

UNHaRMED

Exploring regional dynamics and disaster risk – tomorrow's risk and what can we do about it?

Investing in Resilience Workshop / 2018

Graeme Riddell/ The University of Adelaide
Holger Maier/ The University of Adelaide

 @riddell_g



bushfire&natural
HAZARDSCRC



Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Programme

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

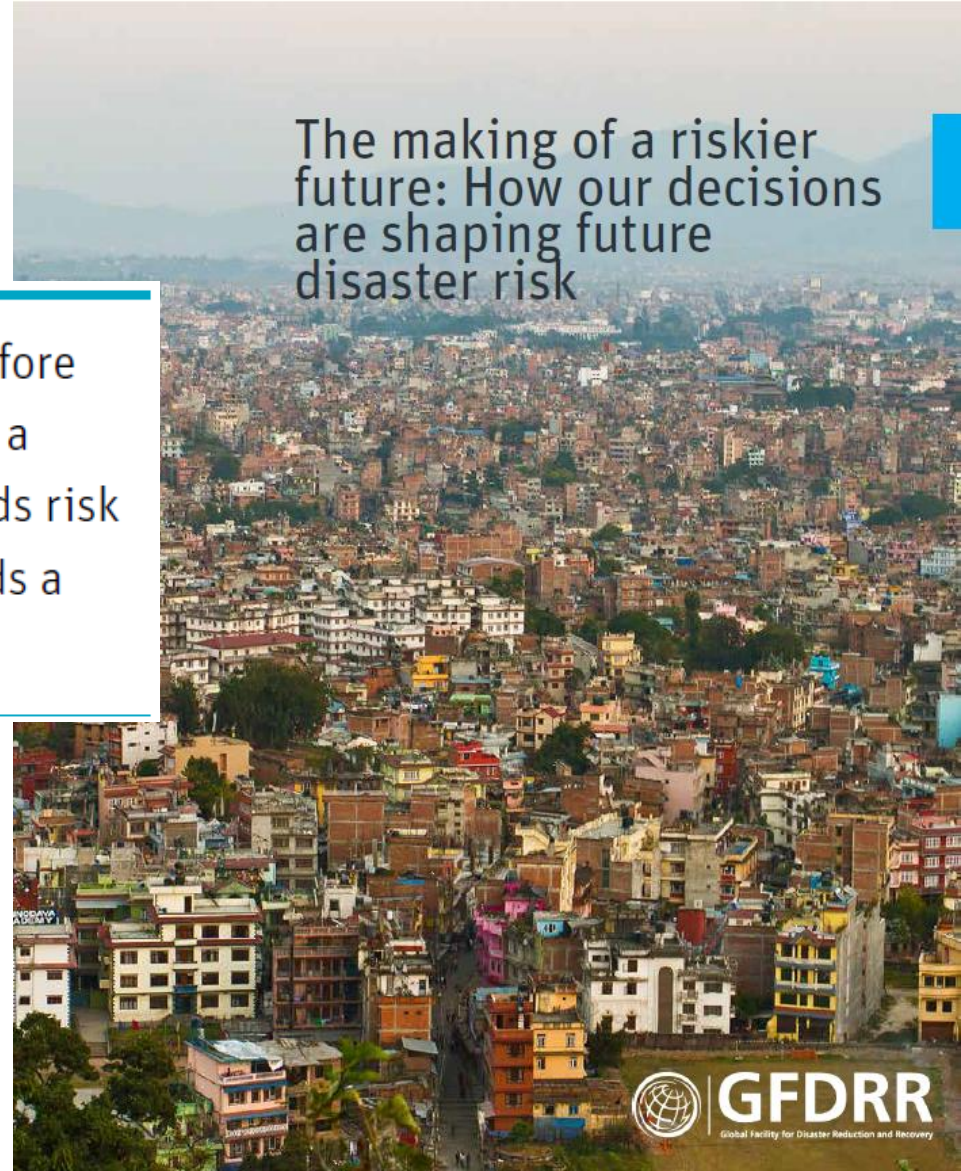


Tomorrow's risk is built today

The making of a riskier future: How our decisions are shaping future disaster risk

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)





