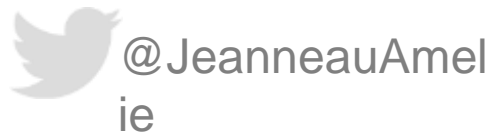


Identification of emerging wildfire risk hotspots due to changes in climate and population in Western Australia

Amelie Jeanneau



Hedwig van Delden, Holger Maier, Aaron Zecchin, Roel Vanhout, Tim McNaught, Mike Wouters



8TH
INTERNATIONAL
WILDLAND FIRE
CONFERENCE



FOR A SAFER STATE



Government of South Australia
Department for Environment
and Water



Natural
Hazards
Research
Australia

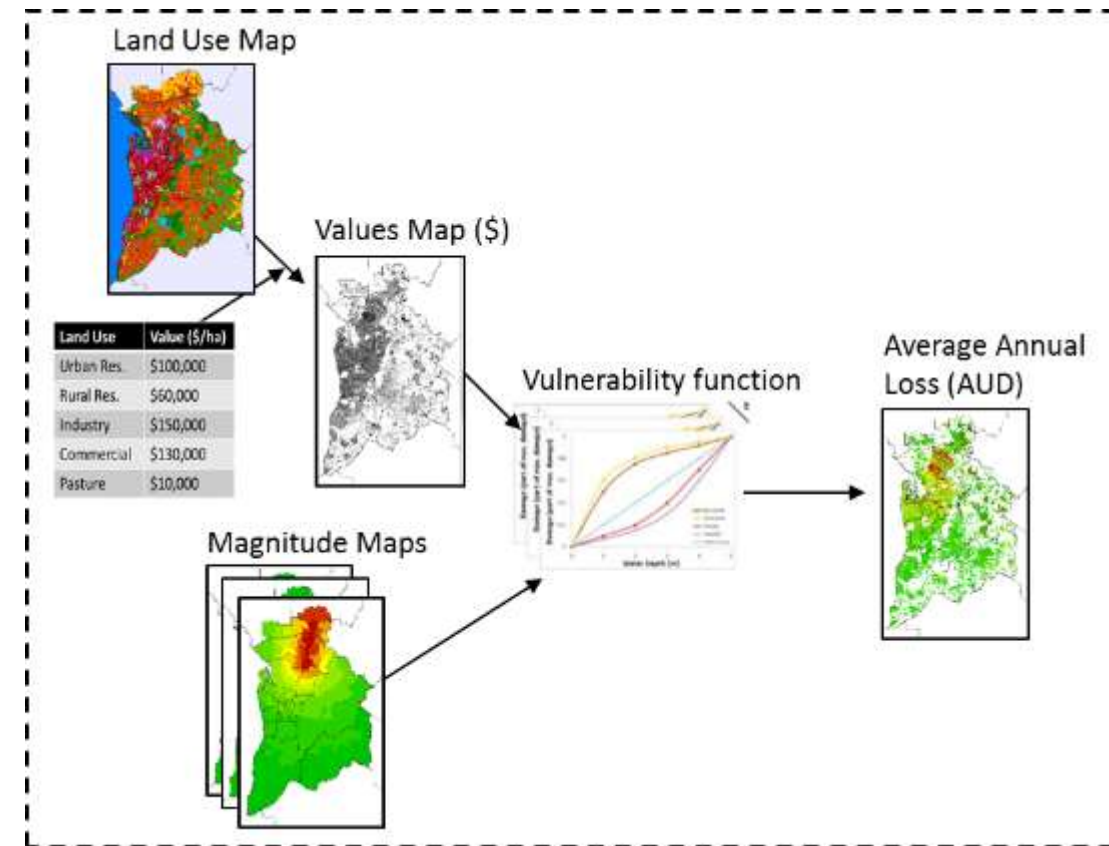




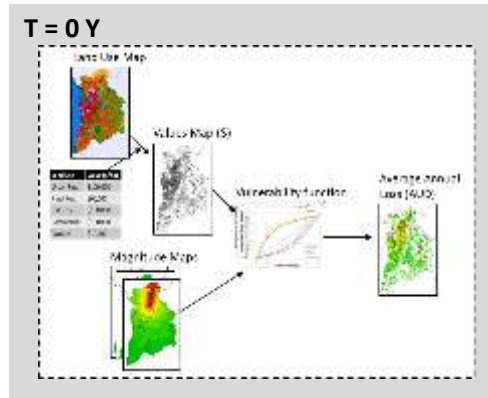
What is UNHaRMED?

A tool for pro-active disaster risk assessment and reduction planning

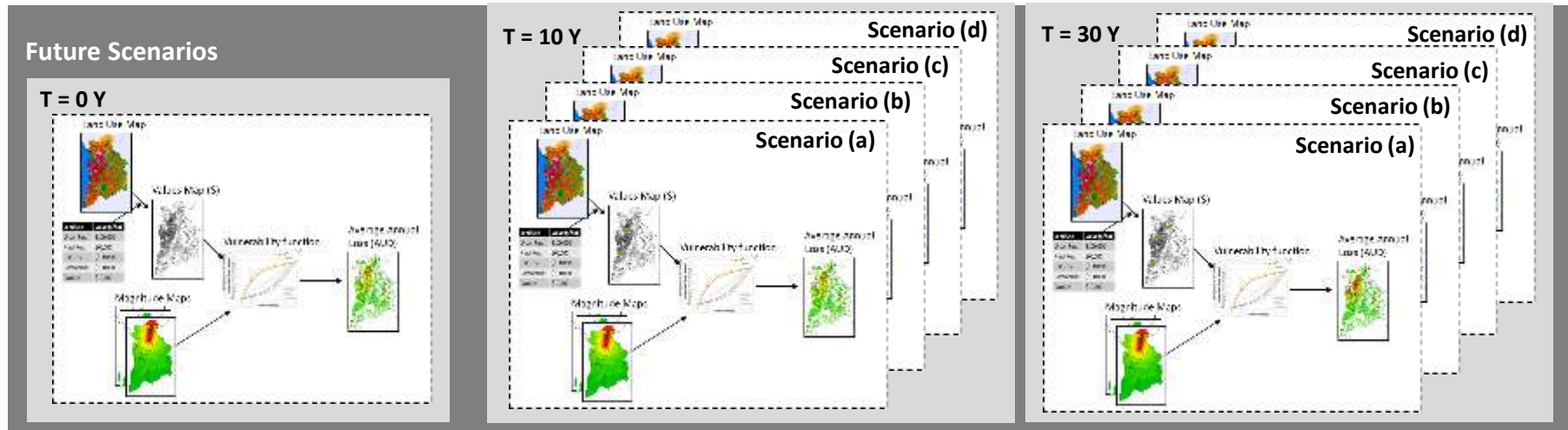
- **Interactive** modelling **platform** to assist decision making, investment choices and mitigation measures
- Considers **long-term dynamics** and **uncertainties** of hazard, exposure and vulnerabilities
- Assess the **effectiveness** of risk reduction measures



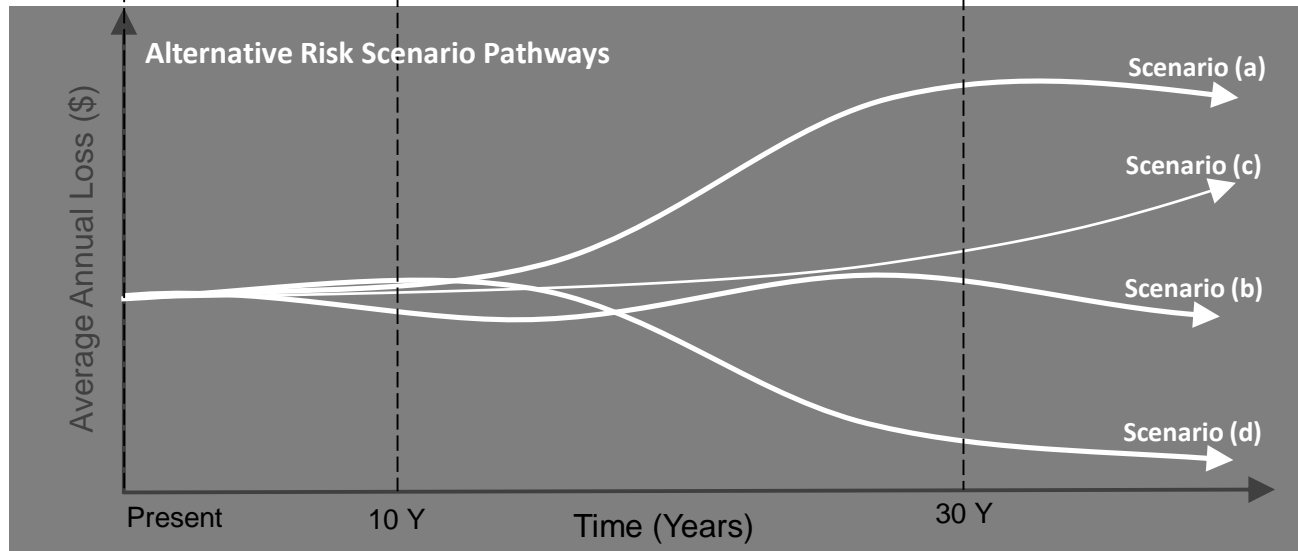
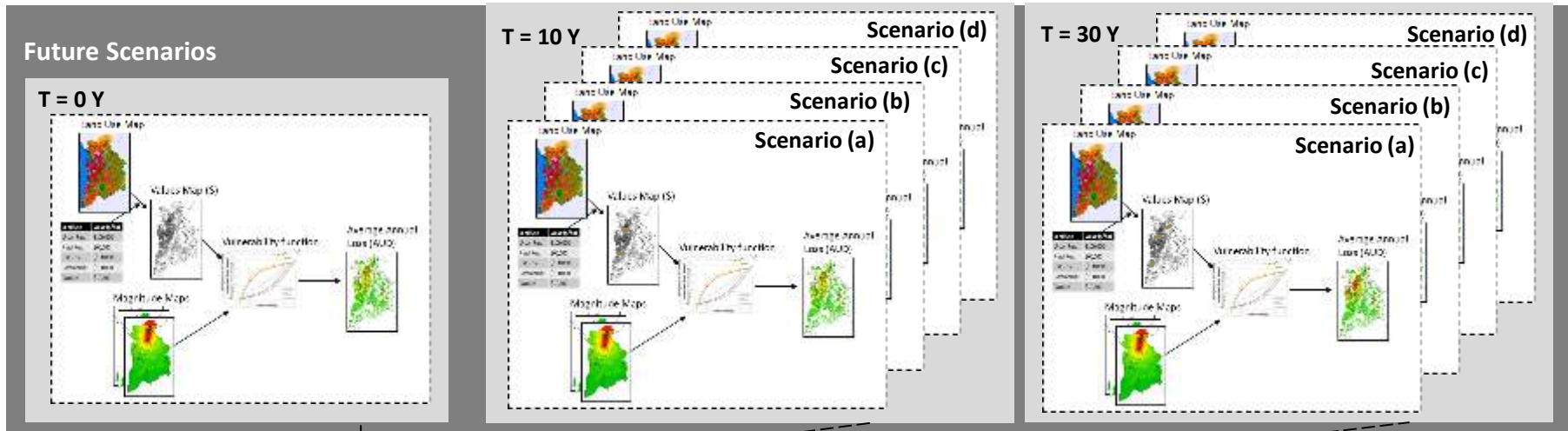
What is UNHaRMED?



