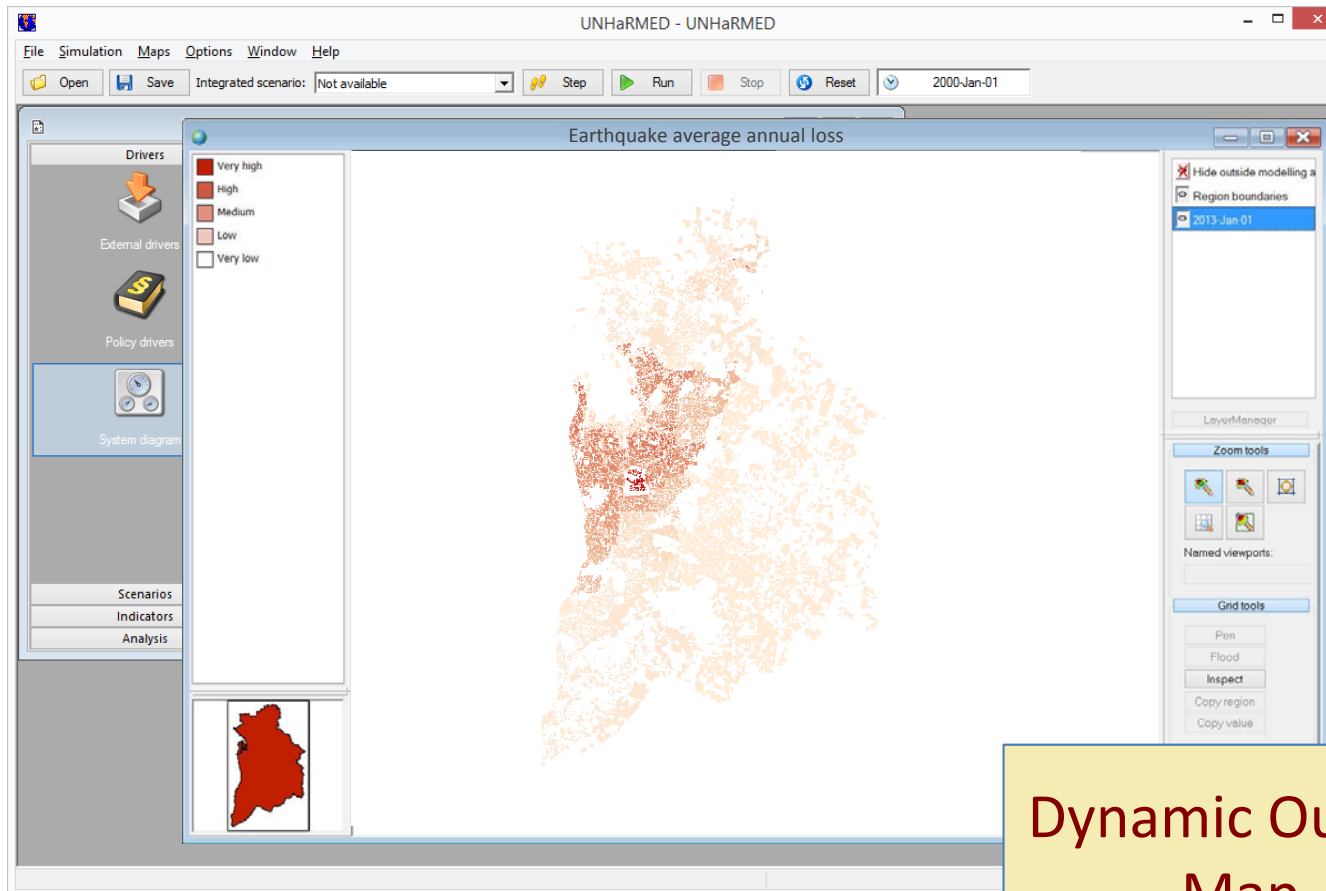




# EARTHQUAKE



# EARTHQUAKE



Dynamic Output Map

# SCENARIO ANALYSIS

The image displays a software interface for scenario analysis. The main window, titled "Main window", features a sidebar on the left with buttons for "Drivers", "Scenarios", "Scenario manager" (with a film reel icon), "Indicators", and "Analysis". The main area shows the "Integrated scenario" dropdown set to "Combination structural and planning", with "New..." and "Delete" buttons. Below this is a "Scenario details" section with a text area for the "Integrated scenario description". At the bottom of the main window, there are dropdowns for "Population trend sub-scenario" (Reference), "Economic trend sub-scenario" (Reference), "sub-scenario" (Reference), "Zoning sub-scenario" (Stricter plan), and "Infrastructure sub-scenario" (Investment).

A "Create new integrated scenario" dialog box is open in the foreground. It contains the following fields and options:

- Integrated scenario name: Exogenous changes mitigated by infrastructure
- Integrated scenario description: (empty text area)
- Population trend sub-scenario: Ageing population
- Economic trend sub-scenario: Reference
- Climate sub-scenario: Higher frequency of severe weather
- Zoning sub-scenario: Reference
- Infrastructure sub-scenario: Investment in structural options, Reference

Buttons for "OK" and "Cancel" are located at the bottom right of the dialog box.

# CASE STUDIES

## *APPROACH*

- Phase 1 – Scoping
  - Region and extent of DSS
  - Key Hazards
  - Identification of mitigation options
  - Indicators of Risk
- Phase 2 – Qualitative scenario development
  - Key drivers of change and major uncertainties
  - Factors effecting resilience of mitigation
- Phase 3 – Quantitative scenario development
- Phase 4 – Development of optimisation approach



# CASE STUDIES

## *GREATER ADELAIDE*

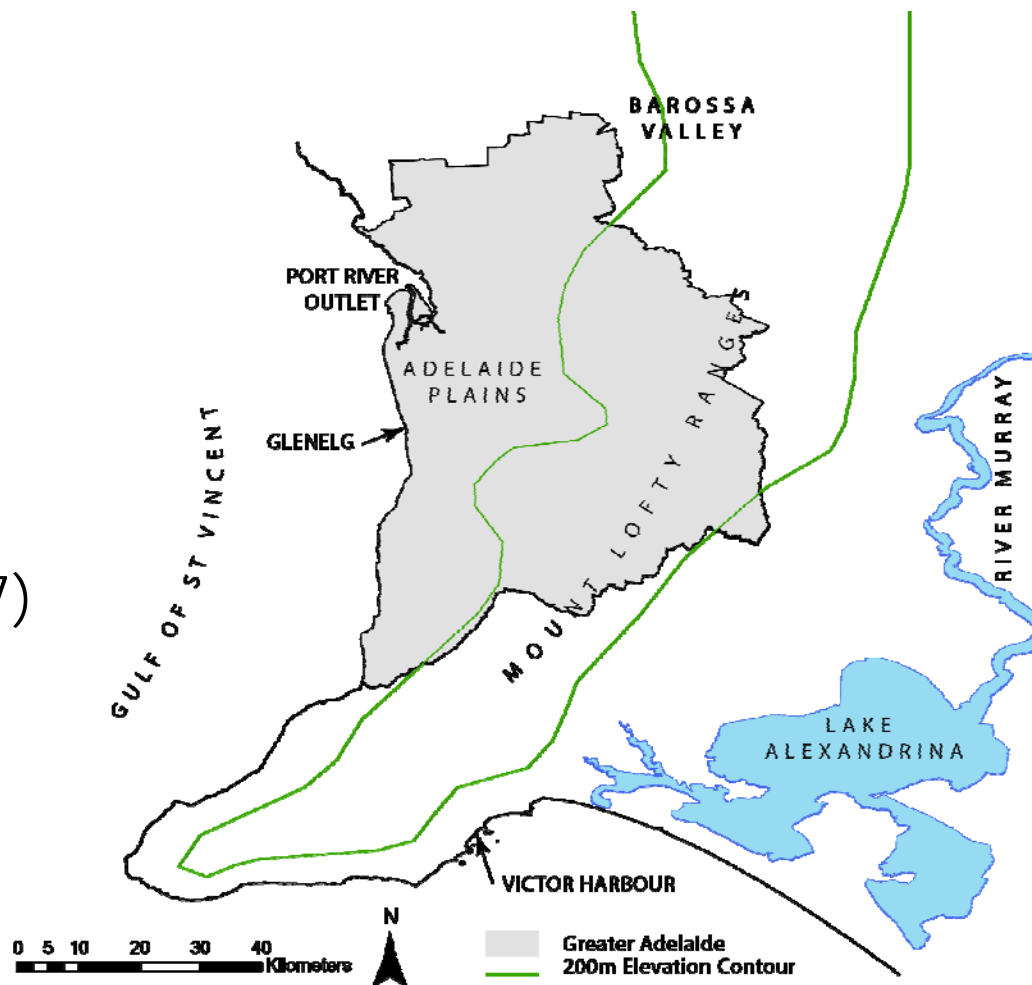
- Stakeholders:
  - Champion: Ed Pikusa (DEWNR)
  - Organisations: DCSI, SES (SA), DPC, SAFECOM, DPTI, DEWNR, OCIO, SAPOL, DECD, DPTI, SA Water, GA, SA Health, DTF, BOM, LGA, AG
- Status:
  - Four workshops
  - Completed scoping phase
  - Completed qualitative scenarios
  - Completed quantitative scenarios
  - Software development
    - Beta testing of the DSS software
    - Refinement/integration of hazard models
    - Integrating optimisation



# CASE STUDIES

## *GREATER ADELAIDE: SCOPING*

- Study region
  - Greater Adelaide
- Hazards
  - Bushfire
  - Earthquake
  - Coastal inundation
  - Flood
  - Heatwave
- Mitigation options (27)
  - Structural
  - Land use planning
  - Land management
- Indicators (31)
  - Economic, Social, Environmental

