



# Assessing Regional Sustainability and Land Use Change

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**Wentworth Group of Concerned Scientists**

- Environmental Accounts
- Climate Change Risk Assessment



# Accounting for Nature

The Wentworth Group model for  
environmental accounts



## **Australia needs an environmental accounting system for rural and urban areas that:**

- Provides annual national, state/territory-wide and regional (catchment) scale reports
- Underpins the long-term catchment management and land use planning decisions
- Improves the cost effectiveness of public and private investments in natural resource/environmental management and repair

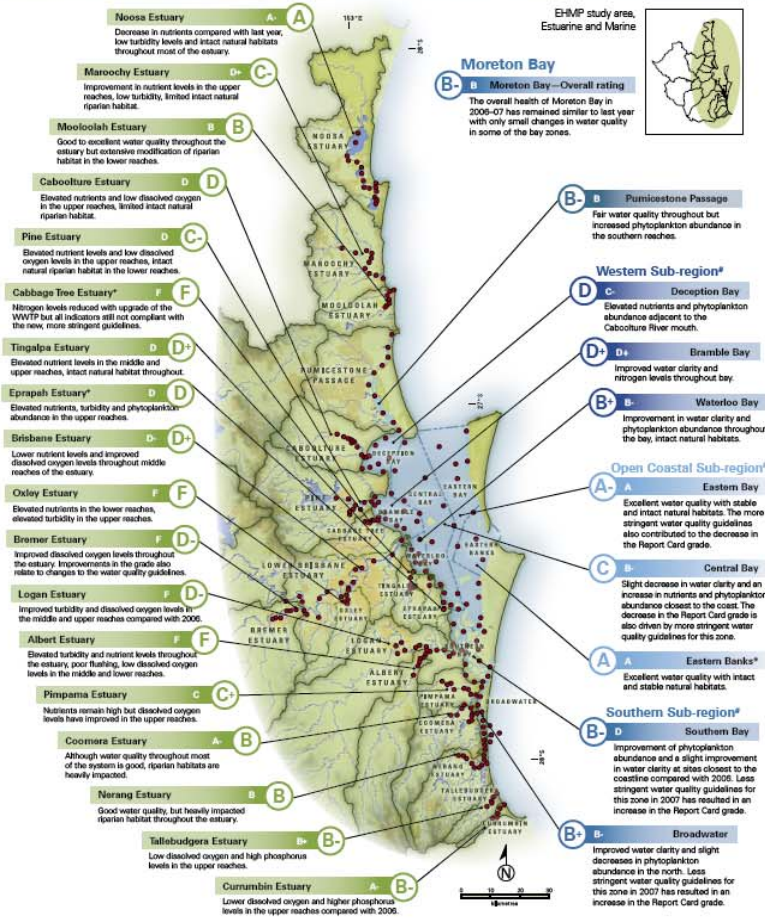
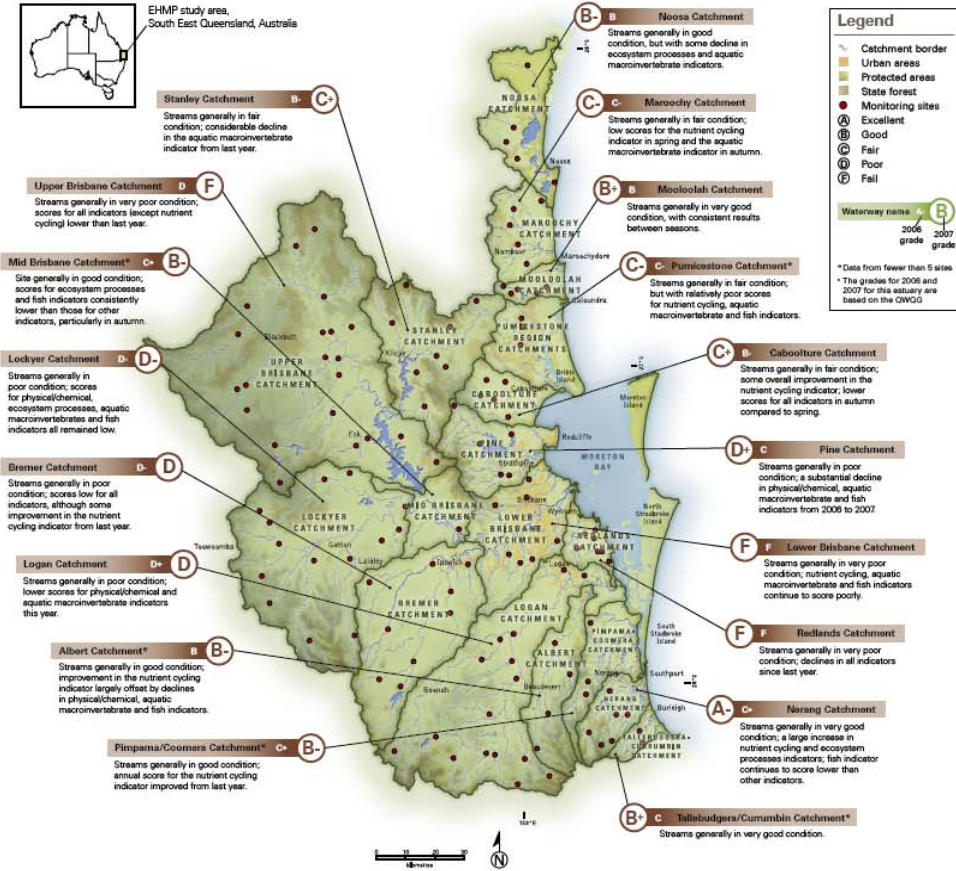
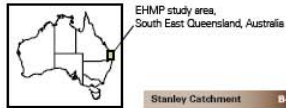
## Design Principles