What is UNHaRMED?



What is UNHaRMED?



How did we use UNHaRMED?

No change



Moderate change (RCP 4.5)



Severe change (RCP 8.5)



How did we use UNHaRMED?



CLIMATE CHANGE IN AUSTRALIA PROJECTIONS FOR AUSTRALIA'S MAIN REGIONS

PROJECTIONS BUILDER

1. PROJECT DETAILS

Title: [text input]
 Year: 2021
 Scenario: RCP4.5

2. VARIABLE SELECTION

Choose the variables you do not want to see in your final assessment.

Policy Medium-Duty Technology Energy Emissions Emissions Emissions
 Migration International Migration International Migration International Migration

Choose the sources for which you want data from the list below.

Births Deaths Migration Migration (2018-2020)
 Births Deaths Migration Migration (2018-2020)
 Births Deaths Migration Migration (2018-2020)
 Births Deaths Migration Migration (2018-2020)

3. REGION SELECTION

1. Select the regions you want to see in your final assessment.

<https://www.climatechangeinaustralia.gov.au/en/>

Australian Bureau of Statistics

Statistics Census Complete your survey About

Home > Statistics > People > Population > Population Projections, Australia > 2017 (base) - 2056

Print

Latest release

Date download

Population Projections, Australia

Population projections (based on assumptions of fertility, mortality and migration) for Australia, states and territories and capital cities

Reference period: 2017 (base) - 2056

Released: 22/11/2018 Next release: Unknown Previous releases

Key statistics

- Australia's population in 2017 (24.6 million) is projected to reach between 37.4 and 46.2 million people by 2056.
- The current average annual growth rate (1.7%) is projected to decline to between 0.9% and 1.4%.
- The median age (37.2 years) is projected to increase to between 50.5 and 43.0 years.

These projections are not predictions or forecasts. They are an assessment of what would happen to Australia's population if assumed levels of the components of population change (births, deaths and migration) were to occur between 2018 and 2056.

Users should assess the available assumptions and choose the combination that best suits their needs.

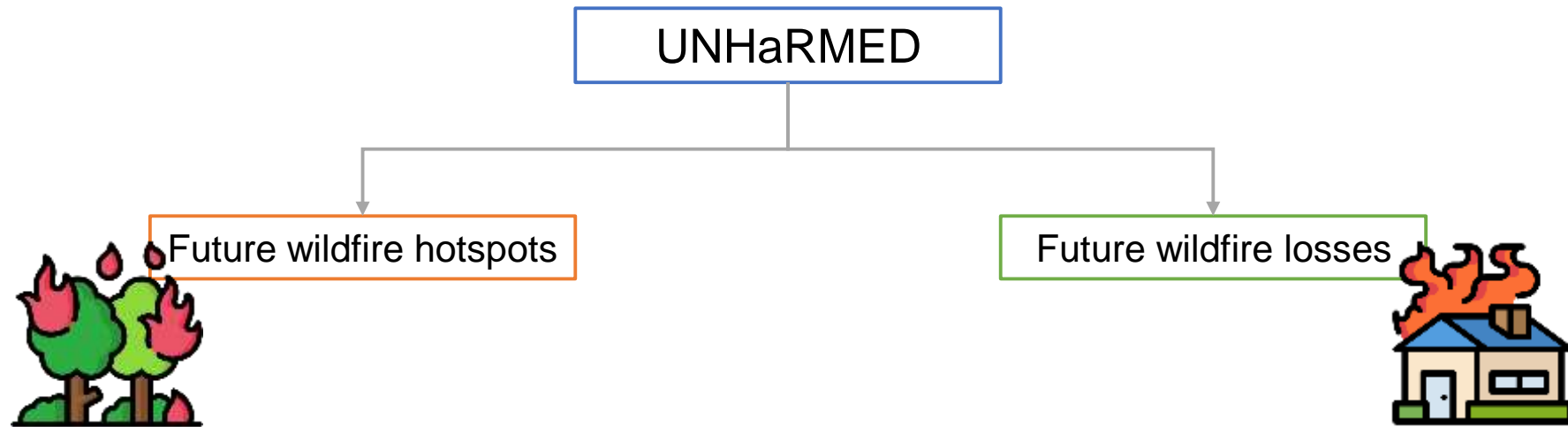
Assumptions

- Introduction
- Summary
- Projection series
- Fertility
- Mortality
- Net overseas migration
- Net interstate migration

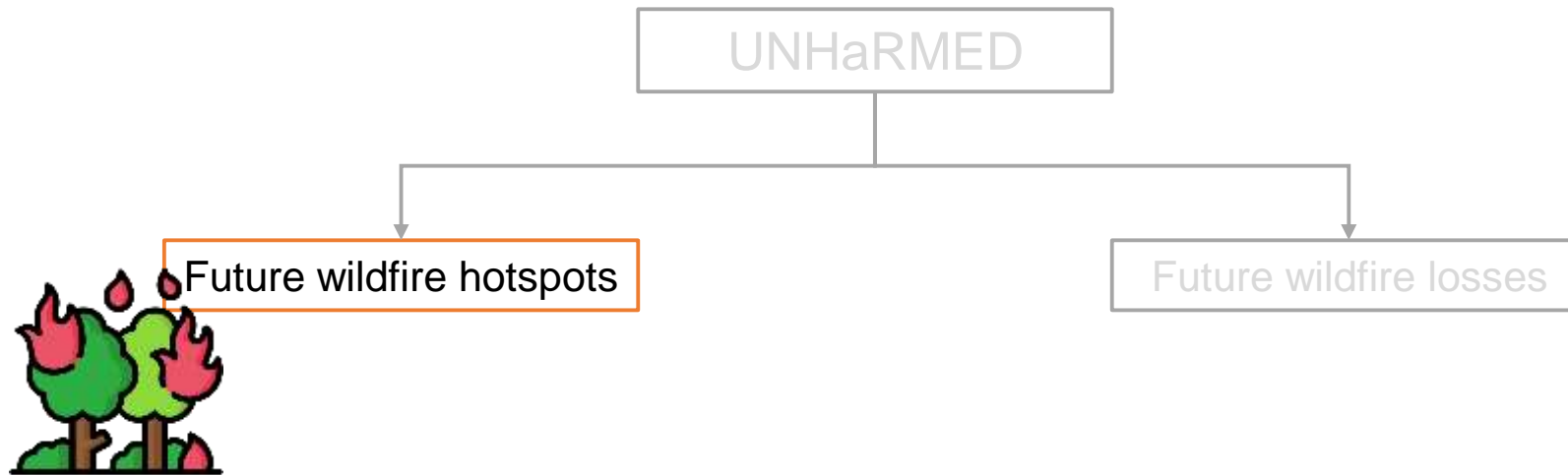
National

<https://www.abs.gov.au/statistics/people/population/population-projections-australia>

How did we use UNHaRMED?

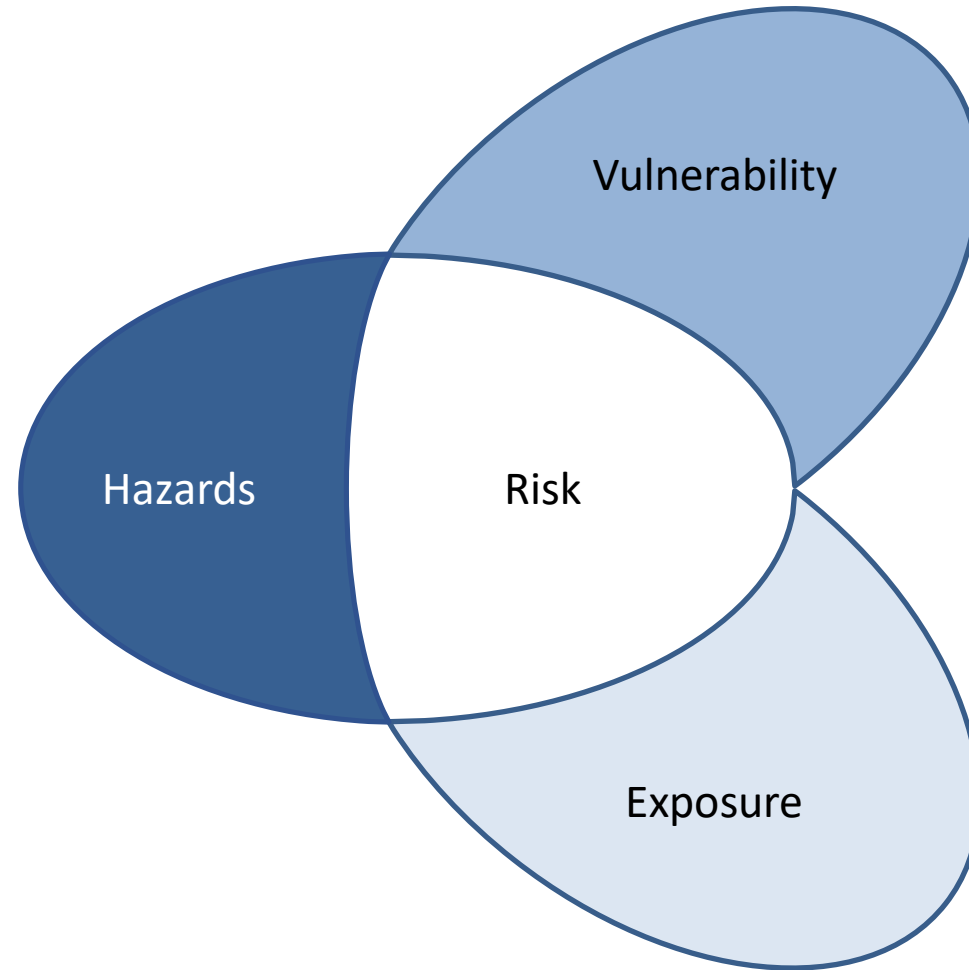


How did we use UNHaRMED?