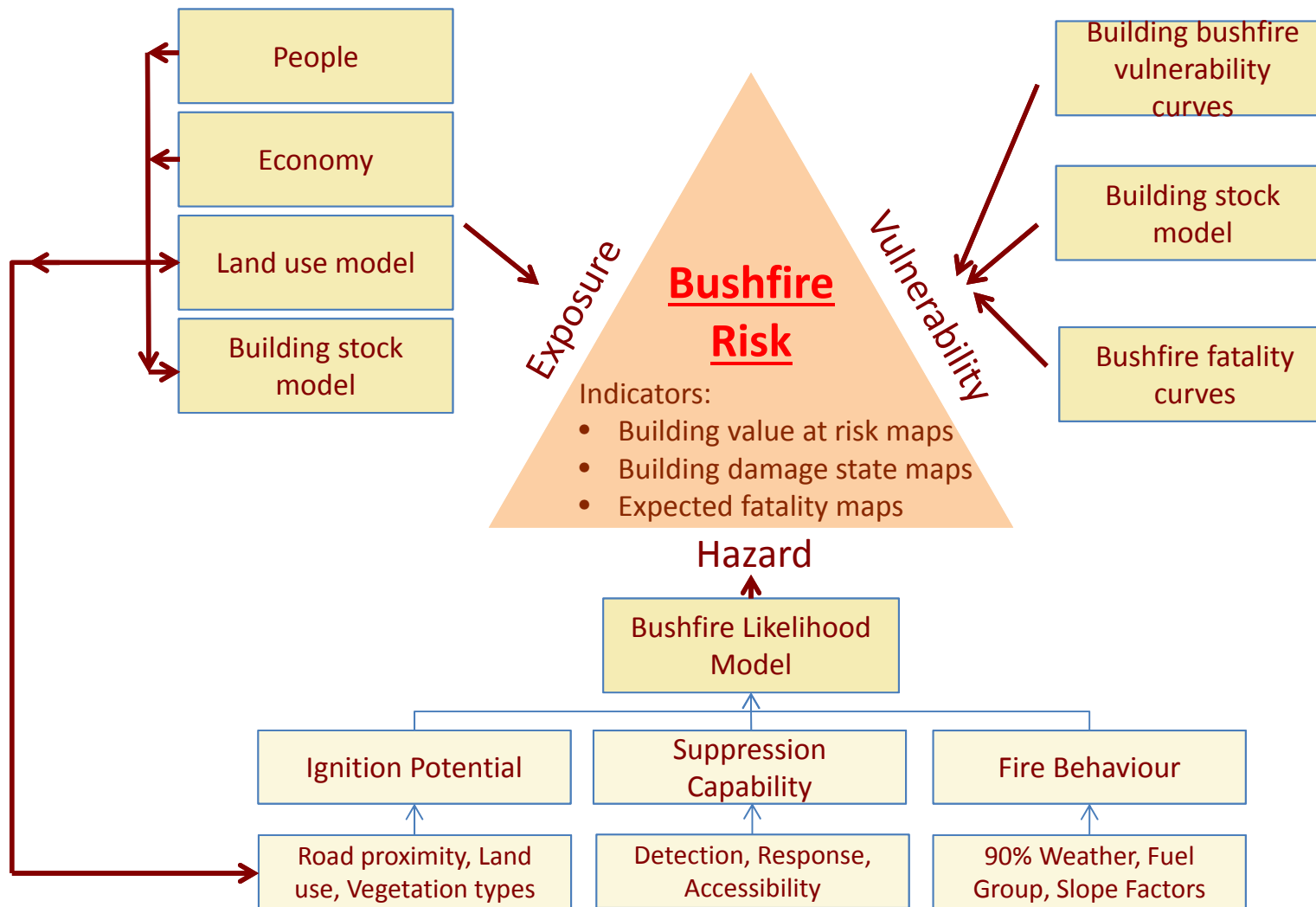


# CASE STUDIES

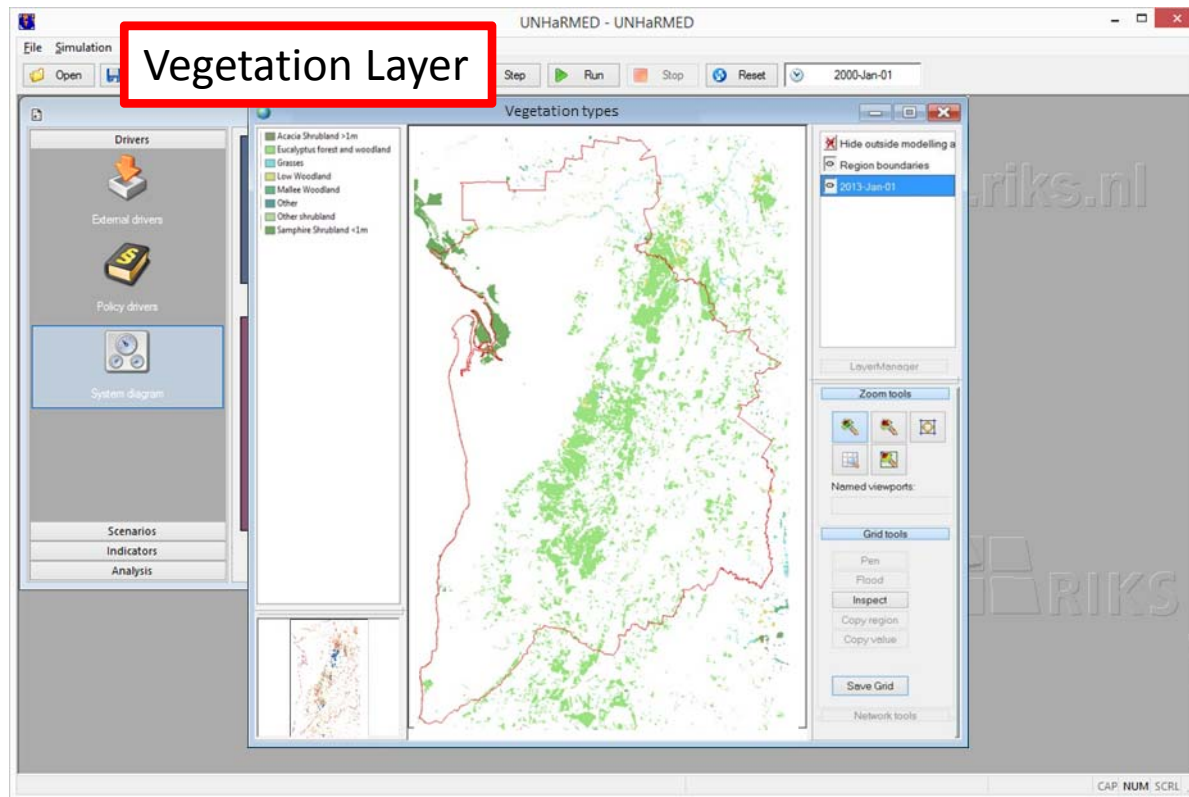
## *GREATER ADELAIDE: MODEL DEVELOPMENT*

### Hazard Models

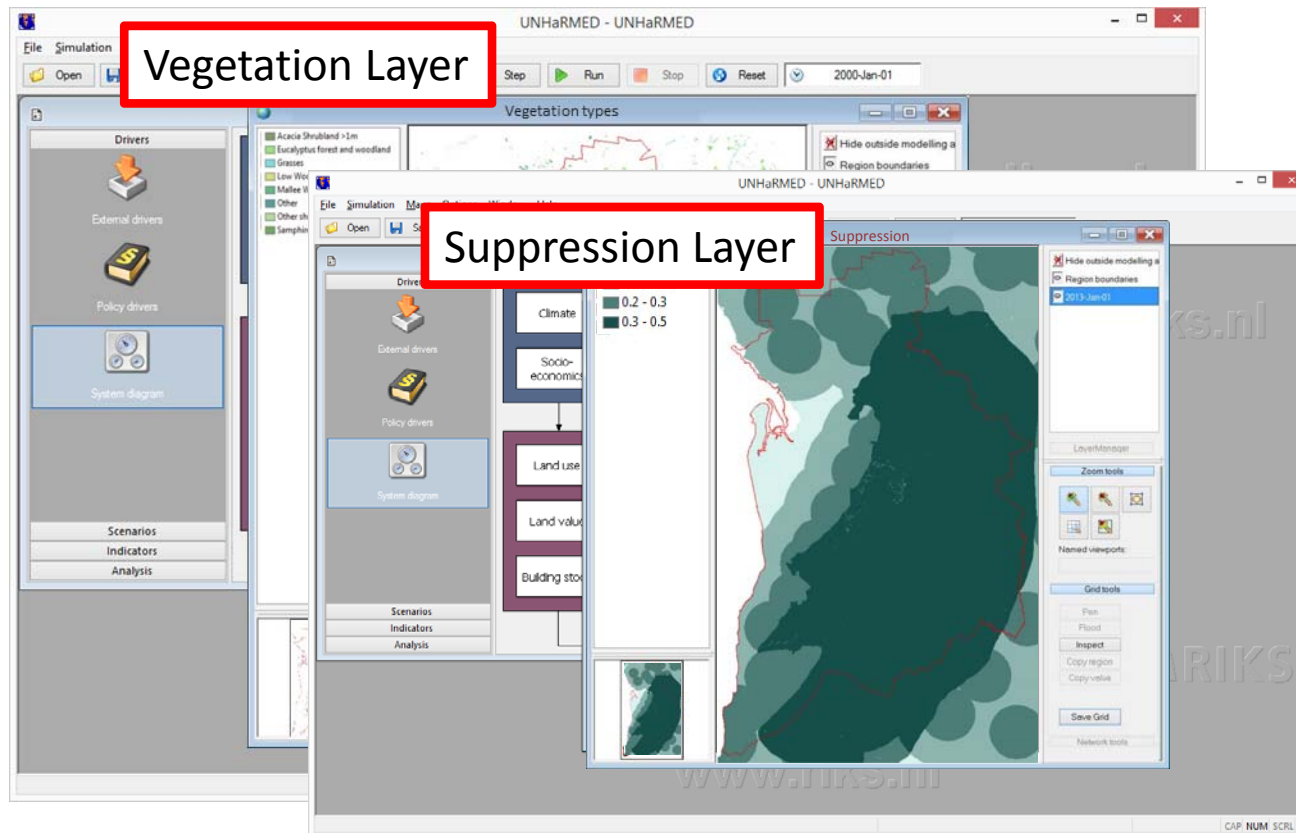
- Flooding
  - In-house zero-dimensional fluvial model
- Earth-quake
  - Probabilistic model consisting of 100 earthquake scenarios
  - Collaboration with Dr James Daniell Karlsruhe Institute of Technology, Germany)
- Coastal surge
  - In-house developed inundation model
- Bushfire model
  - Model based on BRAM (adapted from TASBRAM)
  - Collaboration with Mike Wouters and Simeon Telfer (DEWNR)
- Heatwave
  - In-house model developed based on excess heat factor
  - Consultation with John Nairne (BOM)