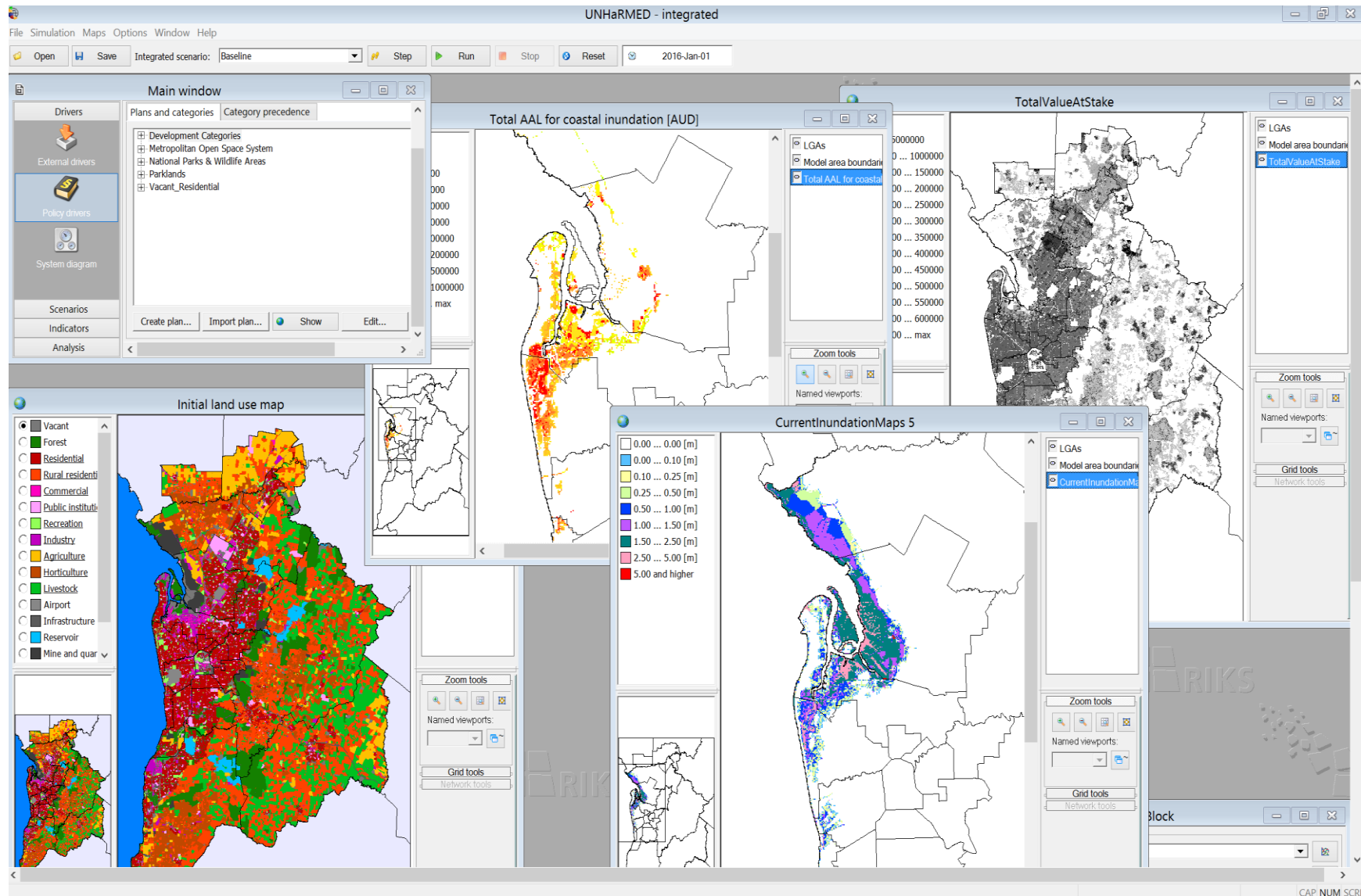
UNHaRMED

A tool for pro-active climate risk assessment and adaptation planning

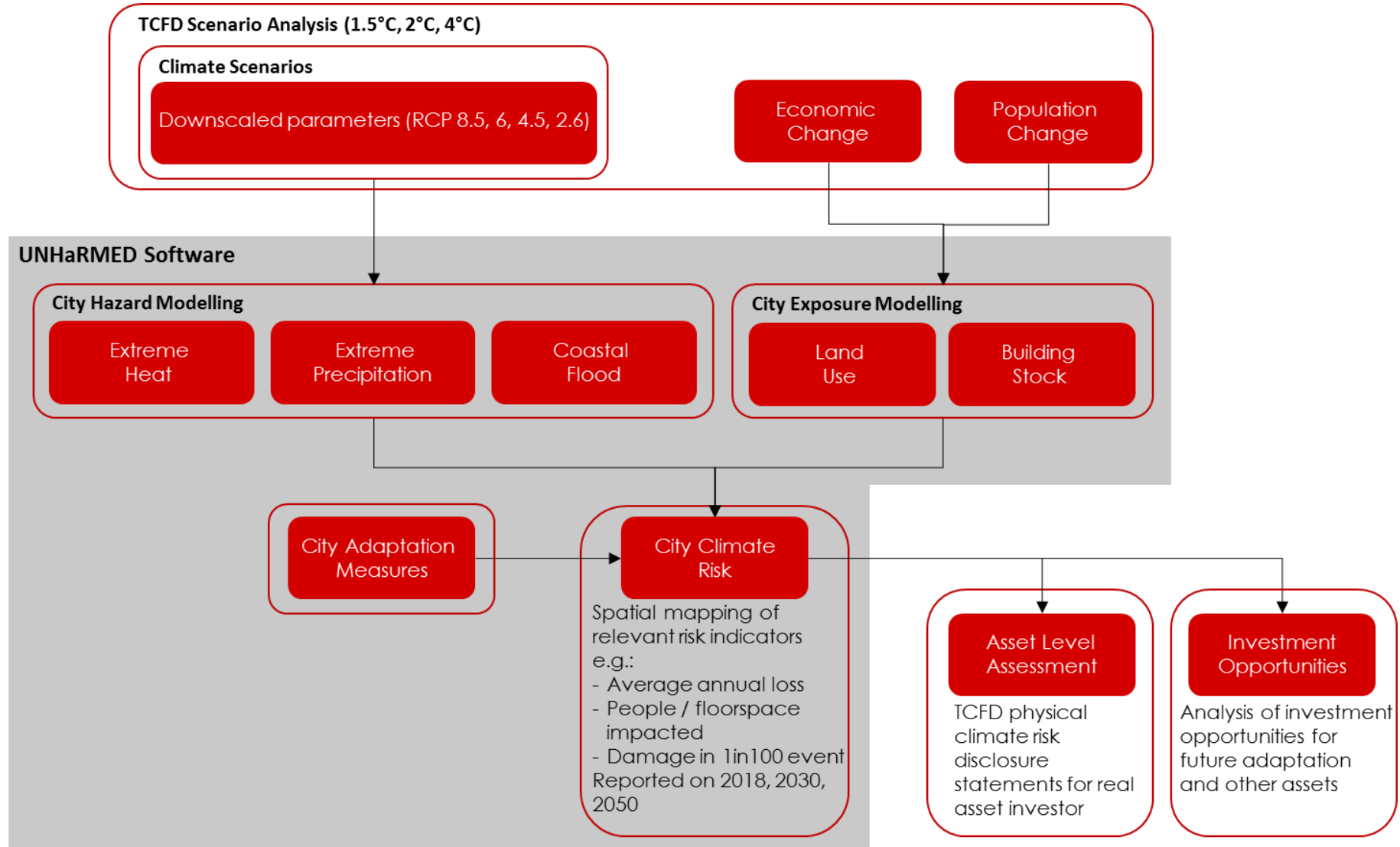
- Interactive modelling platform to assist decision making, investment choices and adaptation measures
- Aims:
 - Improve thinking about risk into the future;
 - Better manage and minimise risk;
 - Position organisations to best achieve this and lobby others.
- Considers long-term dynamics and uncertainties of hazard, exposure and vulnerabilities
- Integrated scenario analysis (transition and physical aspects)
- Incorporated assessment of adaptation measures