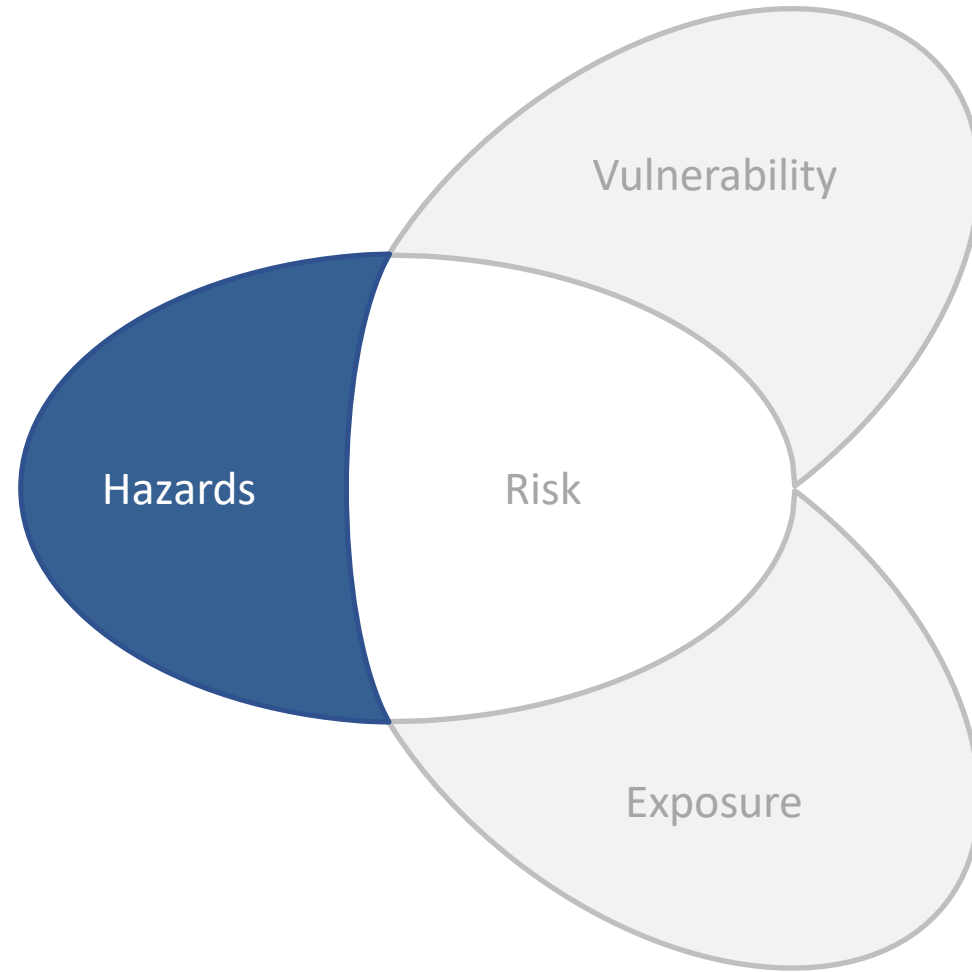
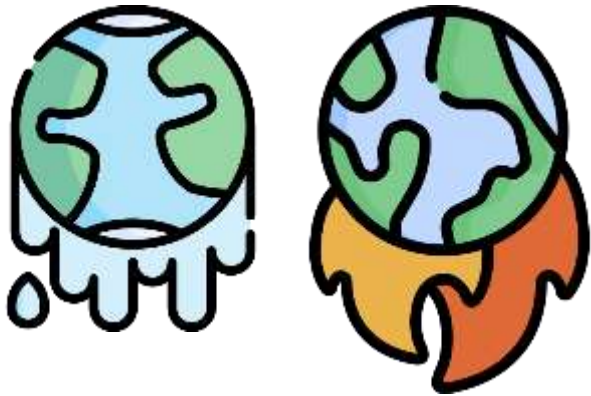