# CASE STUDIES: *GREATER ADELAIDE*



# CASE STUDIES: *GREATER ADELAIDE*



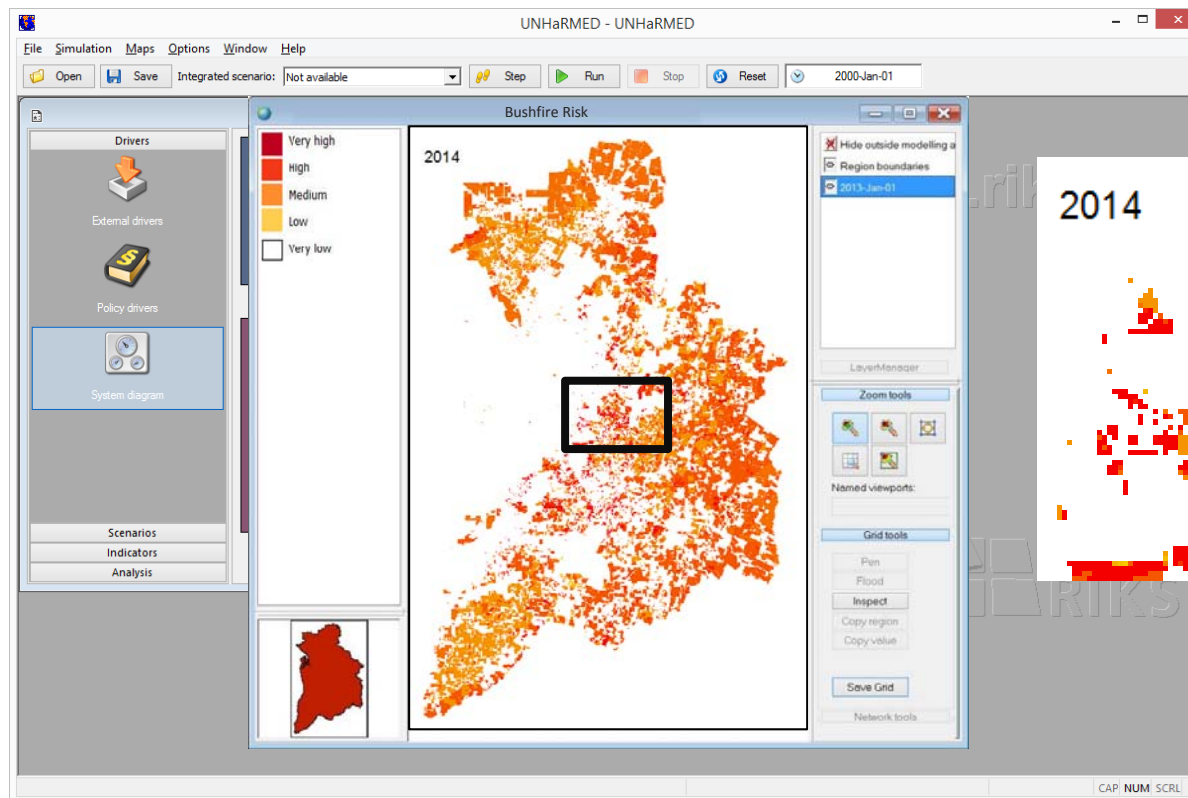
# CASE STUDIES: *GREATER ADELAIDE*

The image displays the UNHaRMED software interface, which is used for modeling and simulation. Three specific layers are highlighted with red boxes:

- Vegetation Layer:** This layer is shown in the top window, displaying a map of vegetation types. The interface includes a menu bar (File, Simulation), a toolbar with buttons for Step, Run, Stop, and Reset, and a date field set to 2000-Jan-01. A list of vegetation types is visible on the left, including Acacia Shrubland >1m, Eucalyptus forest and woodland, Grasses, Low Wood, Melaleuca, Other, and Samphire.
- Suppression Layer:** This layer is shown in the middle window, displaying a map of suppression. The interface includes a menu bar (File, Simulation), a toolbar, and a date field set to 2013-Jan-01. A legend on the left shows two categories: 0.2 - 0.3 and 0.3 - 0.6.
- Land-use Planning Layer:** This layer is shown in the bottom window, displaying a map of land-use planning. The interface includes a menu bar (File, Simulation), a toolbar, and a date field set to 2013-Jan-01. A legend on the left shows four categories: Actively stimulated (green), Allowed (yellow), Weakly restricted (orange), and Strictly restricted (red). A table of land-use types is also visible:

Category	Plan	Zoning status	Start time	End time
Forest reserve	Forest reserves	Strictly restricted		
No reserve	Forest reserves	Unspecified		

# CASE STUDIES: *GREATER ADELAIDE*

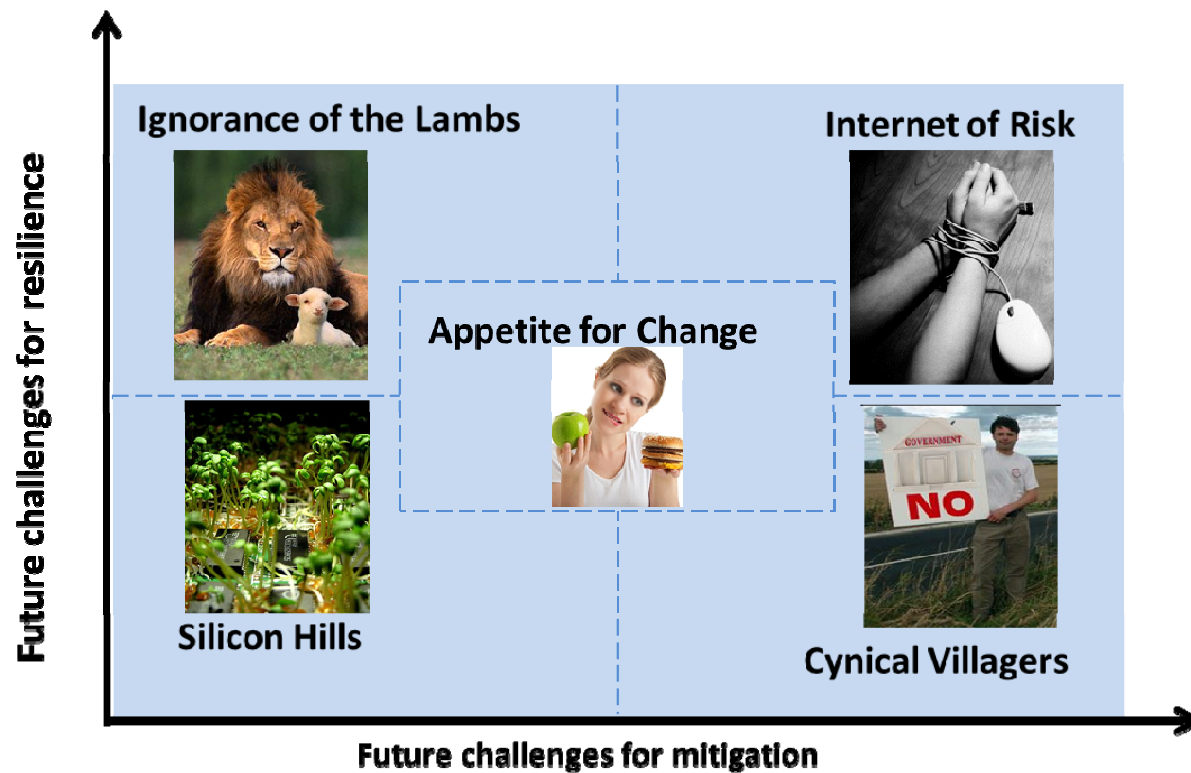




# CASE STUDIES

## *GREATER ADELAIDE: QUALITATIVE SCENARIOS*

- Through the workshops, five scenarios were developed



## CASE STUDIES

### *GREATER ADELAIDE: QUALITATIVE SCENARIOS*

#### Ignorance of the Lambs *(High challenges to resilience)*



- Decline in rural living
  - shift to highly urbanised centre
- High population growth with high immigration
  - Increased community vulnerability, heavy reliance on government for social and hazard-related support
- High mitigation cost means higher reliance on Federal Government
  - Loss of state-based policy, State Government as service provider
- Continued decline in manufacturing and high unemployment
  - Brain-drain to eastern sea-board, preferences for low cost housing

## CASE STUDIES

### *GREATER ADELAIDE: QUALITATIVE SCENARIOS*

#### Cynical Villagers

*(High challenges to mitigation)*

- Slowing population growth and immigration
  - Shifting in demographics to ageing population
  - Increases in rural residential developments
  - Increases in vulnerable communities
- Downturn in mining with no sector to replace activity
  - Strains on government revenue, and limited mitigation budget
  - Increases in low-middle income earners (urban sprawl and low cost housing)
- Local communities protective over their individual freedoms
  - High “local” knowledge, but limited “global” knowledge
  - Resistance to government policy and zoning regulations
  - High inequality in local understanding of risk



# CASE STUDIES

## GREATER ADELAIDE: QUANTITATIVE SCENARIOS

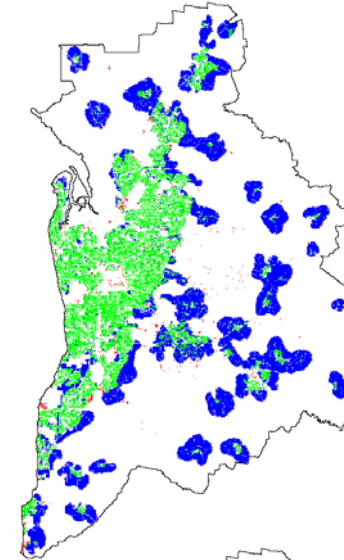
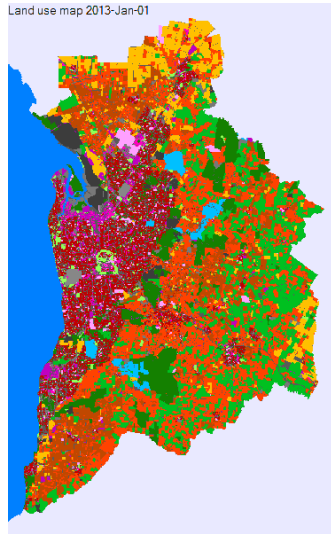
- Quantitative mapping of scenarios to model drivers