Regional risk modelling

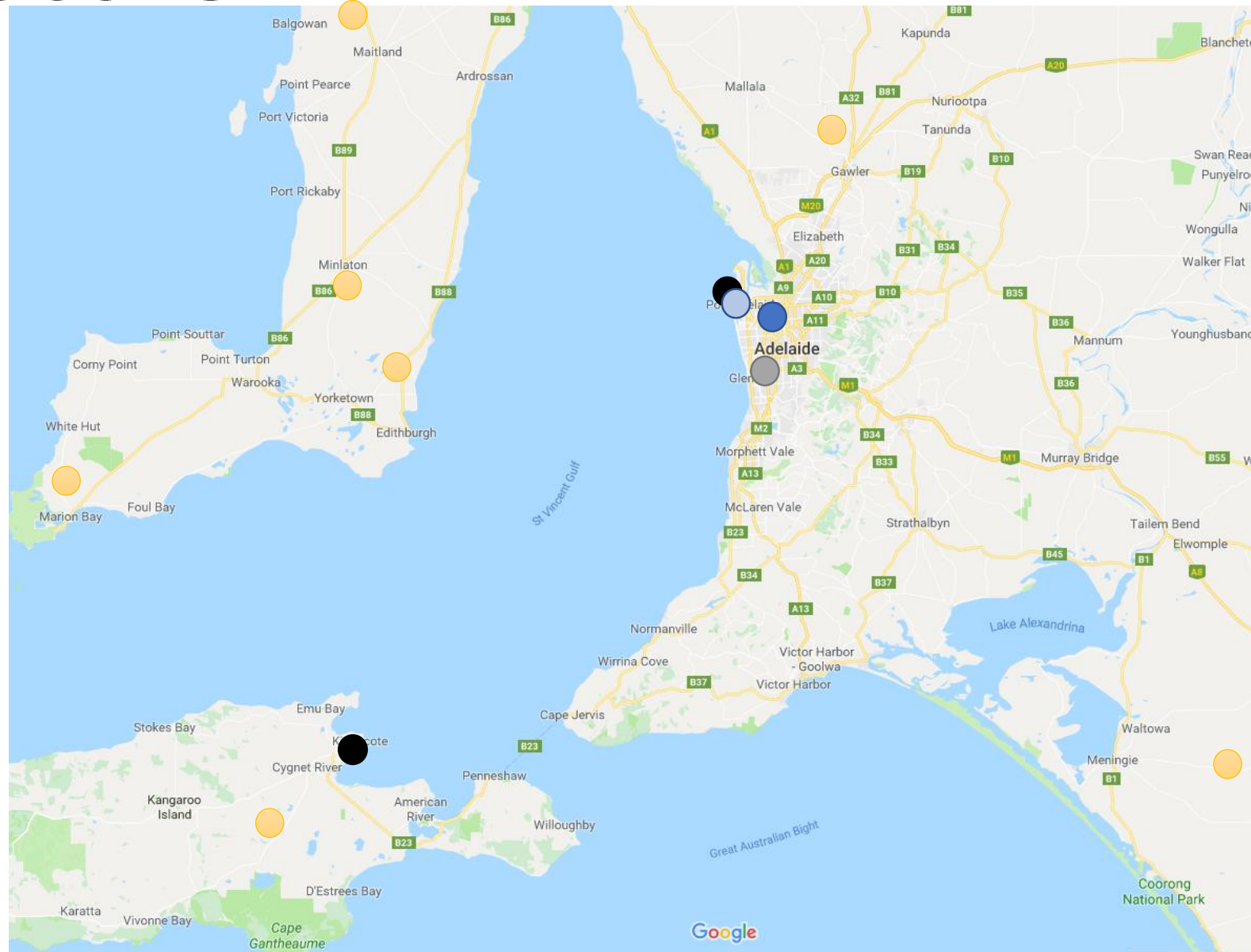


Integrated scenario analysis



Regional factors

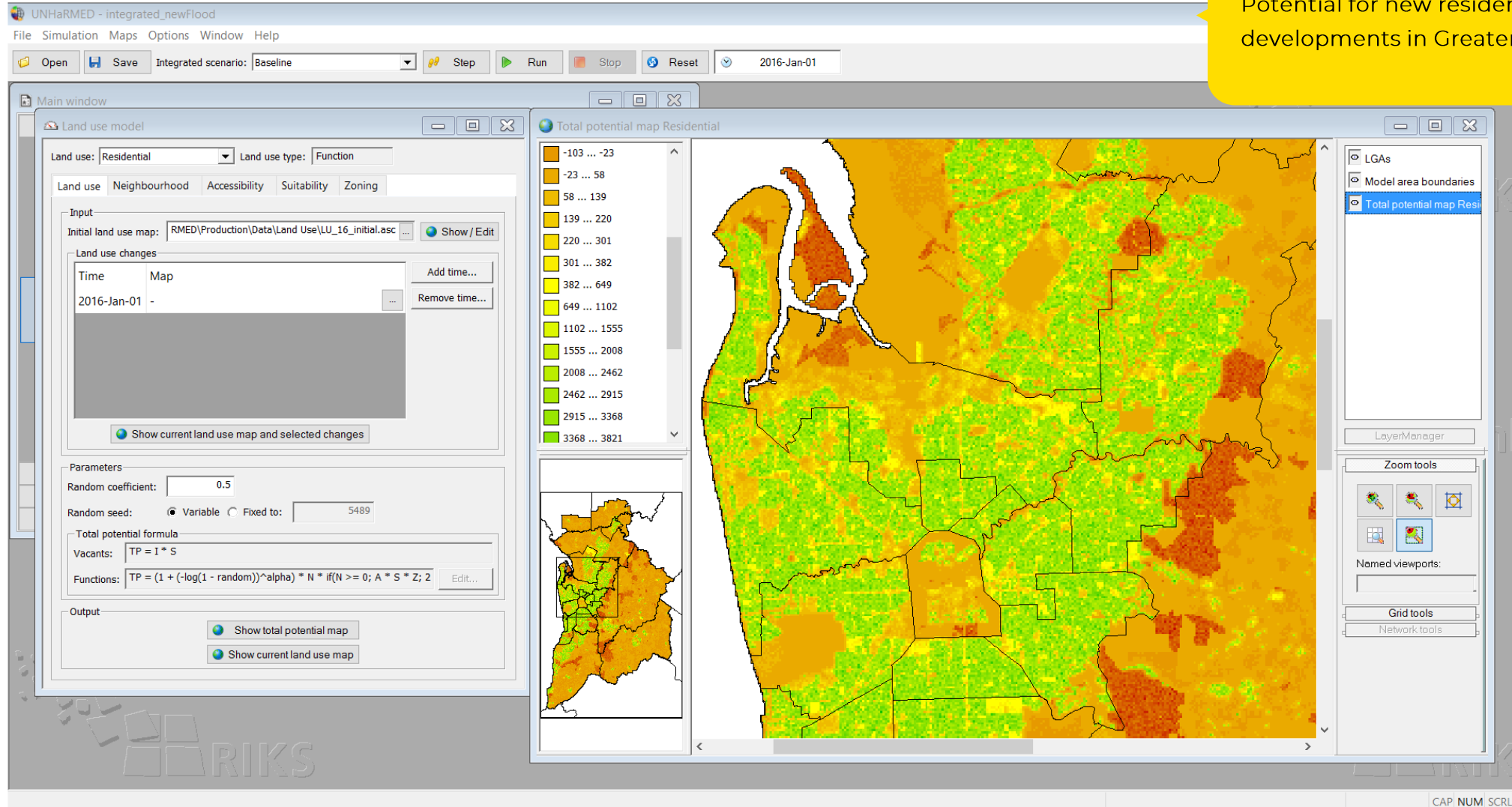
- Coopers Regency Park Brewery
- Ports
- Adelaide Airport
- Malting facility
- Malt barley sources