Future wildfire hotspots

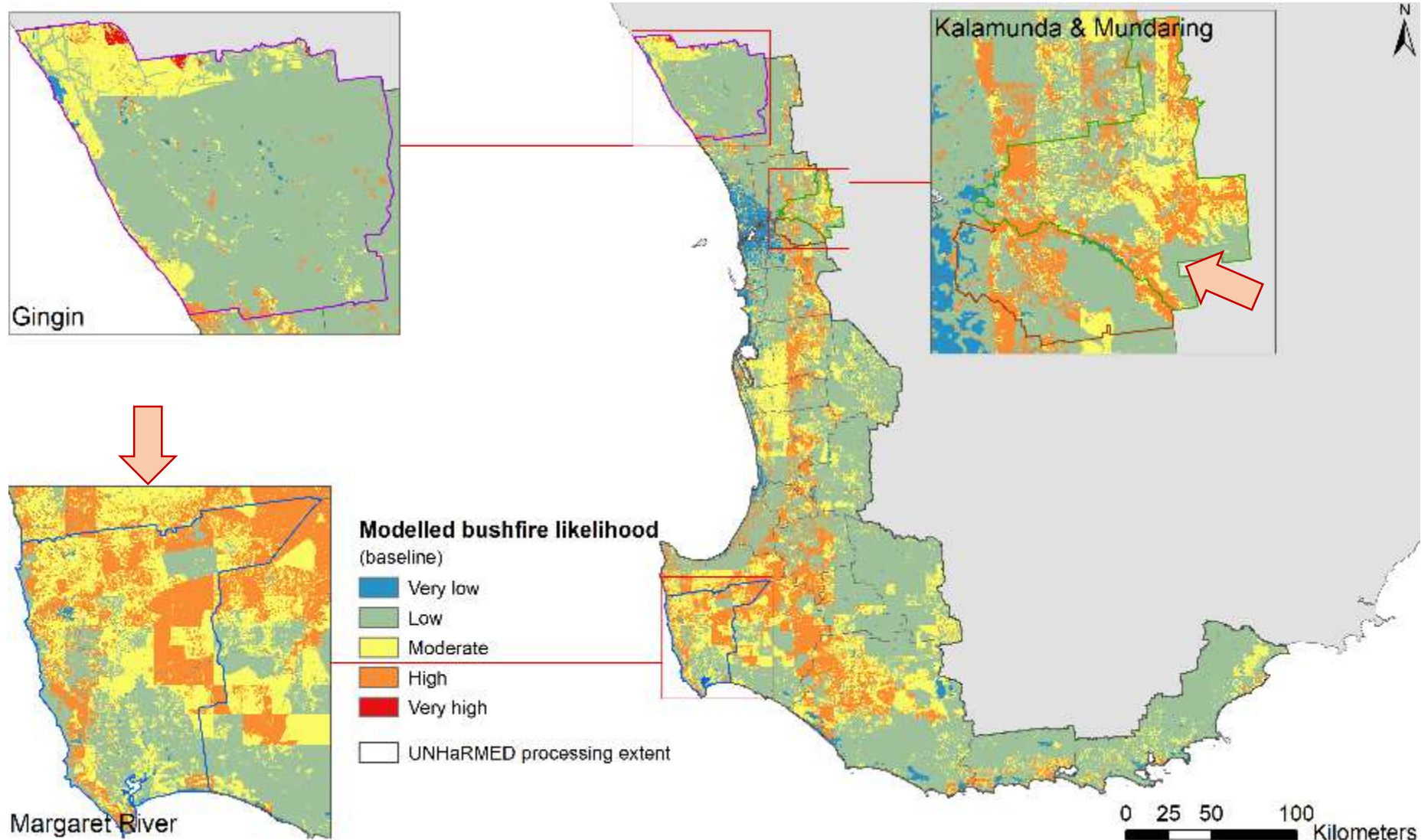




Future wildfire hotspots

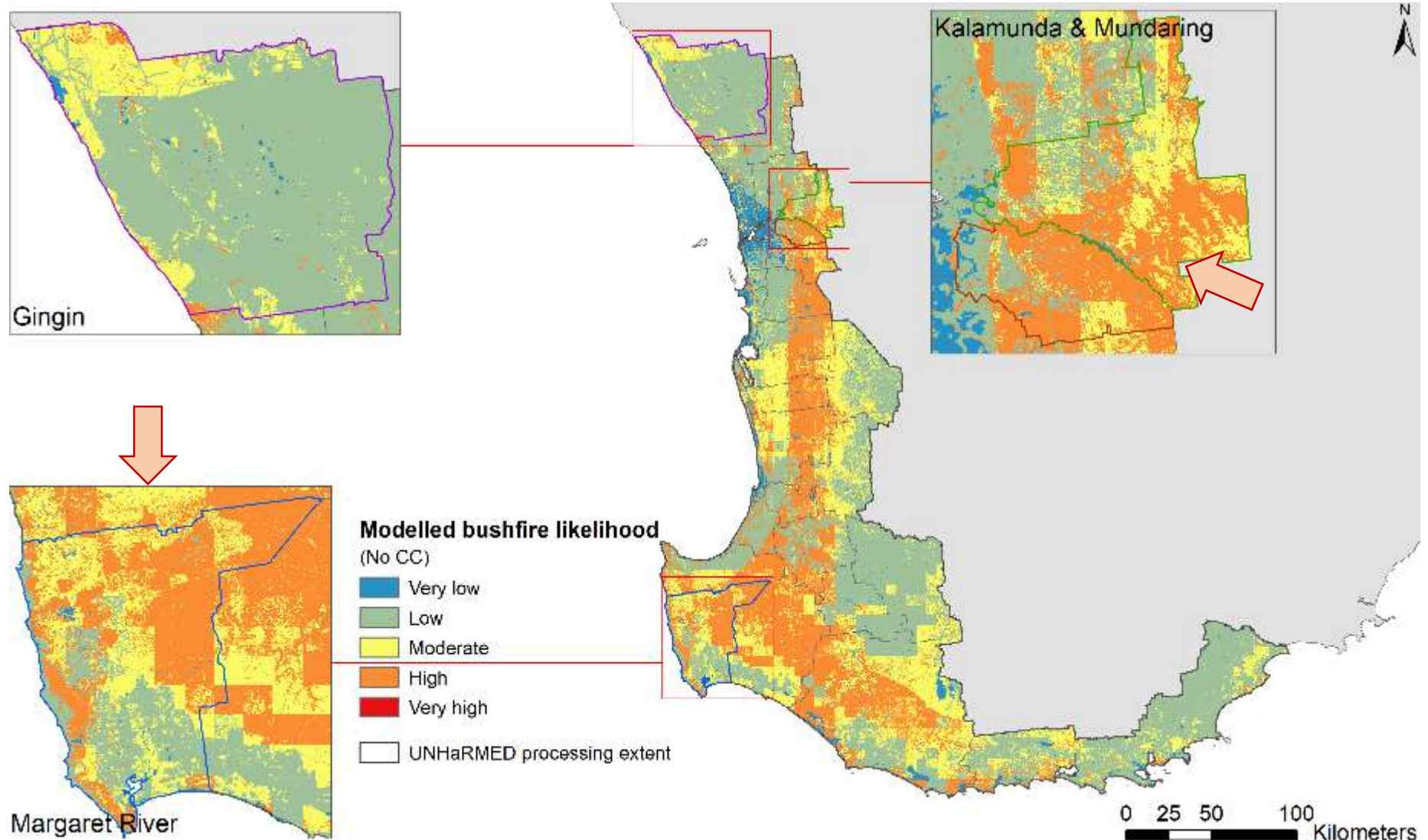


Future wildfire hotspots



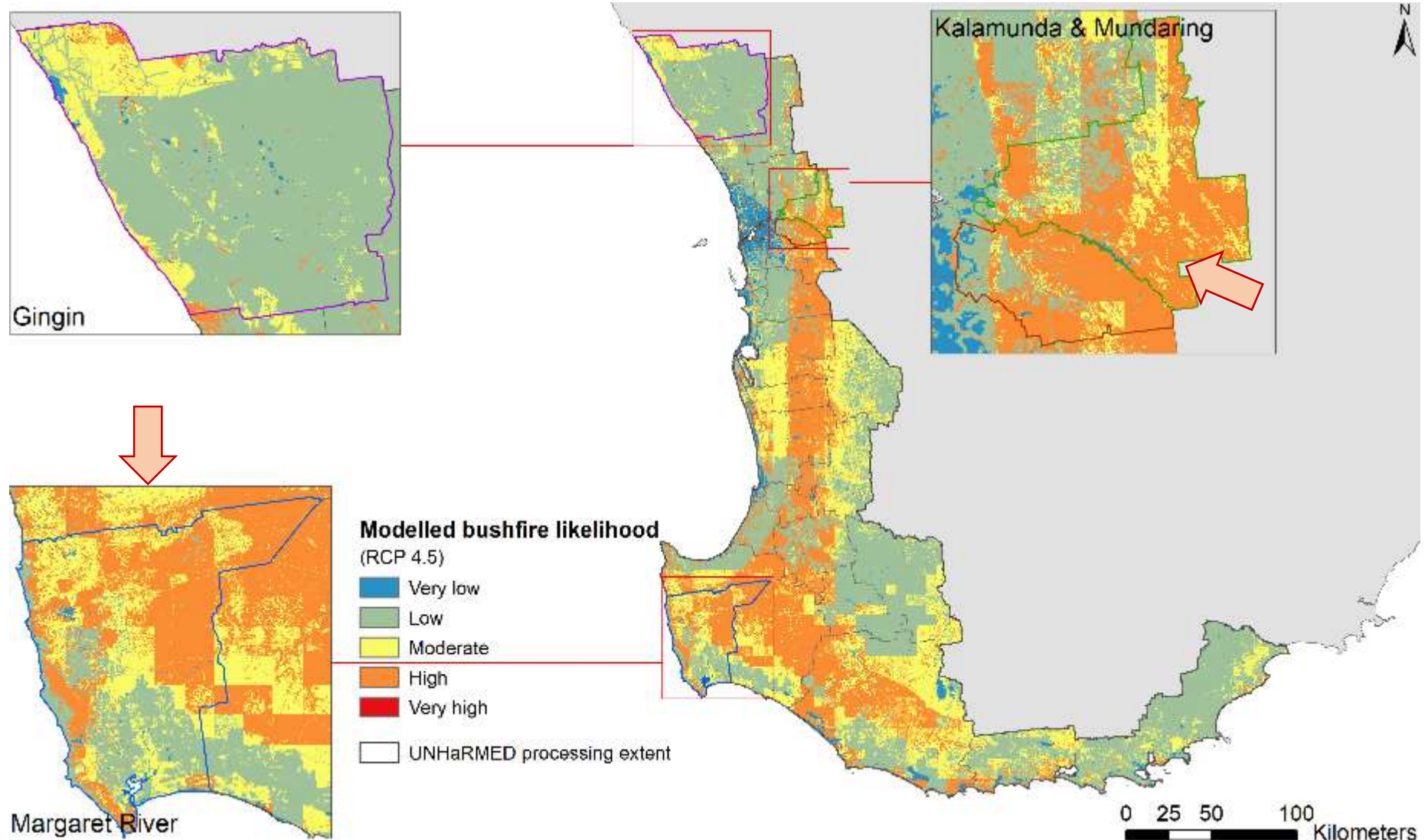