	Silicon Hills	Cynical Villagers	Ignorance of the Lambs	Appetite for Change	Internet of Risk
Population in 2050	1.9 M	1.5 M	2.5 M	1.8 M	1.5 M
Economy					
Community resilience					
Building stock resilience					
Residential land use developments	<i>Gradual growth urban and rural areas</i>	<i>Large increase in rural residential, mixed with other land uses</i>	<i>Residential commuter communities in the hills</i>	<i>Infill, some sprawl on the fringe and rural residential development</i>	<i>Large increase in rural residential</i>
Land use planning					
Education & awareness					
Structural mitigation					

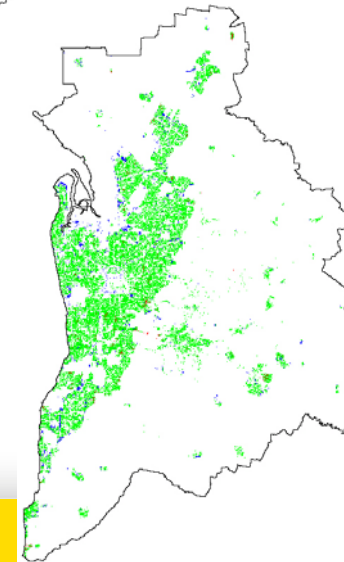
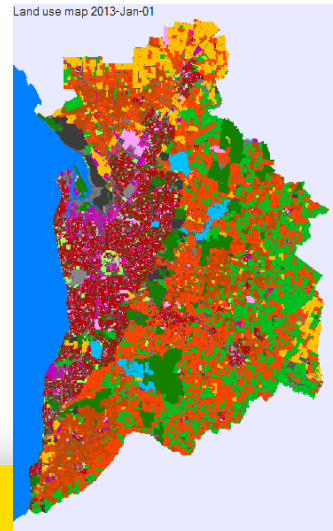
# CASE STUDIES

## *GREATER ADELAIDE: QUANTITATIVE SCENARIOS*

Ignorance of the  
Lambs



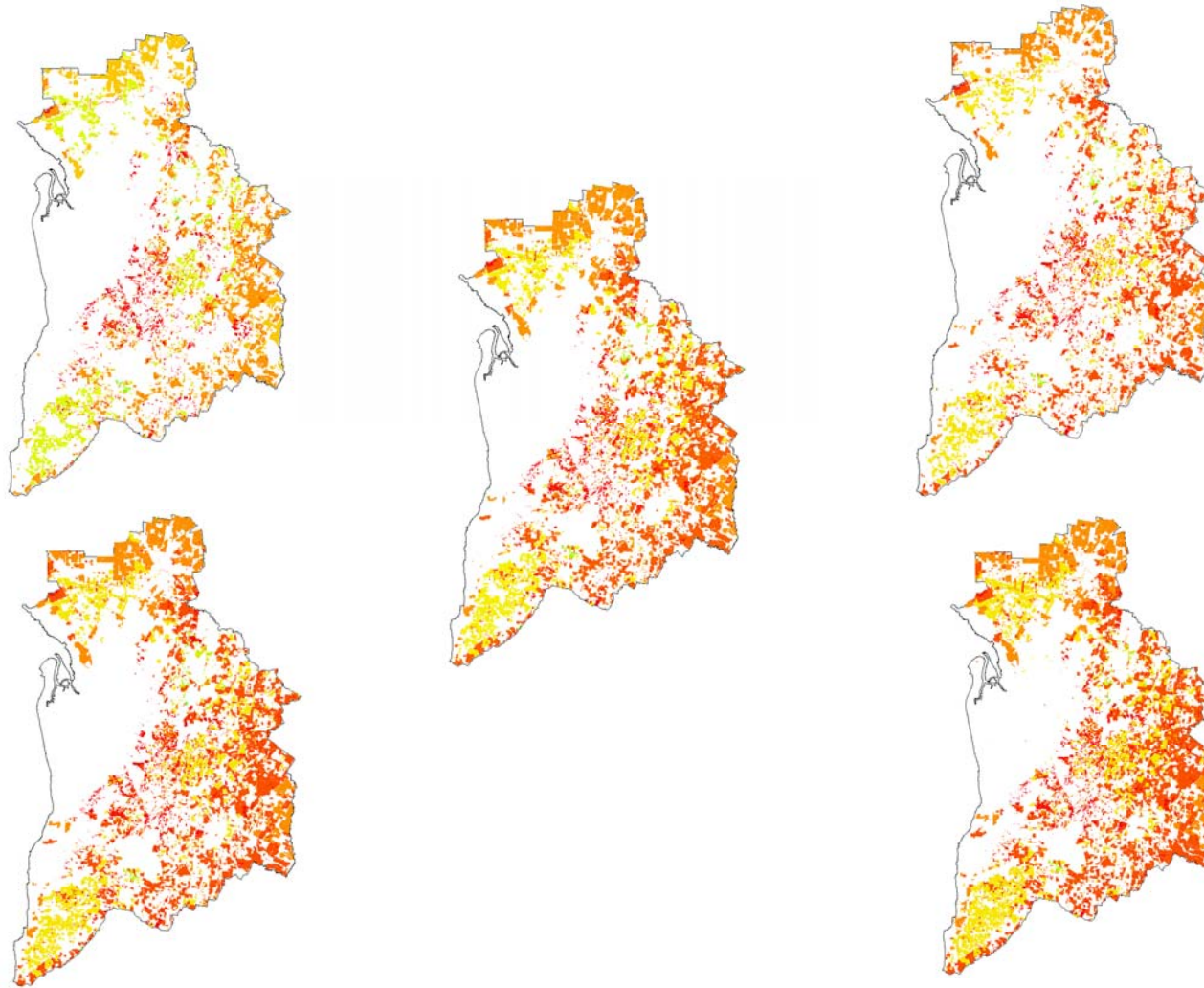
Cynical  
Villagers



# DECISION SUPPORT SYSTEM FRAMEWORK

## *SOFTWARE FRAMEWORK*

**Future challenges for resilience**



# CASE STUDIES

## *GREATER ADELAIDE: NEXT STEPS...*

- Finalise release version of DSS
  - Finalise and integrate hazards
  - Integration of optimisation
- Utilisation
  - Development of training manuals
  - Training of key stakeholders

# CASE STUDIES

## *GREATER & PERI-URBAN MELBOURNE*

- Stakeholders:
  - Champions: Alen Slijepcevic (CFA), Liam Fogarty (DELWP)
  - Organisations: CFA, DELWP, EMV, VU, VMIA, Melbourne Water, DEDJTR, DTF, DHHS
- Status
  - Three workshops
  - Completed scoping phase
  - Completed qualitative scenarios
  - Prototype under development
    - Developing, sourcing and integrating hazards models





# CASE STUDIES

## *GREATER & PERI-URBAN MELBOURNE*

- Study Region
  - Greater & Peri-Urban Melbourne
- Hazards (priority)
  - Bushfire
  - Riverine flooding
  - Storm
  - Heatwave
  - Earthquake
  - Sea level rise
- Mitigation options
  - Identified 24 key strategies
- Policy Indicators
  - Socio-economic (10); Environmental (8)  
Risk-based (10)



FIGURE 5: PROPOSED MODEL EXTENT

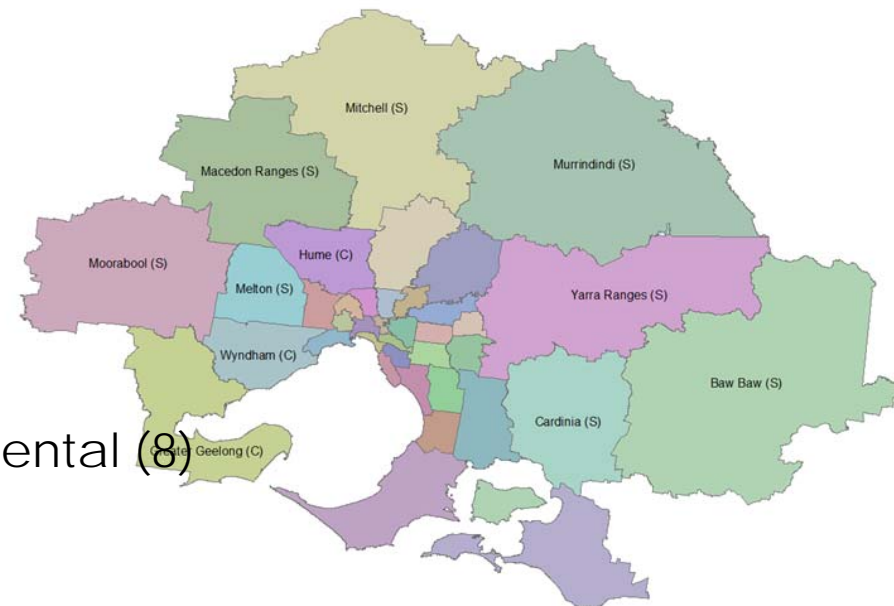


FIGURE 6: PROPOSED MODEL LGA EXTENT

# CASE STUDIES

## *GREATER & PERI-URBAN MELBOURNE*

### Hazard Models

- Coastal Surge
  - In-house developed inundation model
- Earthquake
  - Collaboration with Dr James Daniel Karlsruhe Institute of Technology, Germany)
- Bushfire
  - BRAMS based model
  - Incorporation of Phoenix modelling from DEWLP
    - Incorporation of fire path dependencies
    - Ember attack effects on Vulnerability
- Riverine Flooding
  - Utilisation of flood models from Melbourne Water

# CASE STUDY: *G & P-U MELBOURNE*

Metronamica - Melbourne

File Simulation Maps Options Window Help

Open Save Integrated scenario: Baseline Step Run Stop Reset 2014-Jan-01

Land use model

Land use: Vacant Land use type: Vacant

Land use Neighbourhood Accessibility Suitability Zoning

Parameters (for all land uses)  
Inertia/conversion effect for vacant land uses:

From \ To	Vacant	Nature	Forest
Vacant		1	1
Nature		1	1
Forest		1	1
Rural Resident...		1	1
Low density re...		1	1

Neighbourhood effect for function land uses:

From \ To	Rura...	Low ...	Con...	Med...	Hig...	Tour...	Office R
Conventional ...							
Medium densi...							
High density r...							
Tourism Acco...							
Office							