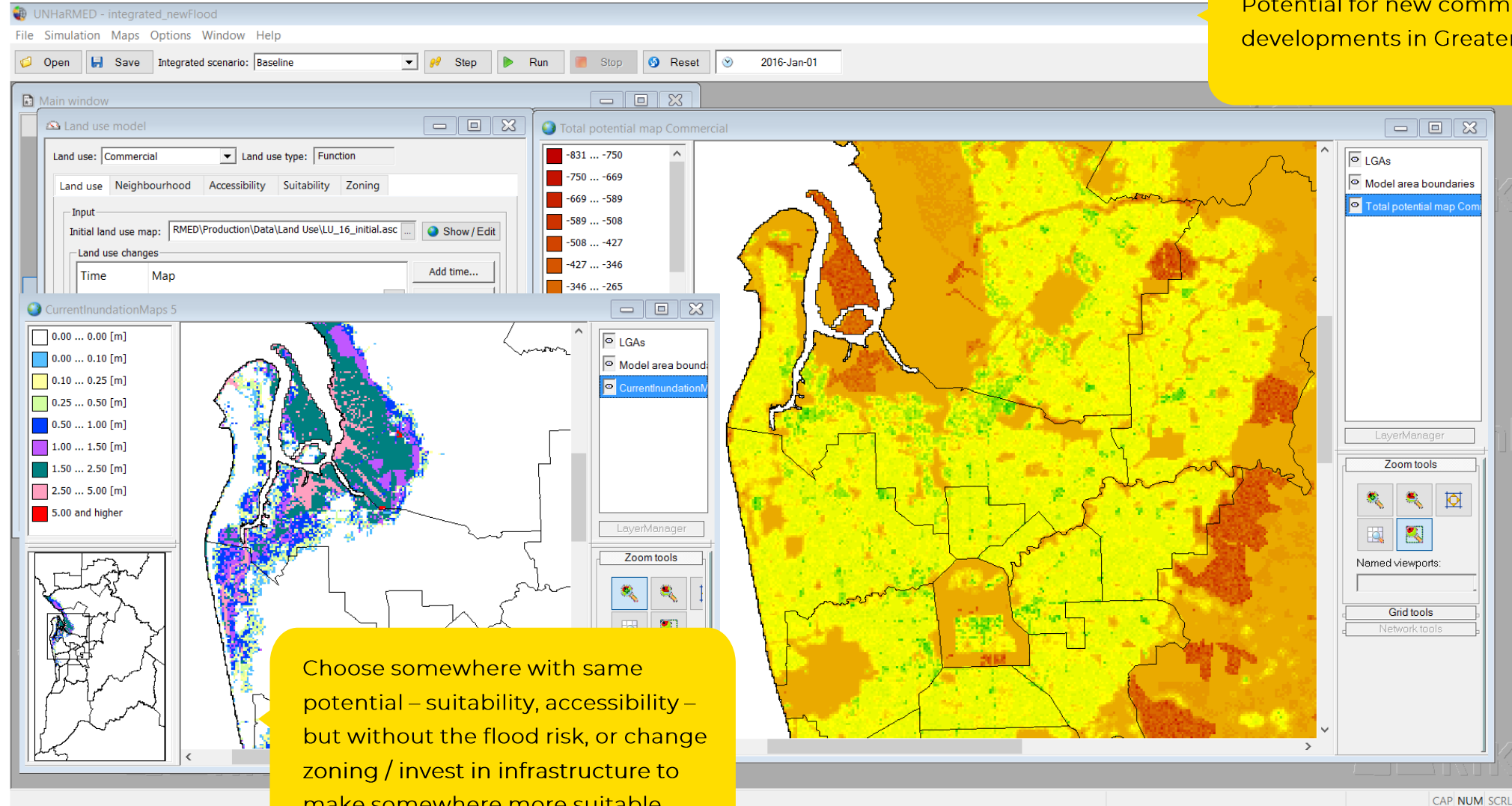
Locations indicative only and are not be a true reflection of exposure or assets