Future wildfire hotspots



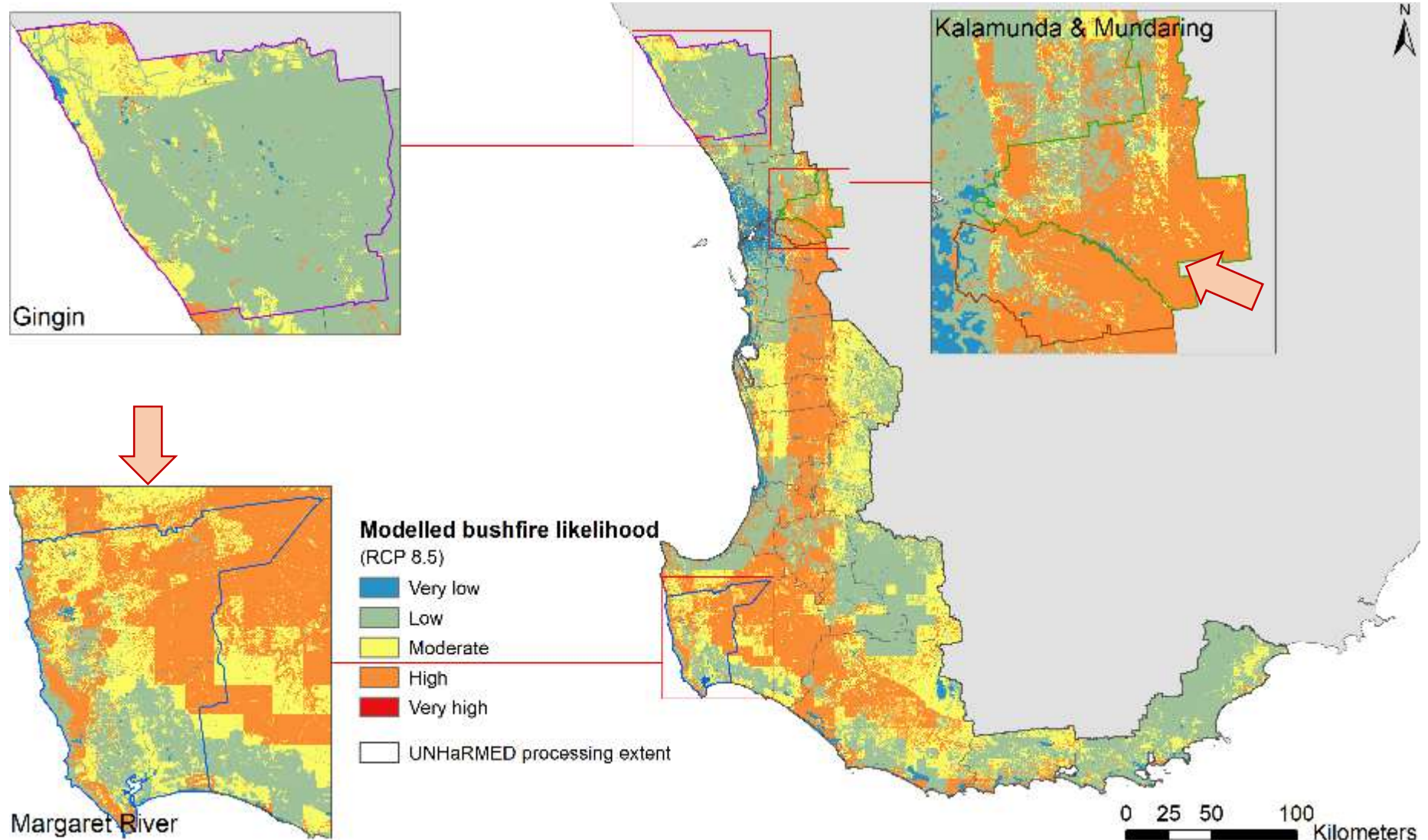


Future wildfire hotspots



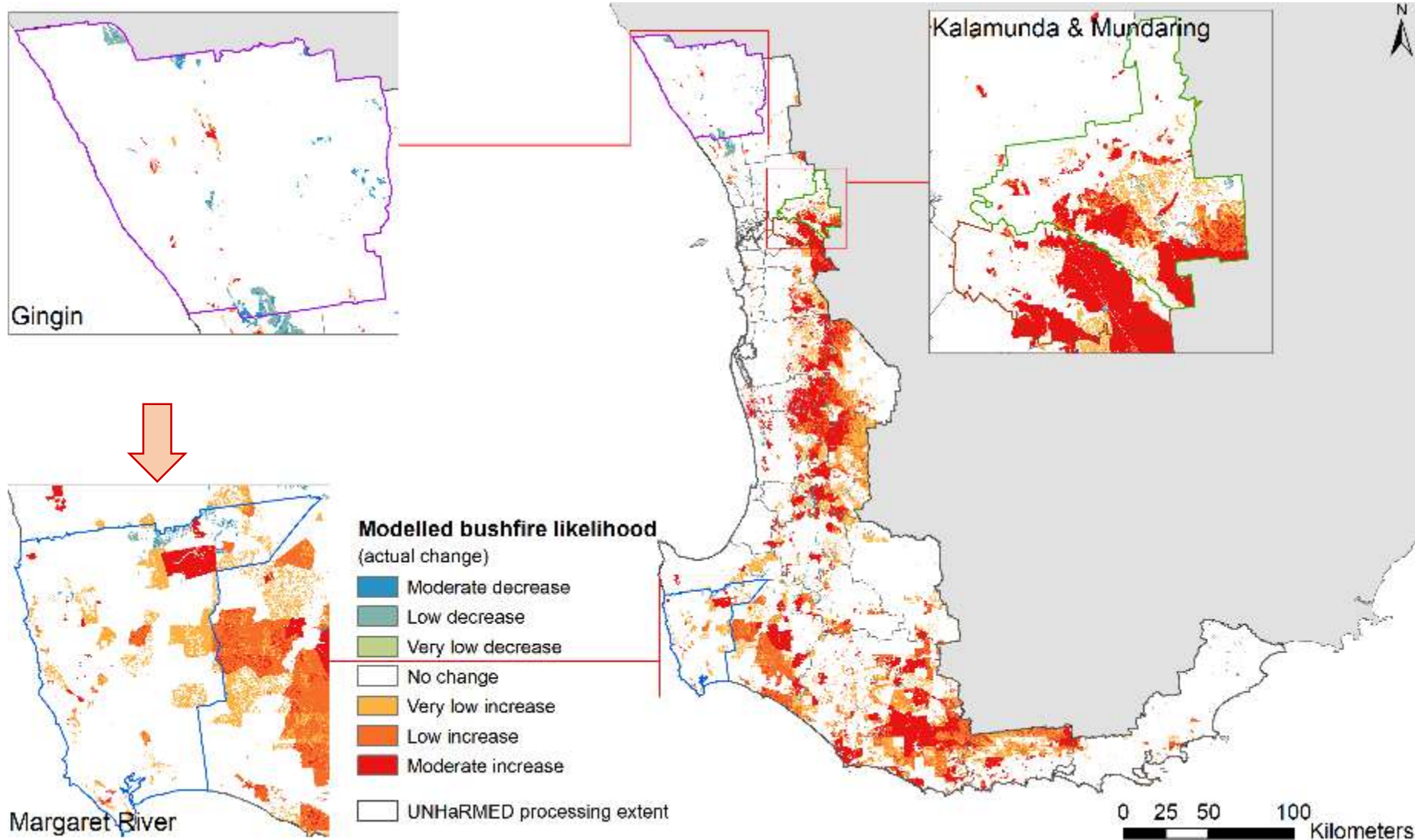


Future wildfire hotspots



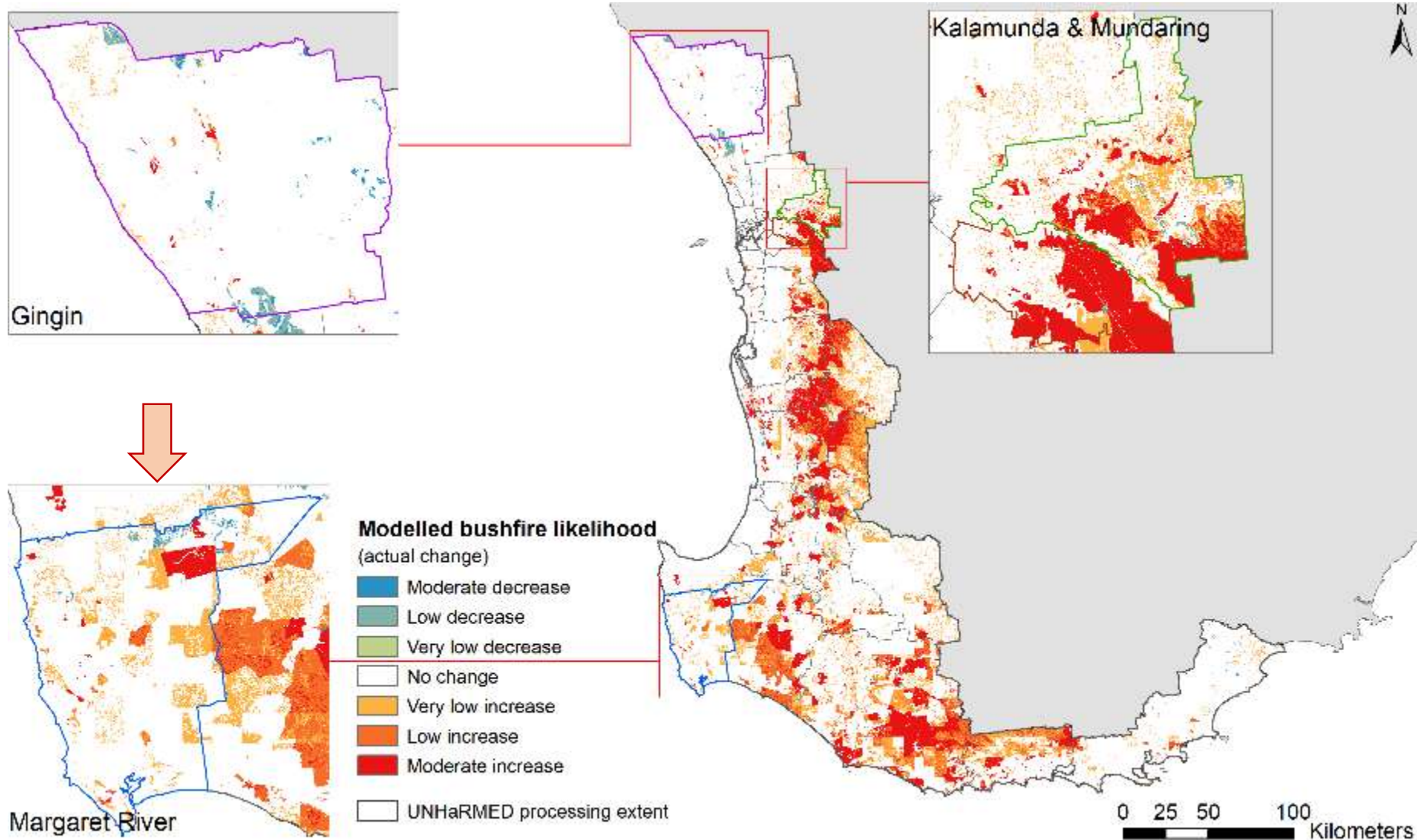