Maximum distance in neighbourhood [cells]: 8

Output

Show neighbourhood potential map

Land use map

- Vacant
- Nature
- Forest
- Rural Residential
- Low density residential
- Conventional density residen
- Medium density residential
- High density residential
- Tourism Accommodation
- Office
- Retail / Commercial
- Industrial
- Community Services
- Forestry
- Intensive Agriculture
- Pasture
- Livestock

# CASE STUDIES

## TASMANIA

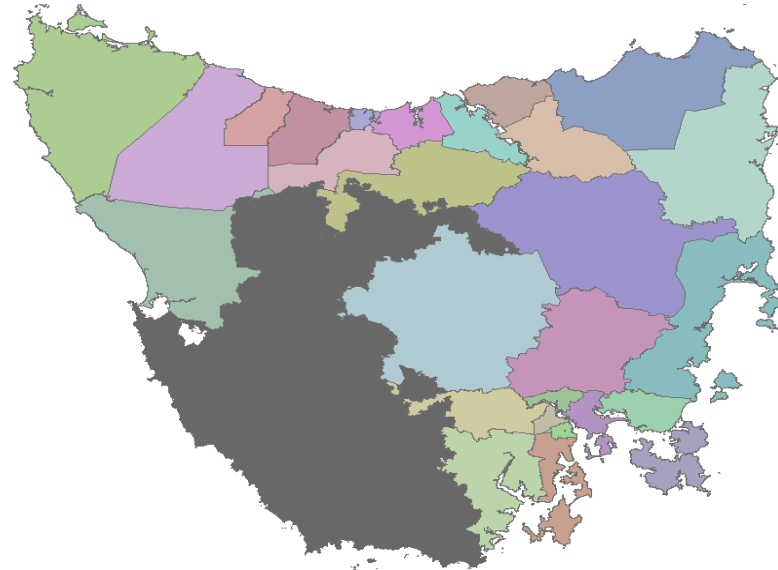
- Stakeholders:
  - Champion: Luke Roberts (DPaC-OSEM), Sandra Whight (TFS)
  - Organisations: DPaC (OSEM & CC), SES, TFS, Planning and Reform Taskforce, Kingborough Council
- Status
  - Two workshops
  - Completed scoping phase
  - Developed prototype land-use model



# CASE STUDIES

## *TASMANIA: SCOPING*

- Study Region
  - Entire Tasmanian Island
- Hazards (priority)
  - Bushfire
  - Coastal Surge
  - Riverine Flooding
  - Landslide
  - Earthquake
- Mitigation strategies
  - Identified 23 key strategies ranging from structural interventions to land-use planning and community-based
- Policy indicators
  - Social (7); Economic (10); Environmental (6); Risk-based (7)

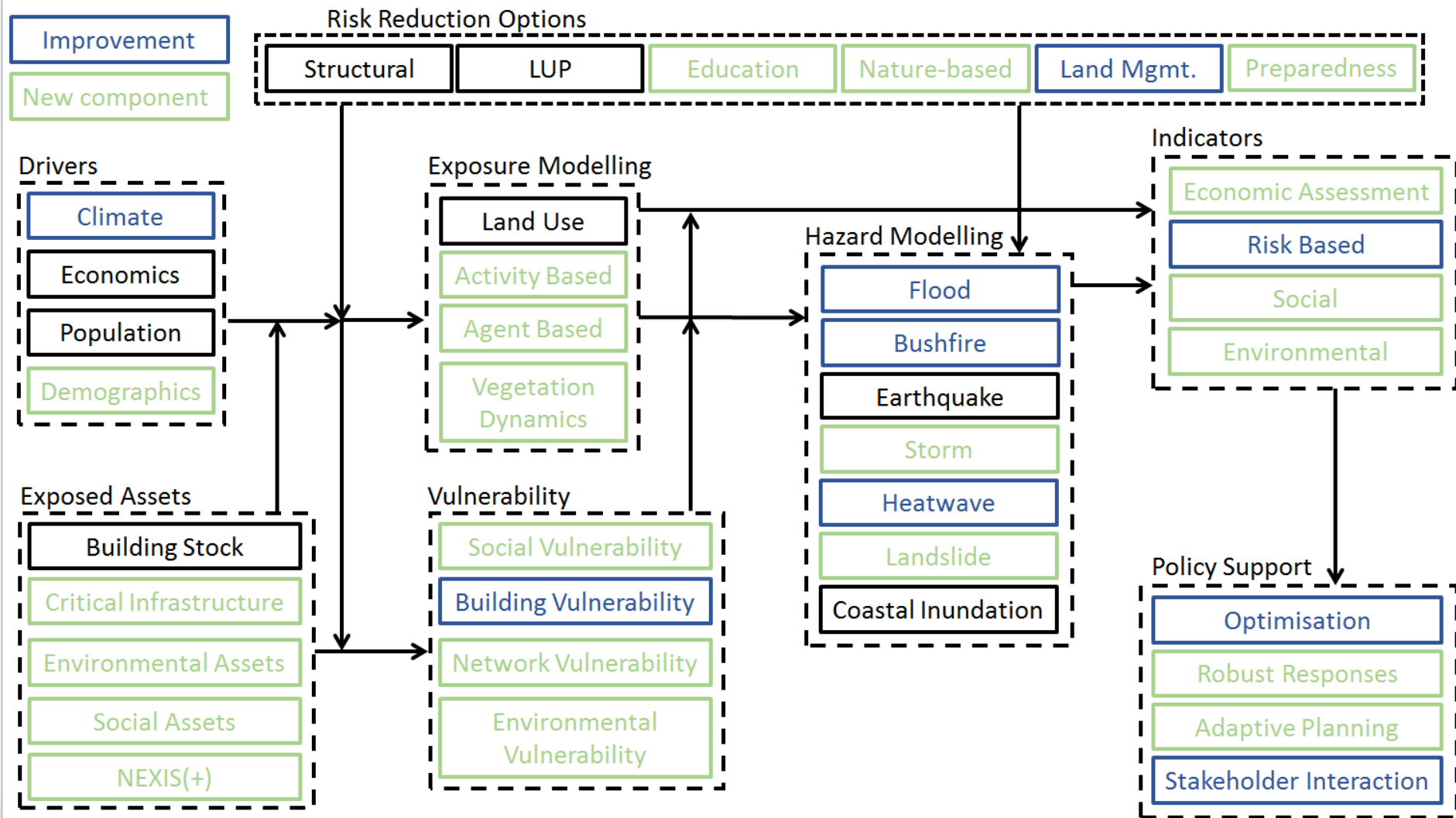


# PROJECT PHASE 2

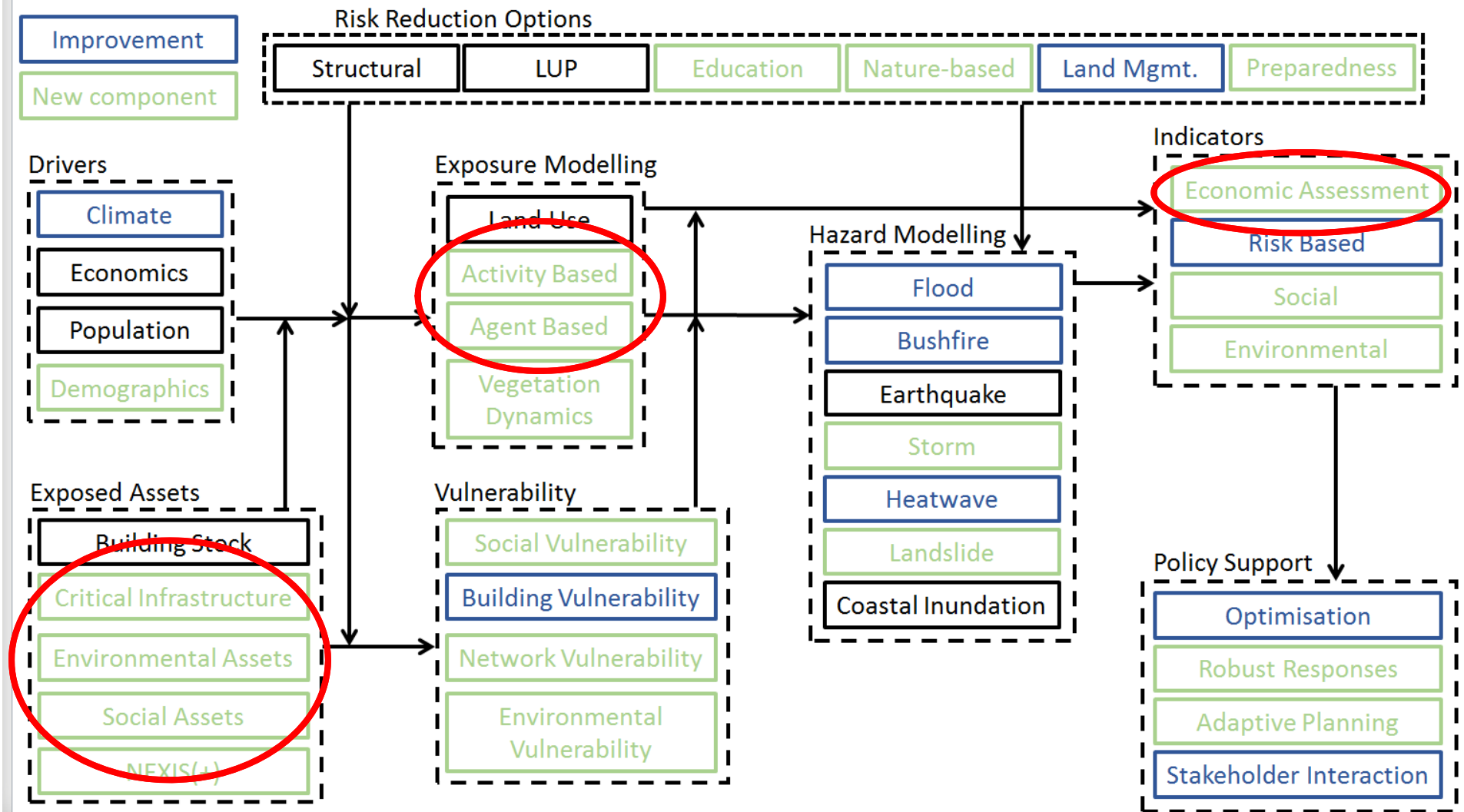
## *KEY TASKS*

- Completion of Phase 1 DSSs and policy-support example
  - Greater Adelaide policy portfolio optimisation analysis
  - Completion of Greater Peri-Urban Melbourne DSS
  - Completion of Tasmania DSS
- Integration of DSS within end-user organisations
  - For Greater Adelaide:
    - Modification of DSS to allow for annual updating of vegetation layer
    - Provision of probabilistic land-use maps for use in flood impact modelling
  - Identification of utilisation pathways for GPUM and Tas DSSs
    - Policy-relevant simulations and reporting
    - Customisation of DSS for usability
    - Development of user manuals and training
- Enhancing DSS capability and functionality