Future developments

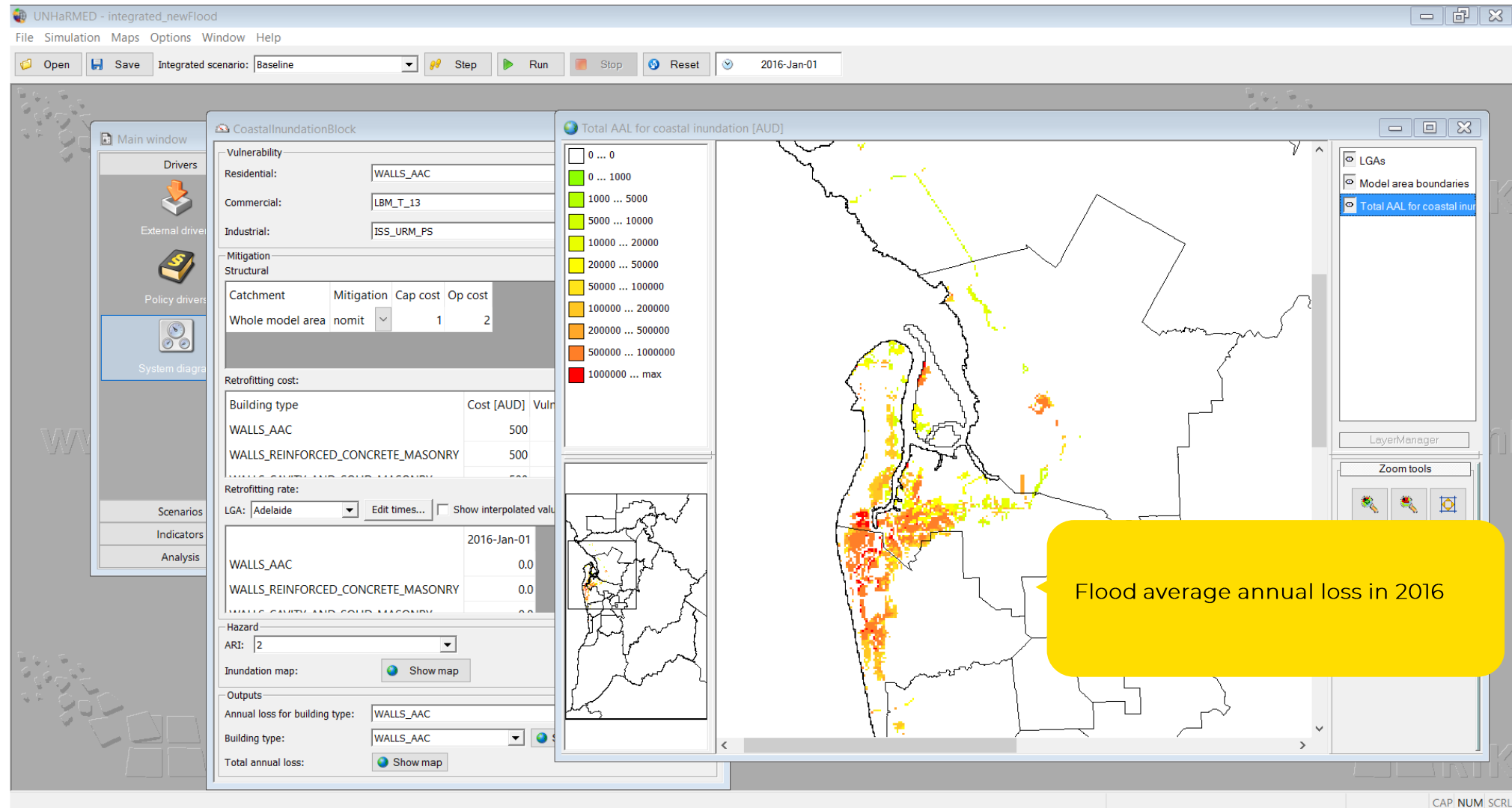
Potential for new residential developments in Greater Adelaide