- Regional data collection and reporting framework
- Five environmental assets (land; water; atmosphere; marine and coastal resources; and towns and cities)
- Annual accounts, with a common scaling standard
- Scientific measurements of specific indicators
- Indicators may vary from region to region
- Establish a nationally agreed system for consistent reporting with funding tied to the supply of any required data

# SEQ – An example of regional reporting

## Freshwater Report Card 2007

## Estuarine and Marine Report Card 2007



## Implementation

- Need for an agreement by all governments in the federal system to establish regional natural resource framework for environmental accounting
- Regions to measure agreed indicators for various environmental assets
- Decision support tools and processes to be developed to improve or maintain natural resource assets

# Assessing the risk to urban areas from the impacts of climate change

- Human health – heat and air quality
- Water supply and water quality
- Bush fires
- Inundation and erosion in coastal areas

## Coastal Adaptation – *Staying Afloat*



ADAPTABILITY

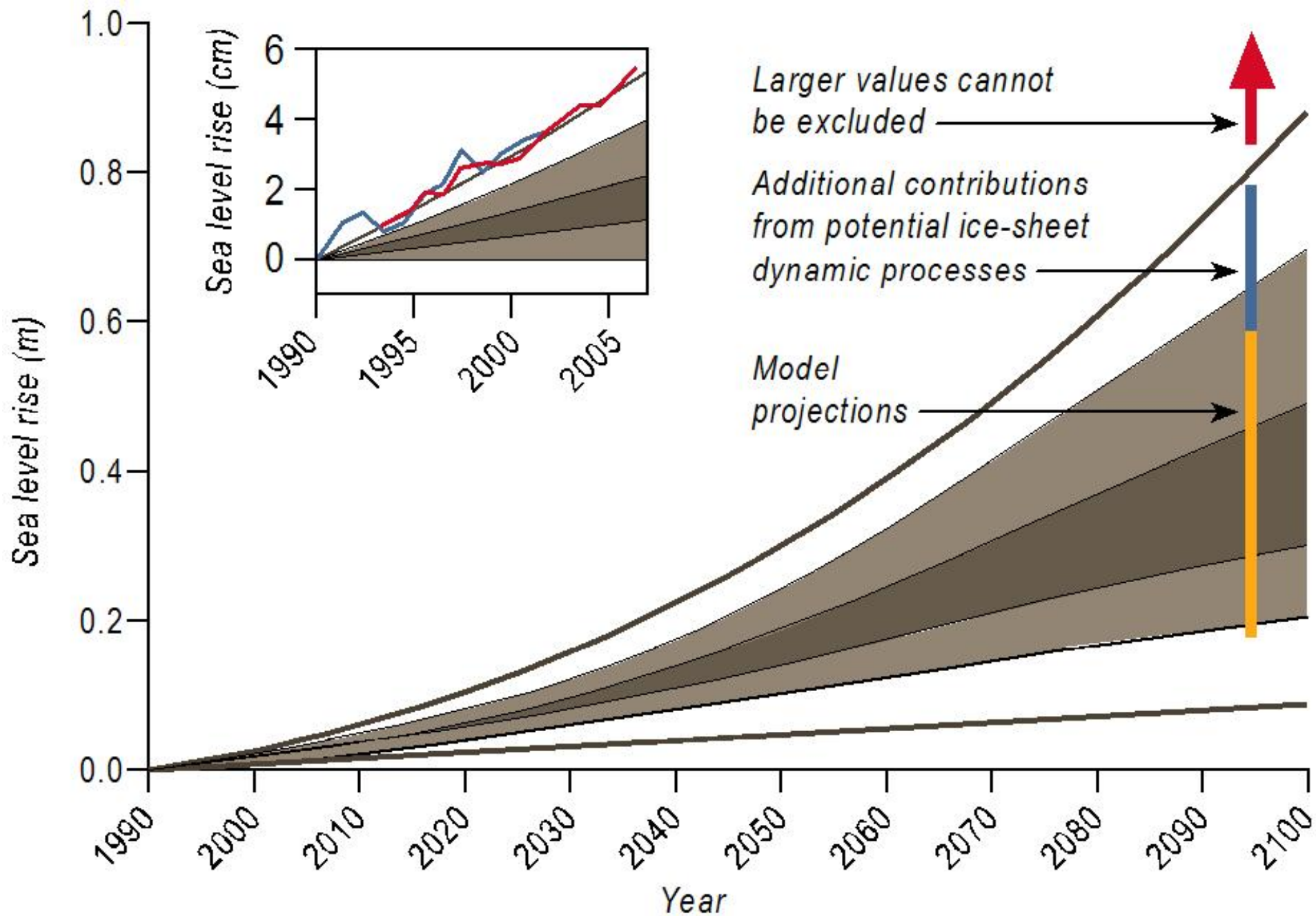
# 1967 Storms Surfers Paradise Esp, Gold Coast