# PROJECT PHASE 2: *ENHANCING DSS*

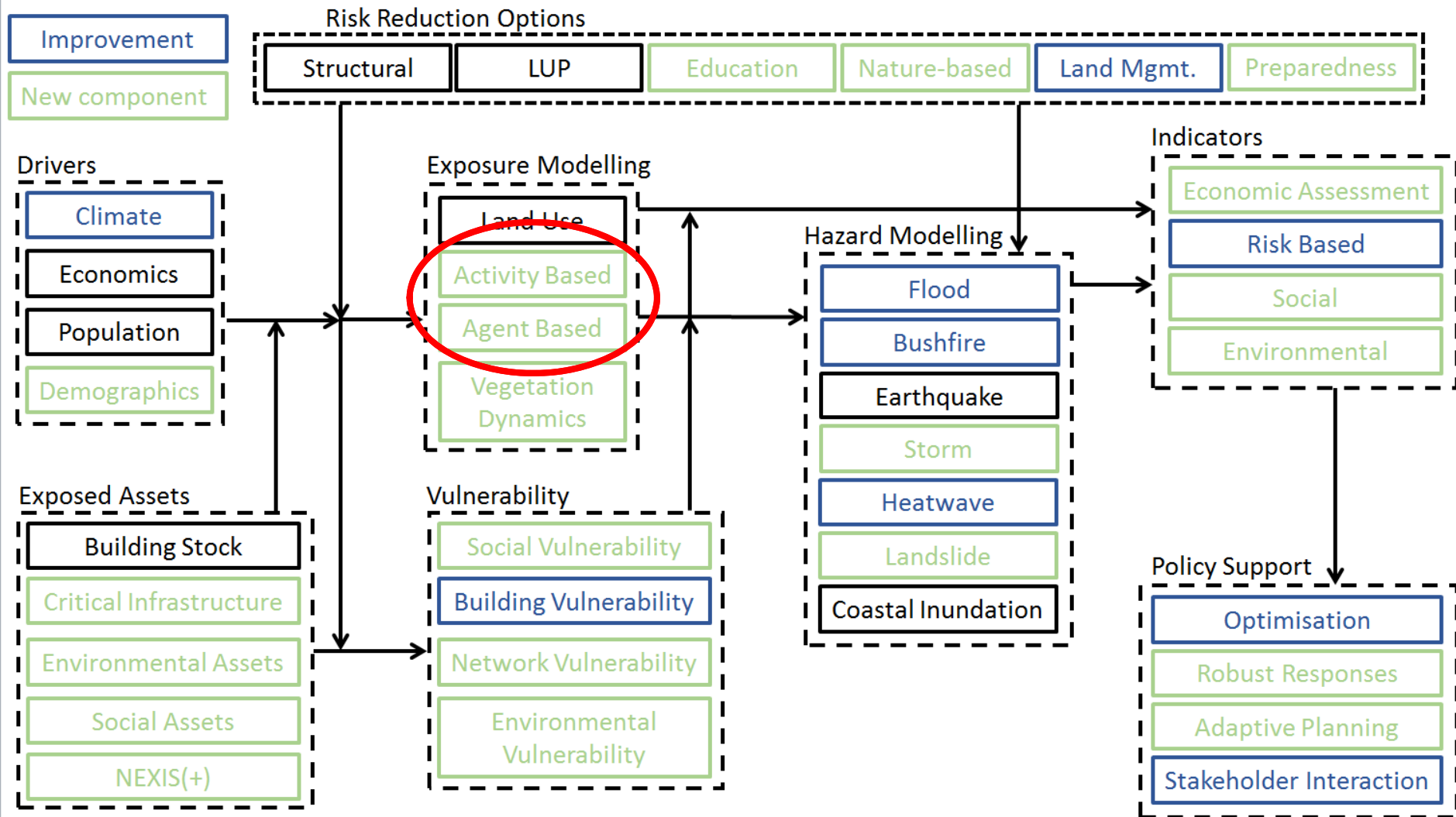


# PROJECT PHASE 2: *ENHANCING DSS*





# PROJECT PHASE 2: *ENHANCING DSS*

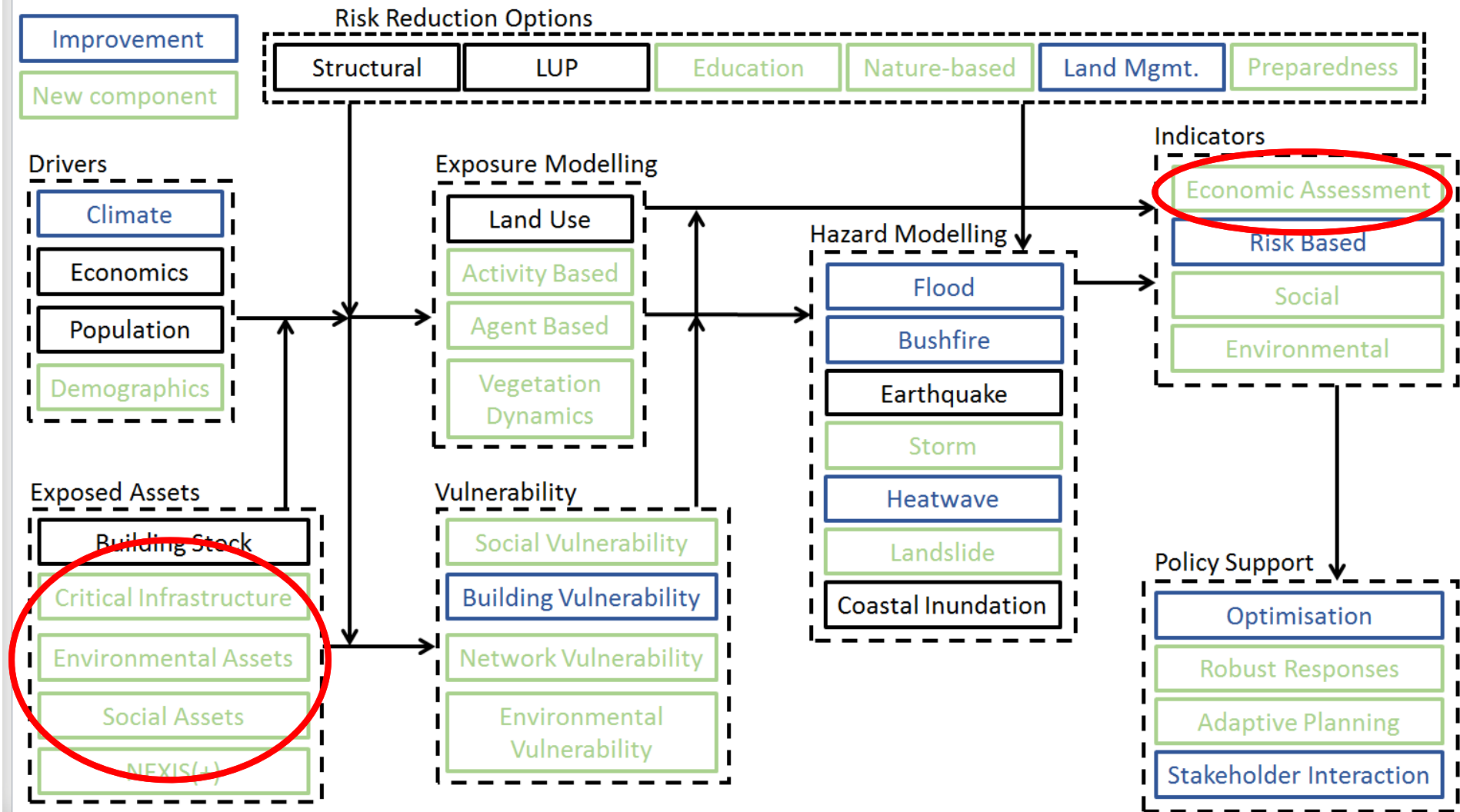


# PROJECT PHASE 2

## *ENHANCING DSS*

- Activity Based Model
  - Incorporation of demographic information for disaggregation of societal groups
  - Aim is to better capture the differing vulnerability of different social group
    - (e.g. elderly, young families, migrant groups)
  - Applied to Greater and Peri-Urban Melbourne case study
- Agent Based Modelling
  - Improved characterisation of social aspects of bushfire risk
    - Influence of past hazard experience, duration in an urban or rural environment and education on social vulnerability
  - Applied to Greater Adelaide case study