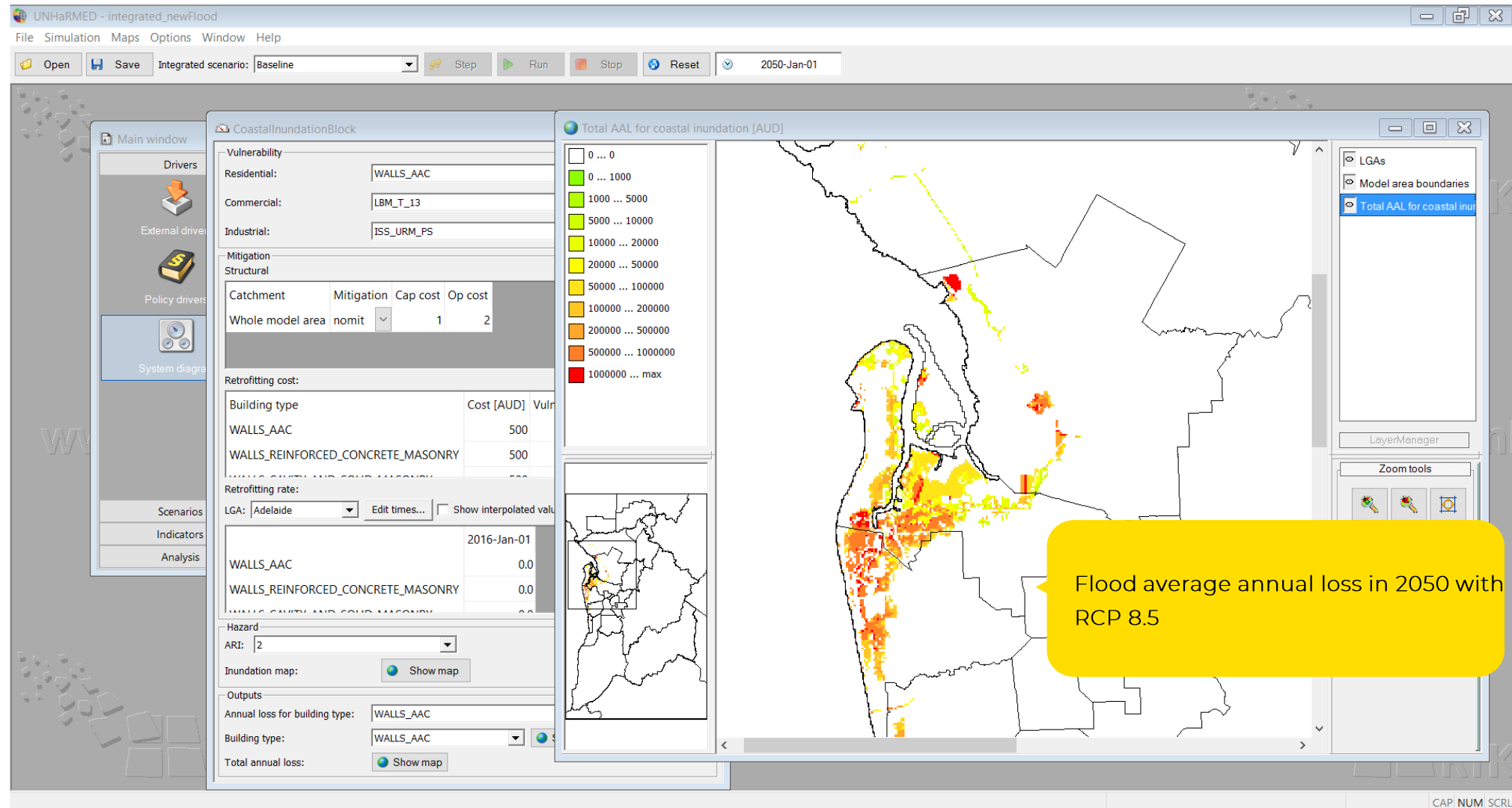
Future developments



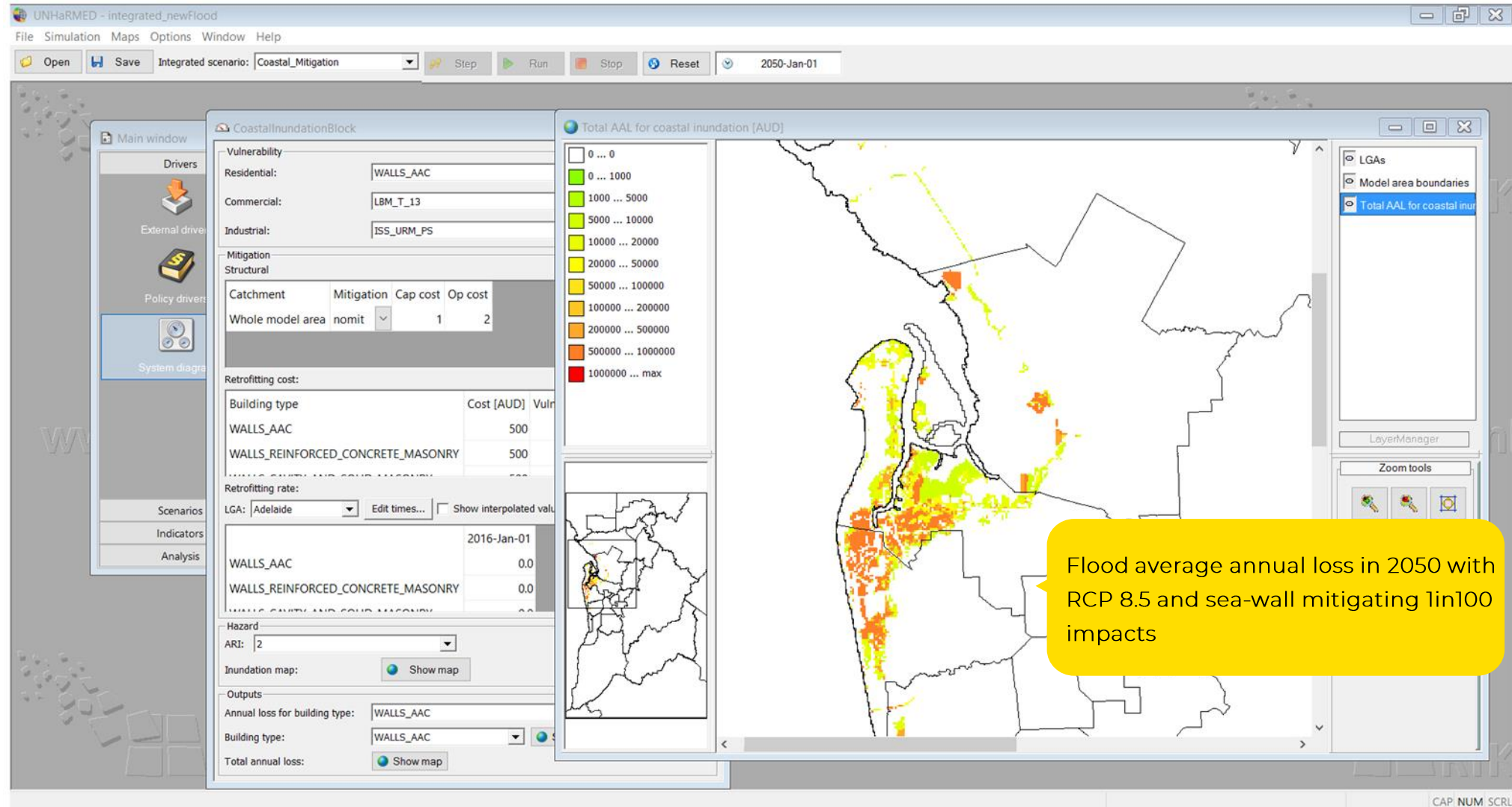
Adaptation investment



Adaptation investment



Adaptation investment



There are mechanisms to deal with risks;
need to capture complexity of physical
risk into these.
Particular challenges with
dependencies, secondary impacts

Existing risk frameworks & models
– consider your exposures &
vulnerabilities – think systems

Where next?

Regional multi-physical
risk modelling

This is the base information you need to
assess current and future risk
**Determining relevant risk drivers &
metrics is critical**

Using regional risk modelling to inform financial risk and opportunities

Challenging and relevant scenario
analysis

Assumptions for scenario analysis should
challenge relevant sectors and
vulnerabilities. Scenarios represent just
one representative future – choose a
hard one!

With an understanding of risks now and
into the future look for opportunities with
future investments 1) to develop resilience,
2) support adaptation measures, 3)
influence future developments

Look for risks, opportunities,
adaptation mechanisms

Where next?

Using regional risk modelling to inform financial risk and opportunities

There are mechanisms to deal with risks;
need to capture complexity of physical
risk into these.

Particular challenges with
dependencies, secondary impacts

Regional multi-physical
risk modelling

Challenging and relevant scenario
analysis

With an understanding of risks now and
into the future look for opportunities with
future investments 1) to develop resilience,
2) support adaptation measures, 3)
influence future developments

Existing risk frameworks & models
– consider your exposures &
vulnerabilities – think systems

This is the base information you need to
assess current and future risk

**Determining relevant risk drivers &
metrics is critical**

Assumptions for scenario analysis should
challenge relevant sectors and
vulnerabilities. Scenarios represent just
one representative future – choose a
hard one!

Look for risks, opportunities,
adaptation mechanisms

Thank you

Graeme Riddell
+61 405 710 645

graeme.riddell@adelaide.edu.au