Future wildfire hotspots



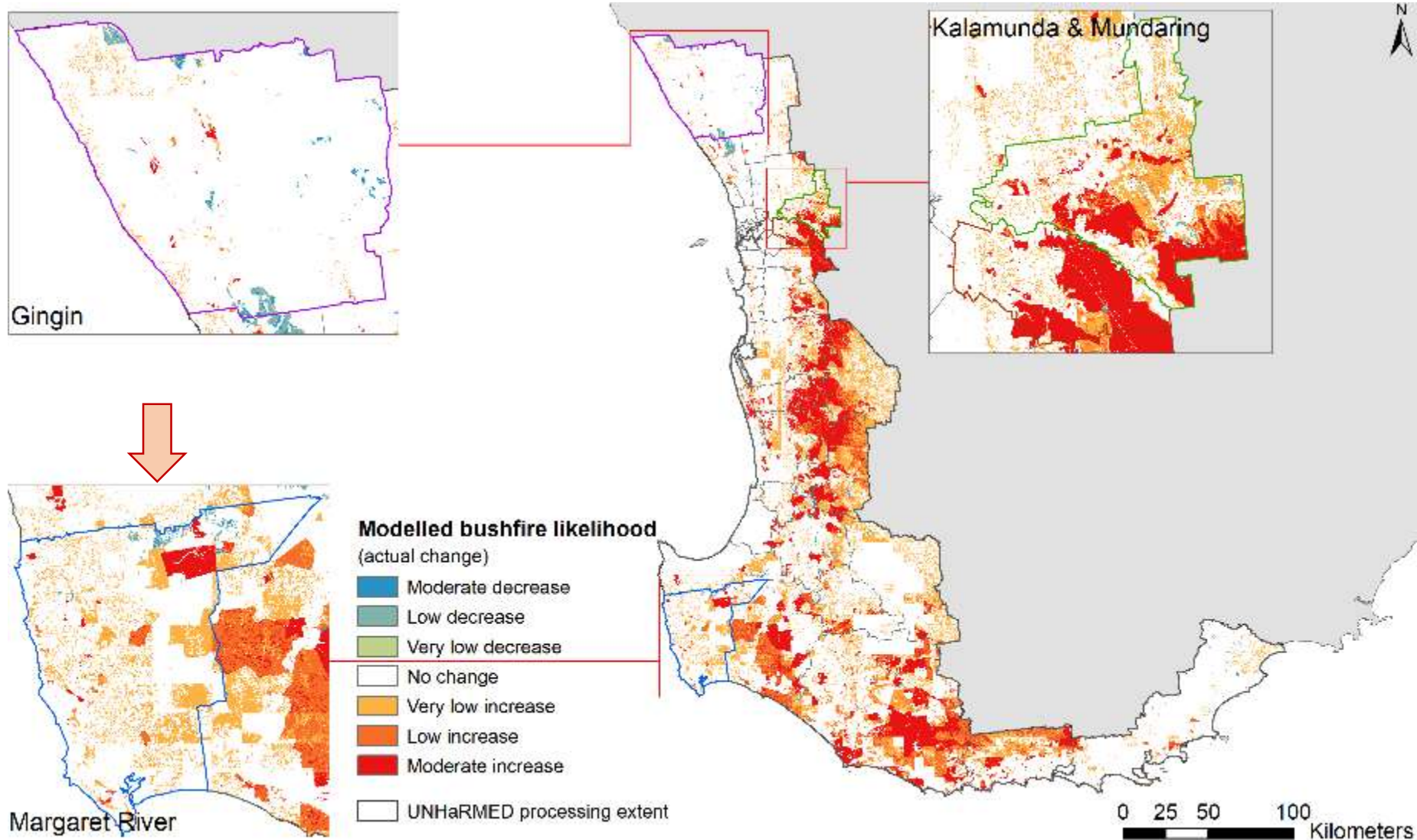


Future wildfire hotspots





Future wildfire hotspots

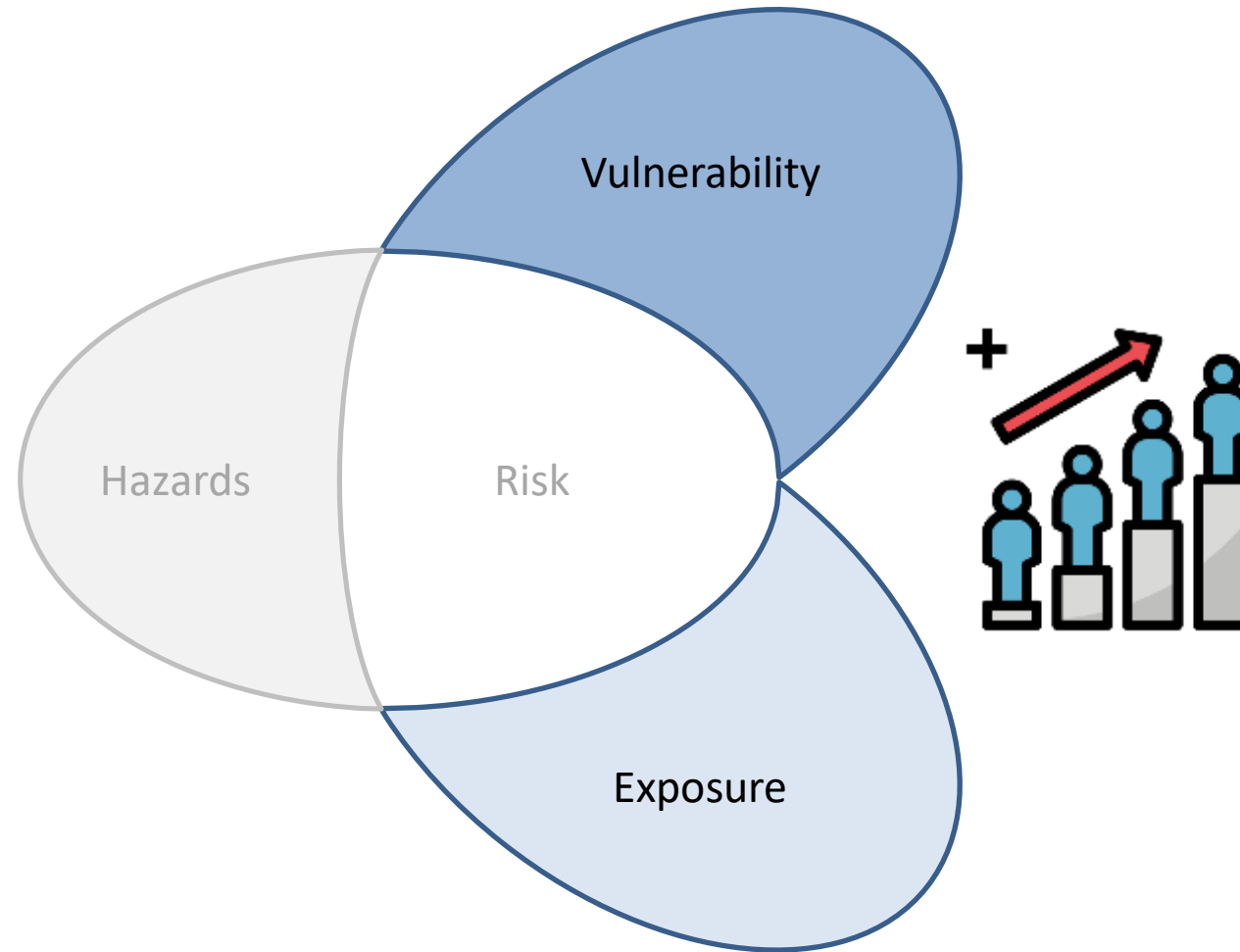


How did we use UNHaRMED?