# PROJECT PHASE 2: *ENHANCING DSS*



## PROJECT PHASE 2

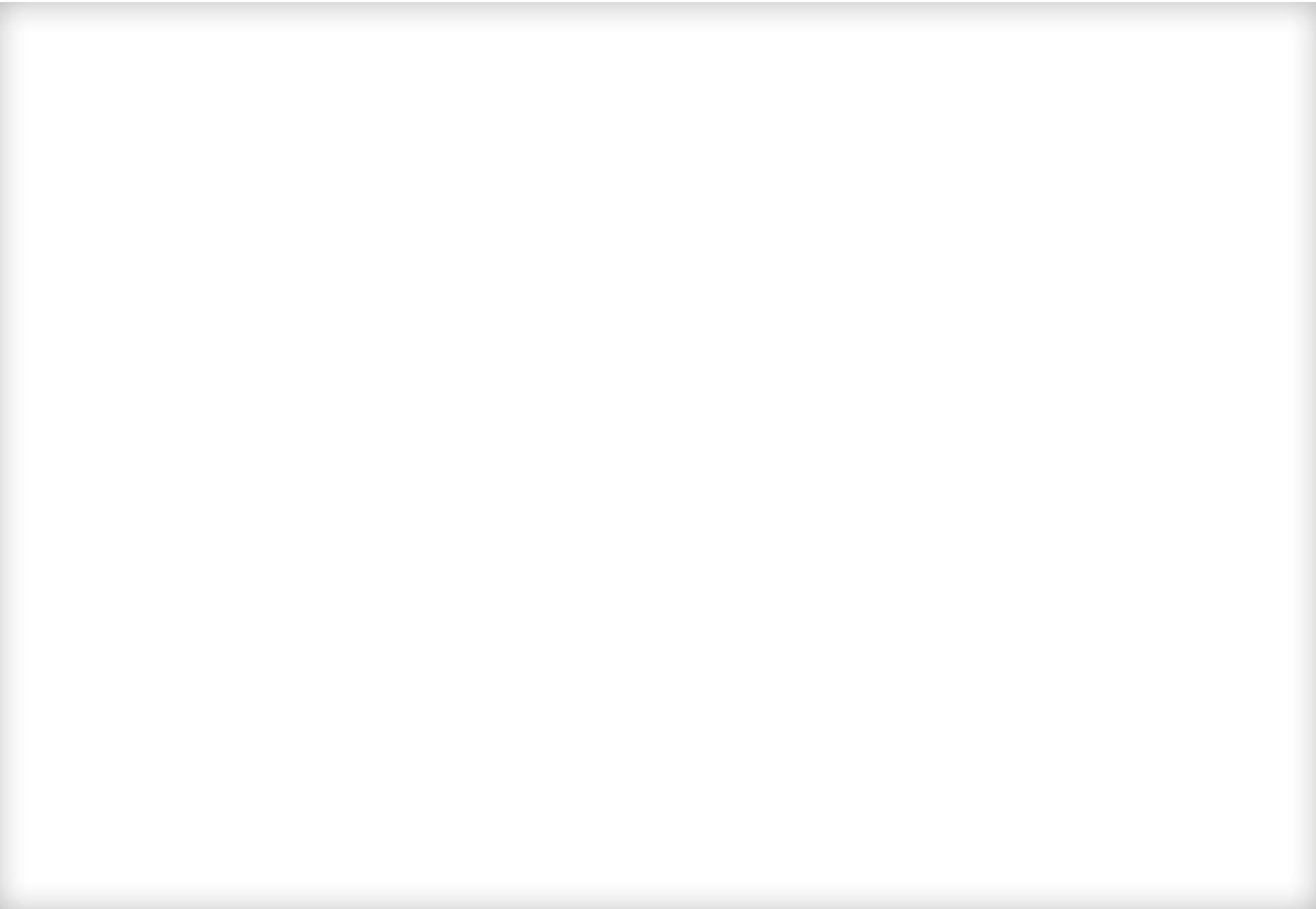
### *ENHANCING DSS*

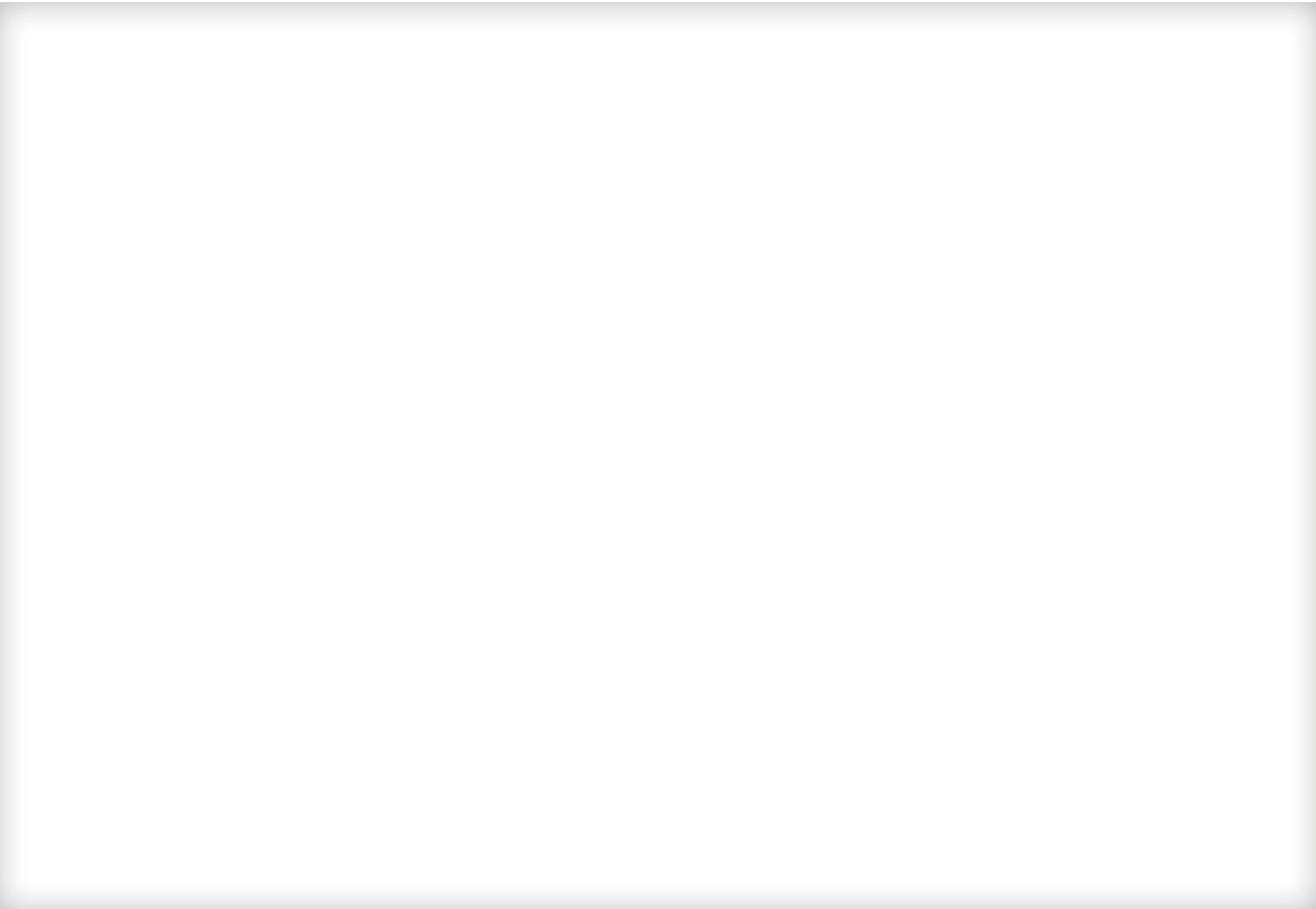
- Inclusion of indirect and intangible economic factors
  - Improved characterisation of benefit:cost
    - Cost of “flow on” impacts (disruption, productivity, etc)
    - Valuation of amenity
  - Link with Project A6 “Economics of bushfires and natural hazards”
- Improved characterisation of exposed assets
  - Include critical assets beyond building stock
    - Cultural, economic, and environmental assets
  - Apply to the Greater Peri-Urban Melbourne DSS

# FUTURE OPPORTUNITIES

- Project proposals for NDRP funding
  - Western Australian case-study
  - Extended South Australian case-study
- In discussions for a Queensland case-study
- Extensions for Greater and Peri-Urban Melbourne
  - Use of scenarios for community engagement (with CFA)
  - Integration of DSS with urban planning (transport models, and “resilient Melbourne”) (with DEWLP)

**THANKS FOR YOUR ATTENTION!**







# ADDITIONAL SLIDES

# DECISION SUPPORT SYSTEM FRAMEWORK

## *MODEL FRAMEWORK*



Risk

Land use model



Building stock model

Exposure

# Earthquake Risk

Indicators:

- Building value at risk maps
- Building damage state maps
- Expected fatality maps