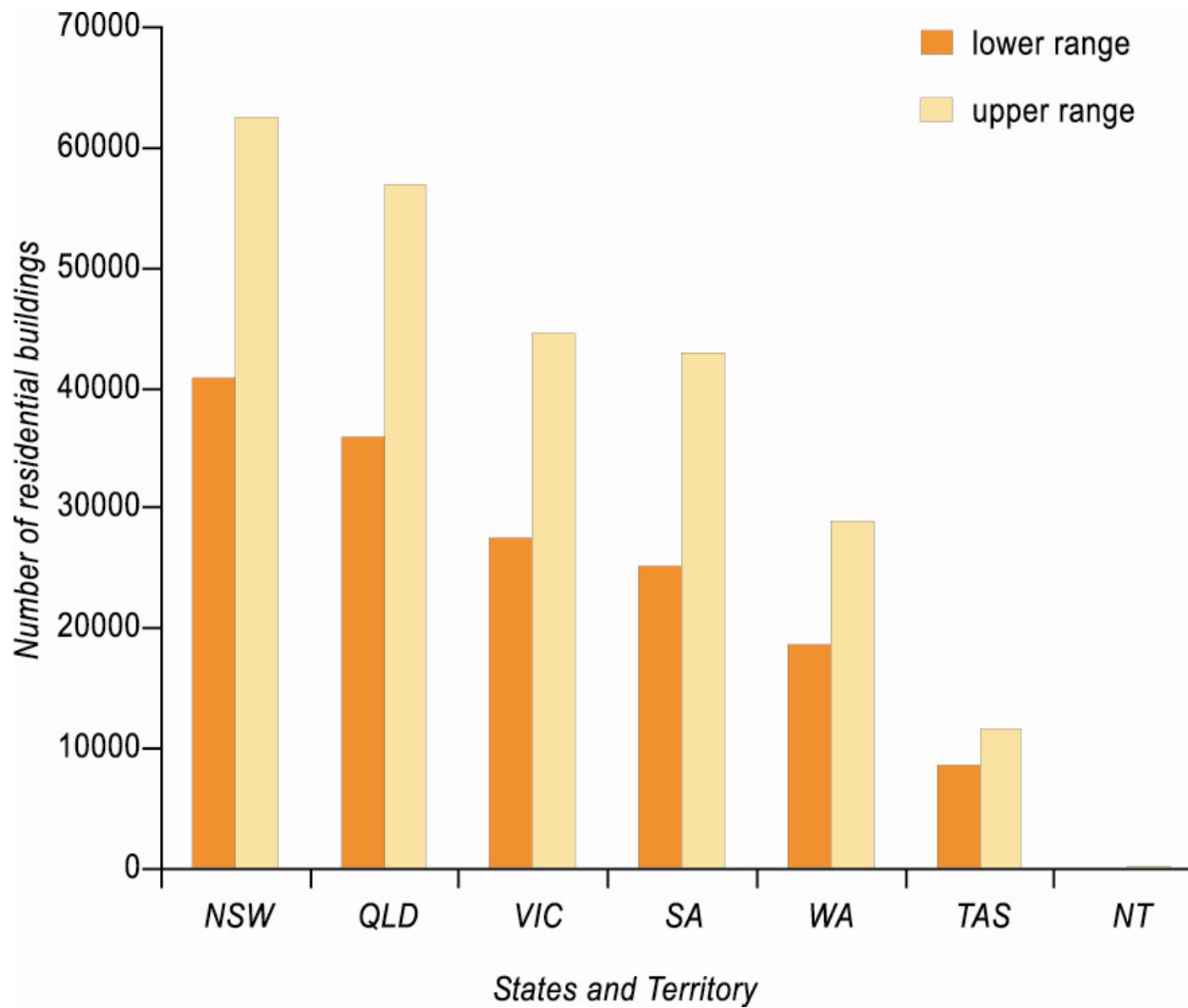
Army constructing  
sandbag wall

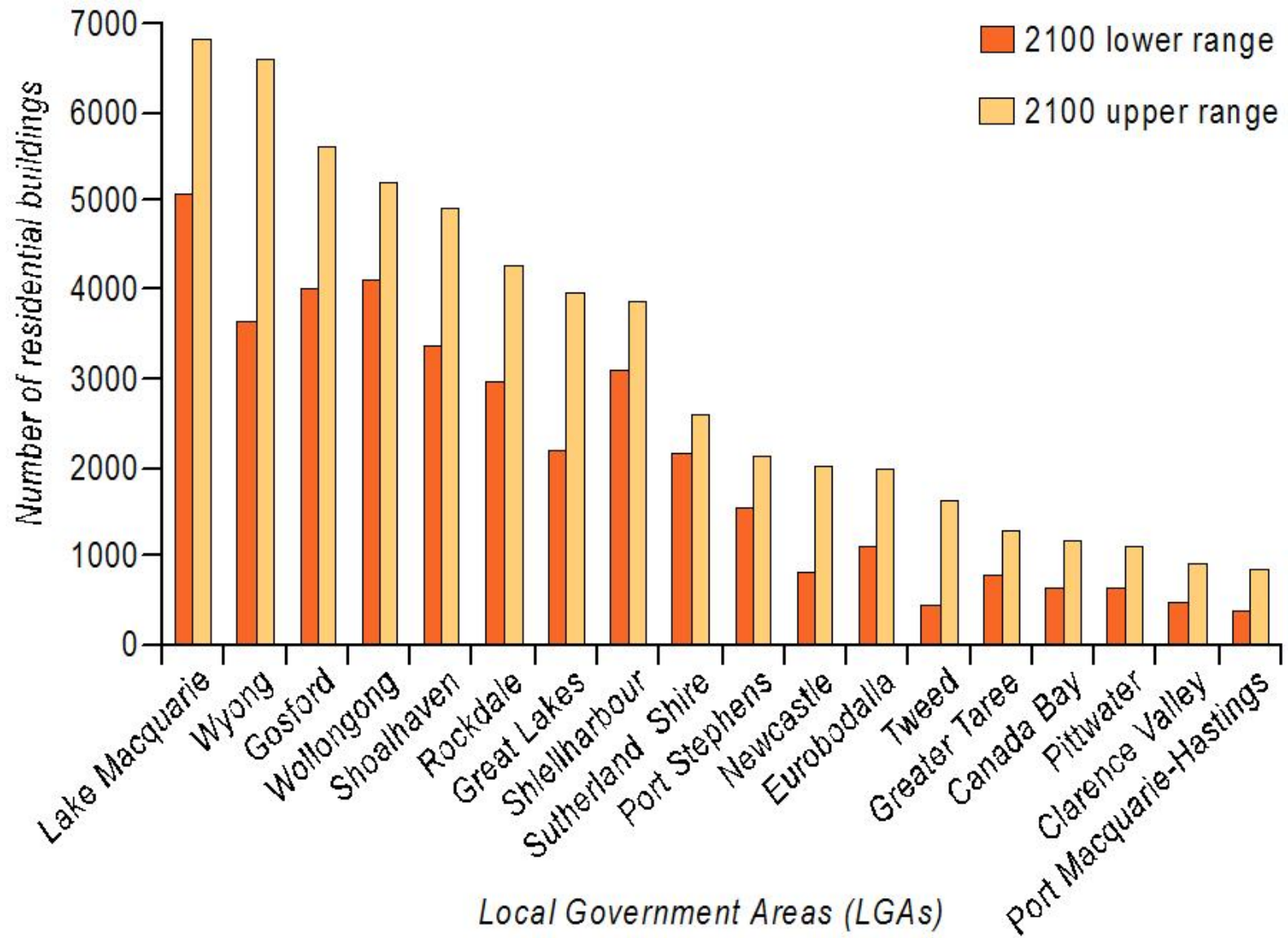


- Power & water cut off
- No access to properties











## Planning for the Future in Urban Growth Regions

- The combination of major storm events with future sea level rise is a key factor to consider for adaptive coastal planning and management
- Numerous adaptation options are available at varying costs – priorities to be set
- Population and infrastructure expansion to occur where risk exposure is minimized

# Coastal Settlements – Issues and Needs



1966  
(40,000 people)

Now  
(500,000 people)





# **Environmental Accounts and Climate Change Risk Assessment:**

Two approaches to achieving regional sustainability