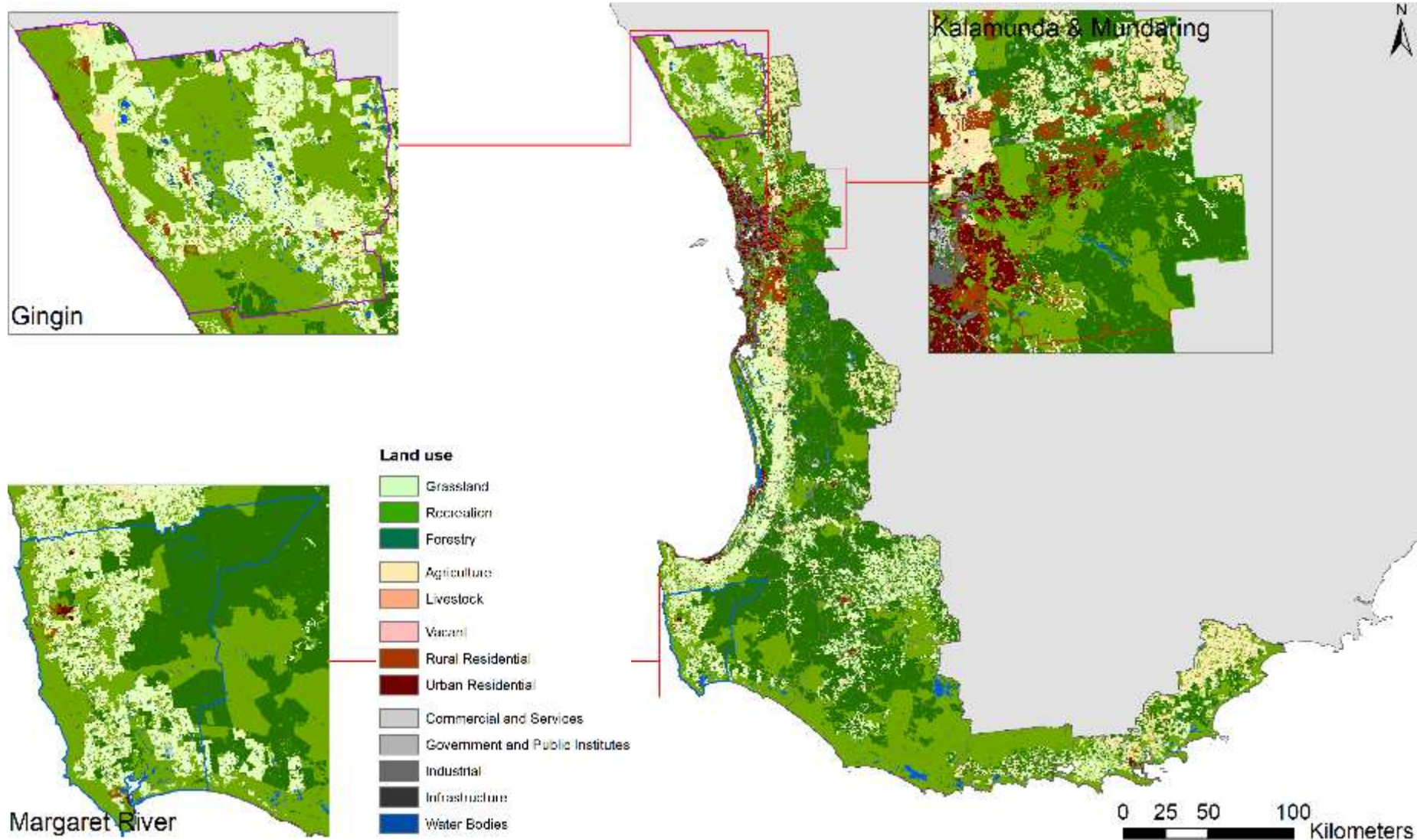




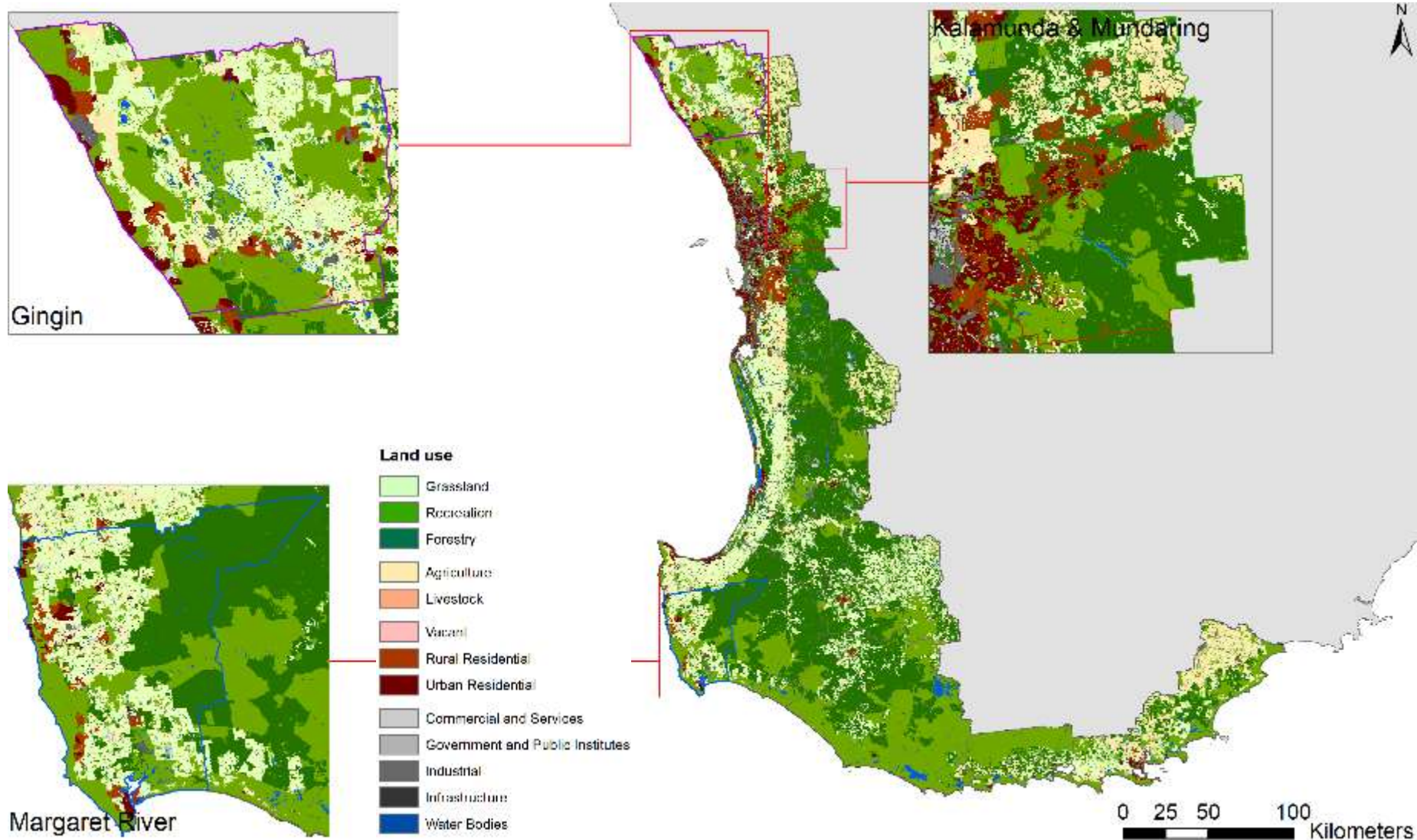
Future wildfire losses



Future wildfire losses

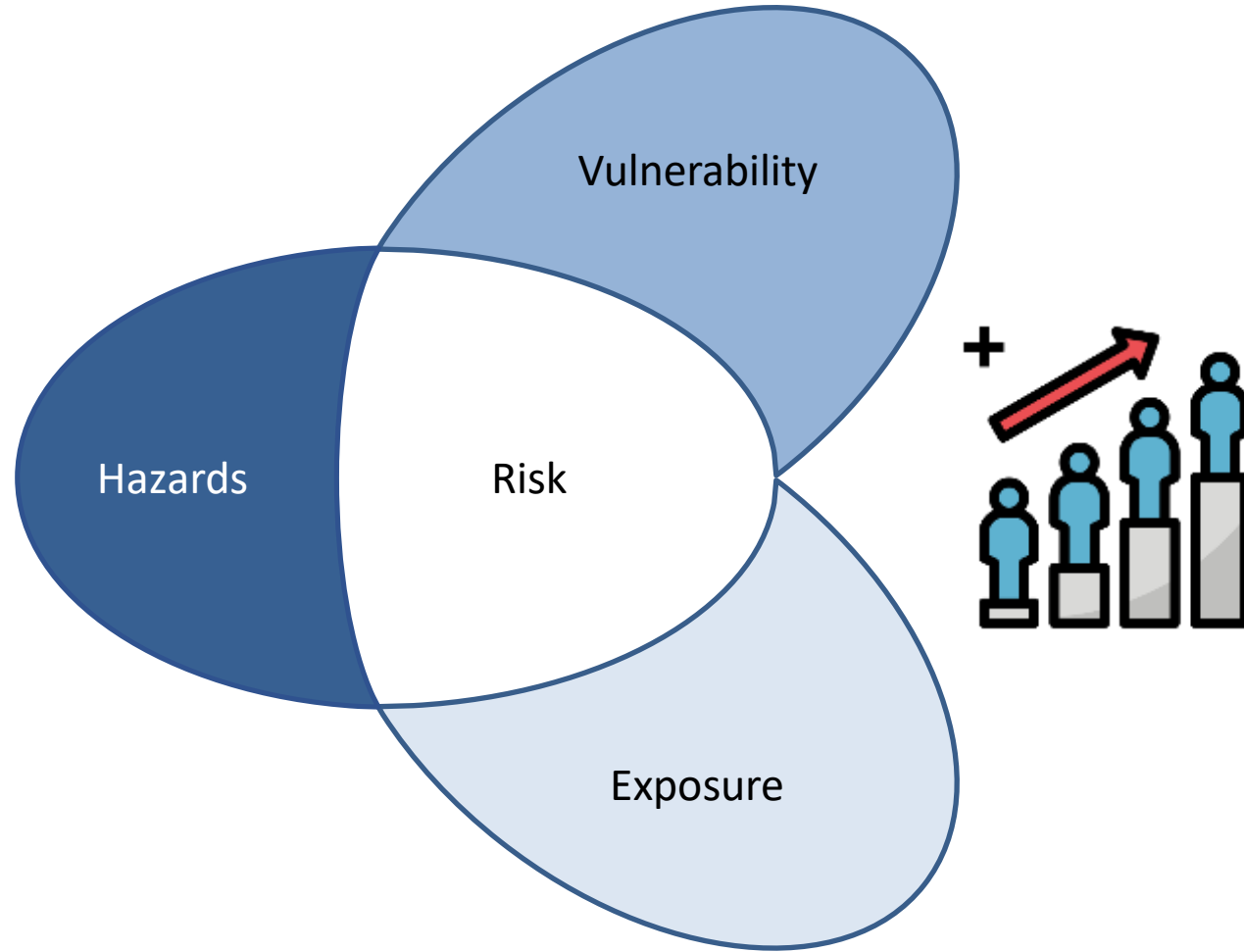
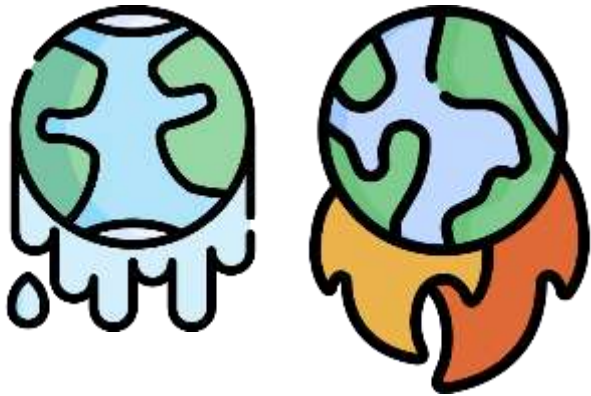