Vulnerability

Building earthquake vulnerability curves

Building stock model

Earthquake fatality curves

## Hazard



Earthquake ground acceleration model

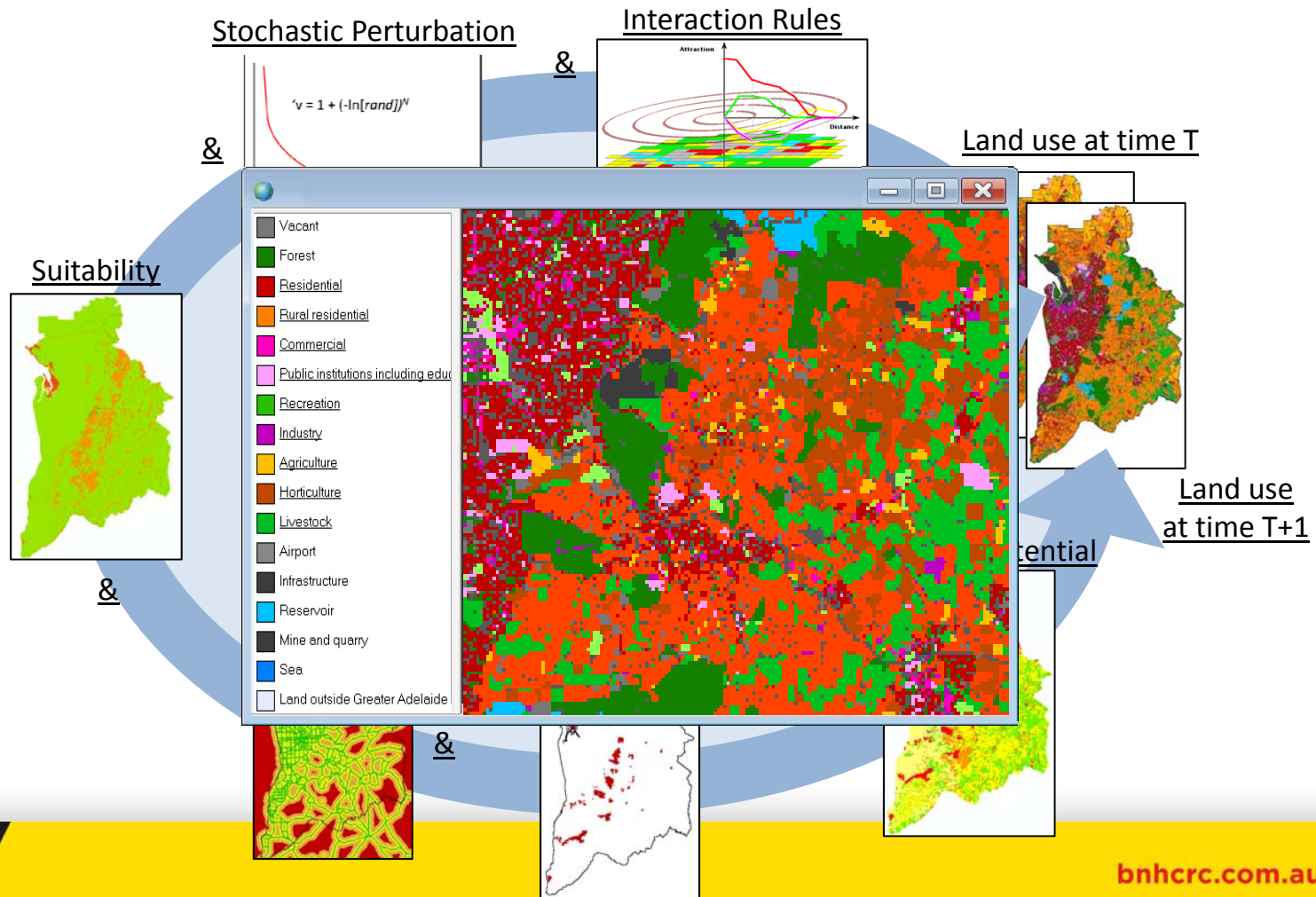


Soil and geological data, Vs30 data

# DECISION SUPPORT SYSTEM FRAMEWORK

## MODEL FRAMEWORK

### Exposure Model





Australian Government  
Productivity Commission

# Natural Disaster Funding Arrangements

Productivity Commission  
Draft Report  
Volume 1

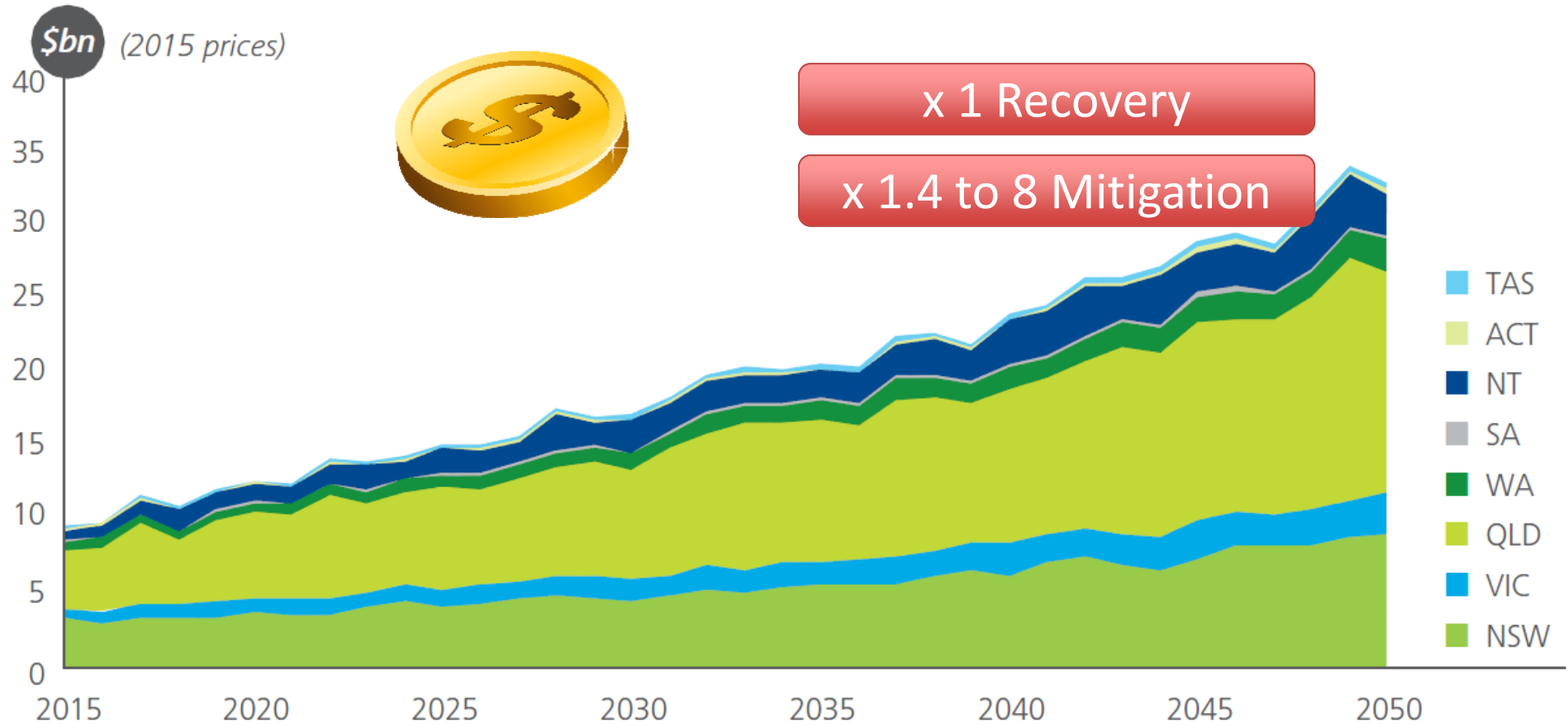
September 2014

*“Land use planning is perhaps **the most potent policy lever** for influencing the level of future natural disaster risk”*

# PREVENTION IS BETTER THAN CURE

## COST

## BENEFIT

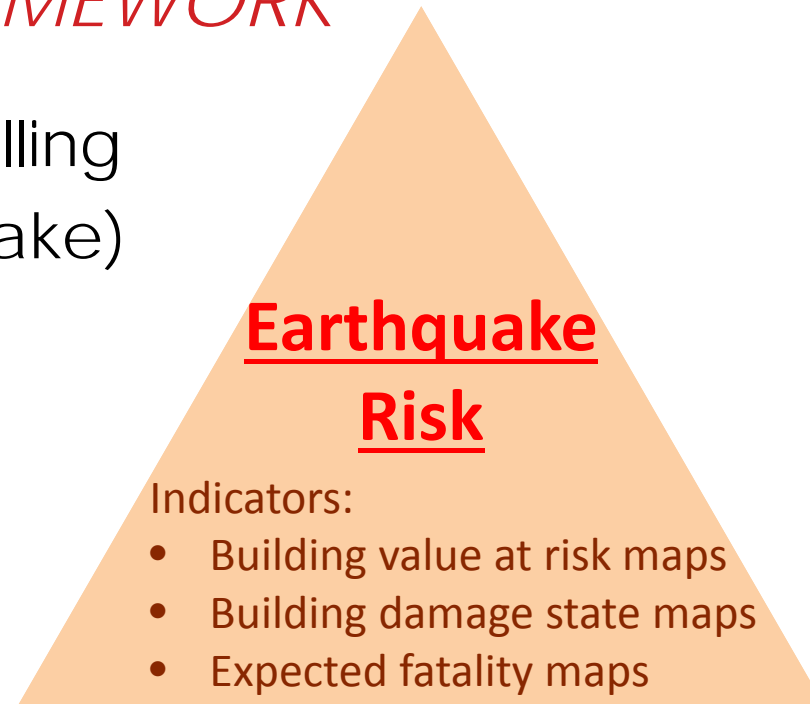


Source: Deloitte Access Economics analysis

# DECISION SUPPORT SYSTEM FRAMEWORK

## *MODEL FRAMEWORK*

Hazard Modelling  
(e.g. earthquake)



Hazard



Earthquake ground  
acceleration model



Soil and geological  
data, Vs30 data

# CASE STUDIES

## *APPROACH*

- Phase 1 – Scoping
  - Build understanding of current Landscape of natural hazard management
    - Key Hazards; Key factors effecting mitigation; Key drivers of change; Major uncertainties
  - Identification of mitigation options
  - Indicators and Factors of Risk
  - Region and Extent of DSS
  - Implementation of DSS
- Phase 2 – Qualitative scenario development
- Phase 3 – Quantitative scenario development
- Phase 4 – Development of optimisation



AZ9

modify/refine

Aaron Zecchin, 31/03/2017

<b>LAND MANAGEMENT</b>	Planned burning, reduction of fuel load	Improved enforcement mechanisms (e.g. illegal veg clearance)	Land reclamations
<b>COMMUNITY BASED</b>	Arson reductions programs	Integration of hazard programs in school curriculum	Increase community awareness (risks, safety strategies)
<b>STRUCTURAL</b>	Building Hardening (in particular for residential infrastructure)	Providing more assistance to owners of buildings in hazard areas to upgrade buildings	Structural upgrade of legacy buildings not currently code compliant
<b>LEARNING (RESPONSE TO PP)</b>	Agreement on residual risk, government and communities	Implementation of business continuity plans	Structured framework for lessons learnt
<b>INSTITUTIONAL CHANGE</b>	Establishment of multi hazard agencies	Tougher legislative requirements to build in higher risk zones	Adaptive policies (thresholds) for decision making (linking with adaption to climate change)
<b>LAND USE PLANNING</b>	Building exclusion areas, flood plains, bushfire areas	Ensuring development in hazard prone areas are compliant to highest codes	Increase access to information for property owners
<b>LEGISLATION</b>	Regulatory requirements to consider natural hazard risk in planning	Provide Hazard Leaders/control agencies with greater powers to question developments	Resource planning to mitigate response/recovery

# MODELLER INTERFACE LAND USE

The screenshot displays the Metronamica - Melbourne software interface. The main window features a menu bar (File, Simulation, Maps, Options, Window, Help) and a toolbar with buttons for Open, Save, Integrated scenario (Baseline), Step, Run, Stop, and Reset. A date selector shows 2014-Jan-01.

The central area is divided into several panels:

- Land use model:** Includes dropdowns for Land use (Vacant) and Land use type (Vacant). It has tabs for Land use, Neighbourhood, Accessibility, Suitability, and Zoning. A section for Parameters (for all land uses) includes an Inertia/conversion effect for vacant land uses table with columns From, To, Vacant, Nature, and Forest.
- Land use map:** A legend lists land use types: Vacant (light green), Nature (medium green), Forest (dark green), and Rural Residential (pink). A map shows the spatial distribution of these land uses.
- Accessibility map Industrial:** A legend shows accessibility levels from 0.0 (red) to 1.0 (green). The map shows a network of roads with higher accessibility (yellow/green) in the center and lower accessibility (red) on the periphery.
- Accessibility map Low density residential:** A legend shows accessibility levels from 0.0 (red) to 1.0 (green). The map shows a dense network of roads with higher accessibility (yellow/green) in the center and lower accessibility (red) on the periphery.

A LayerManager panel on the right lists network layers: Primary routes, Local roads, and Freeways, all with checkboxes. The Accessibility map Industrial layer is currently selected. A 'Show neighbourhood potential map' button is located at the bottom of the interface.

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