Future wildfire losses



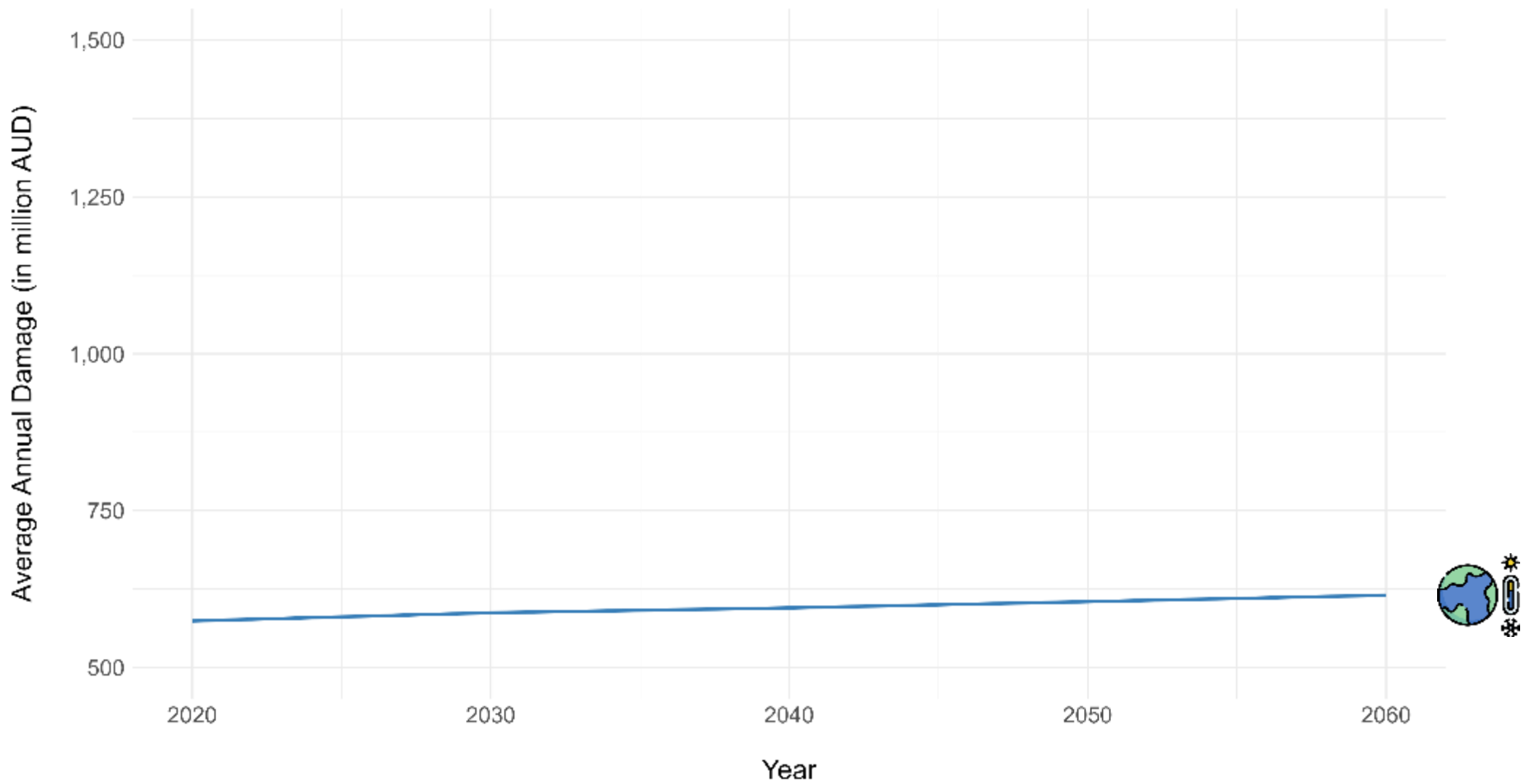


Future wildfire losses



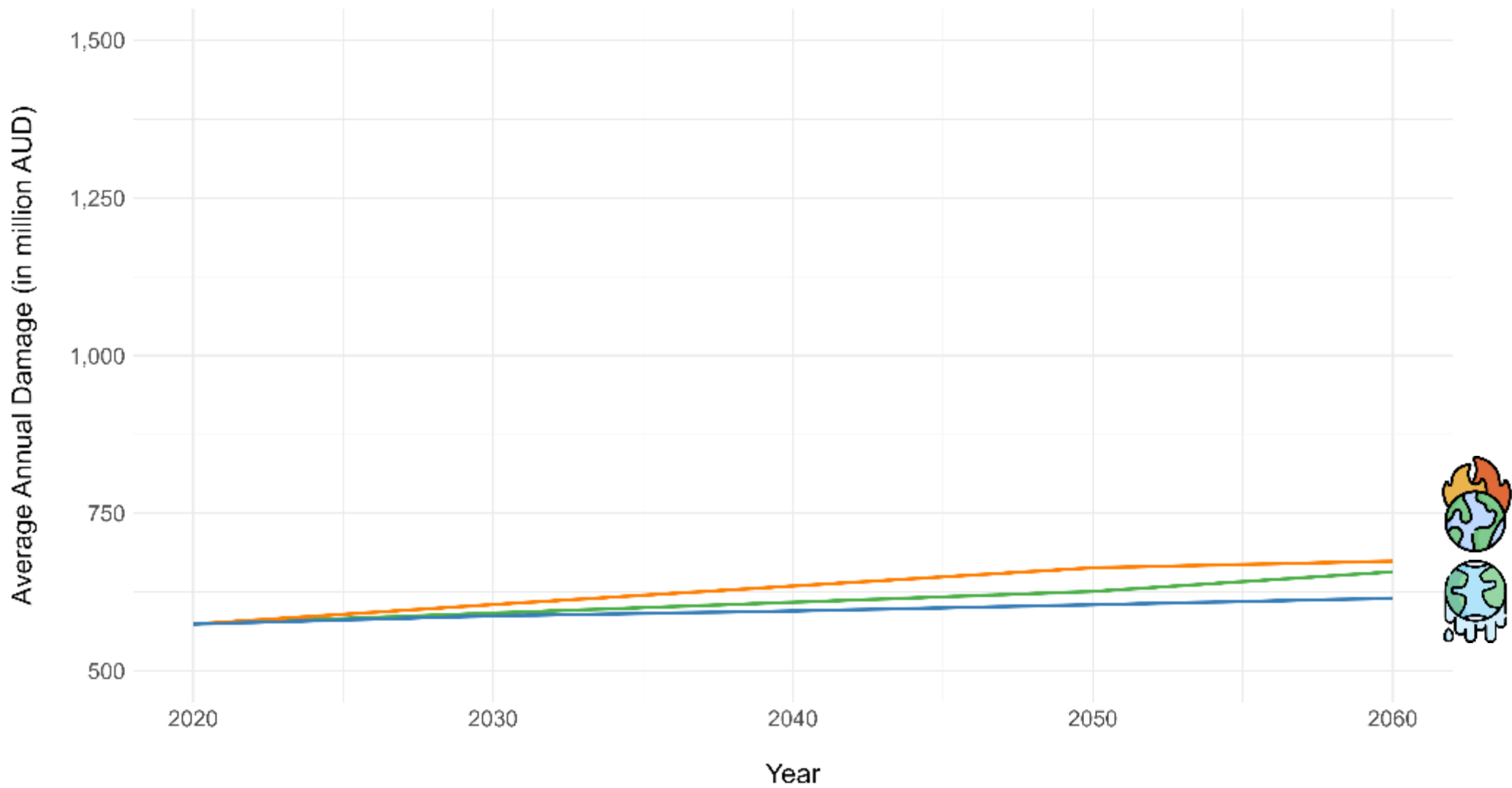


Future wildfire losses



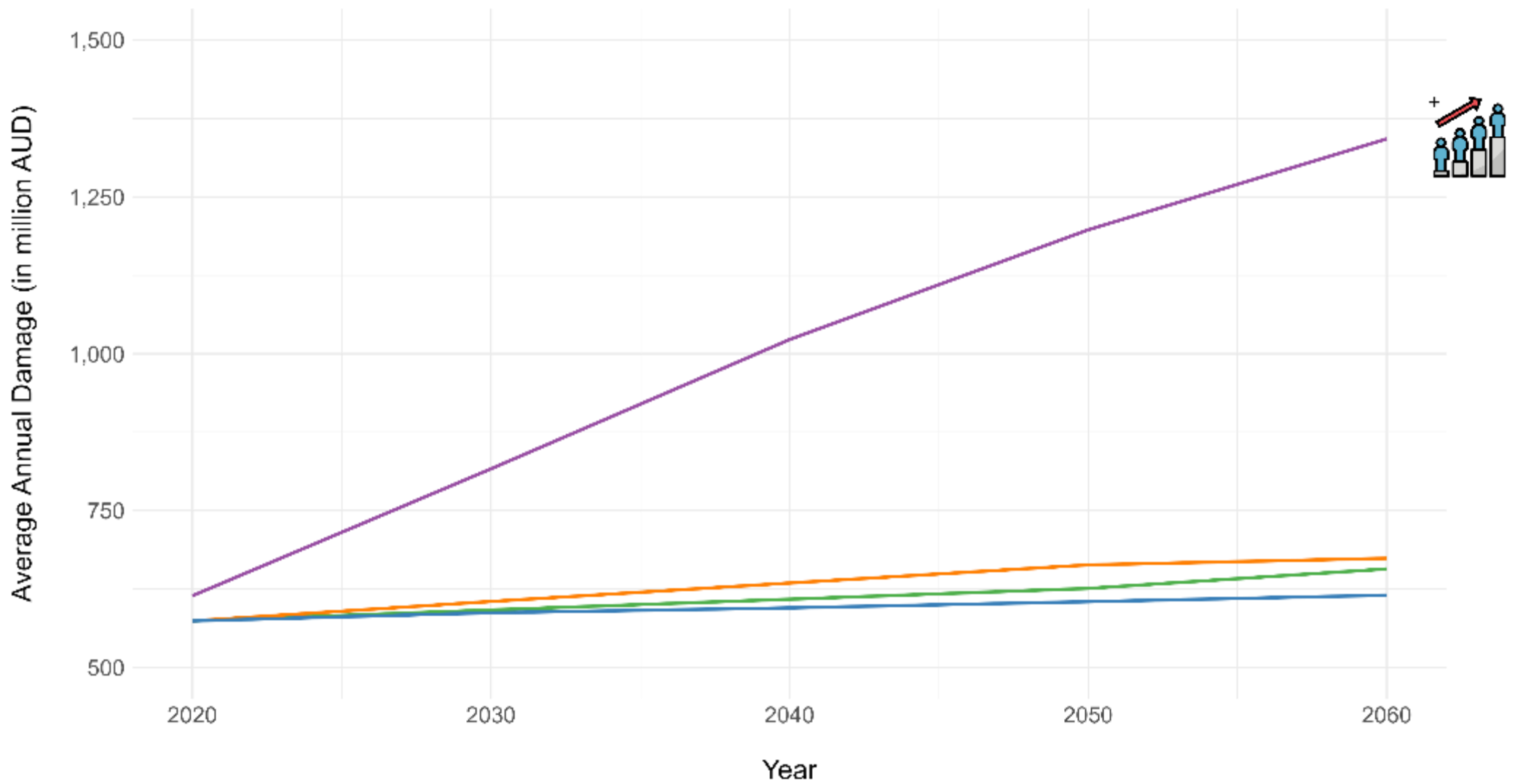


Future wildfire losses



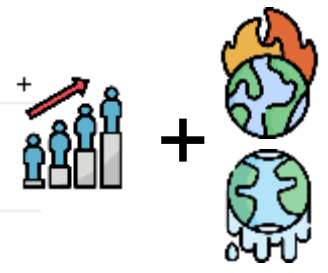
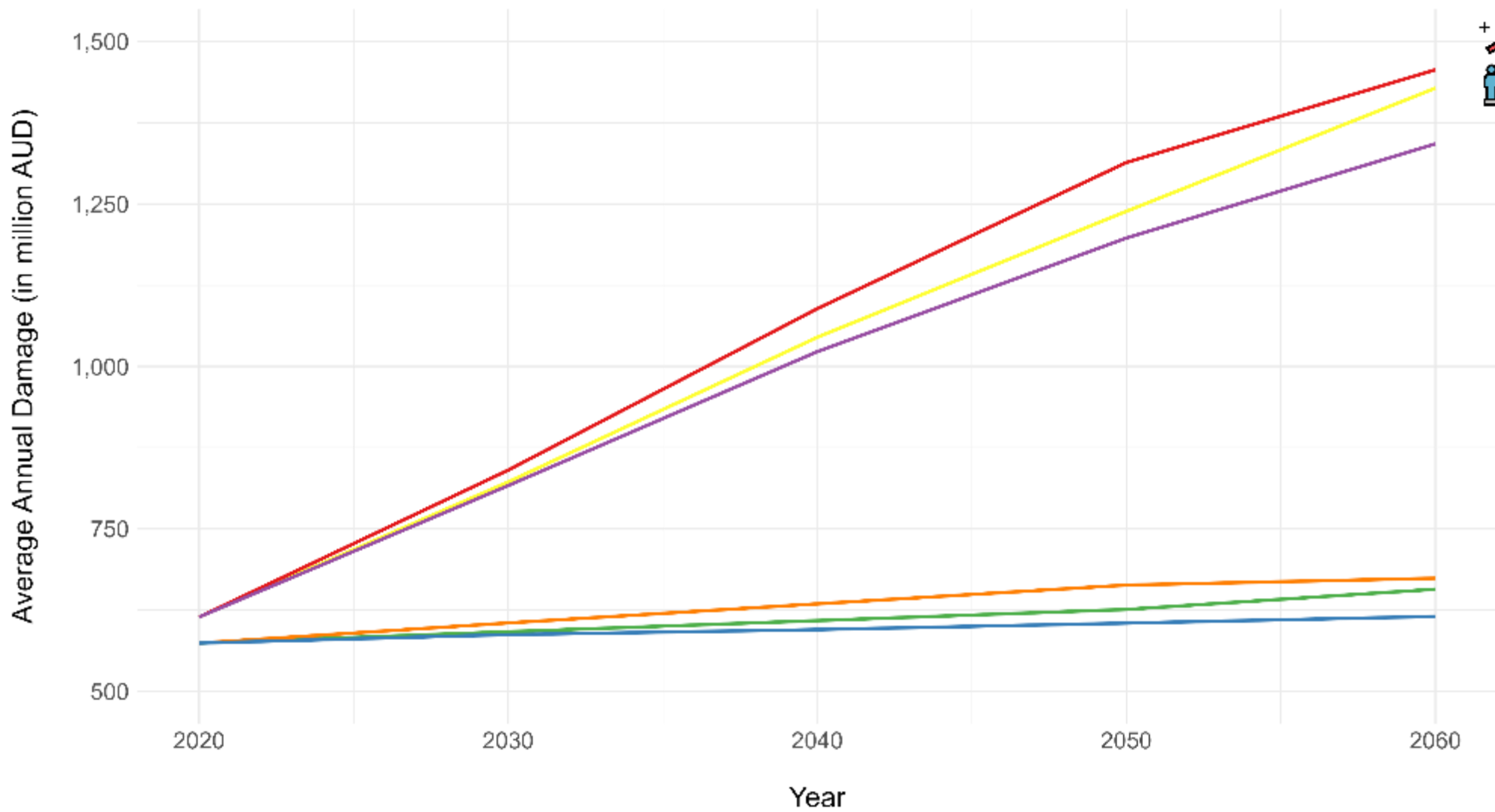


Future wildfire losses









Future wildfire losses



Summary

- UNHaRMED can be used to
 - ❑ **Identify** key areas of **future wildfire risk** 
 - ❑ **Quantify** the **impact** of **climate change** and **population growth** on future losses due to wildfires 
- UNHaRMED can simulate the impact of different mitigation strategies on future bushfire risk
- Useful for wildfire mitigation officers and land planners to
 - ❑ Prioritise funding allocation
 - ❑ Develop policies and strategies for building **well-prepared** and **resilient** communities  
- Future work
 - ❑ Other indicators needed to quantify social and environmental impacts of wildfires





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