



# Planning for climate change adaptation

**EIANZ Climate Change Skills Forum**  
**23 November 2010**

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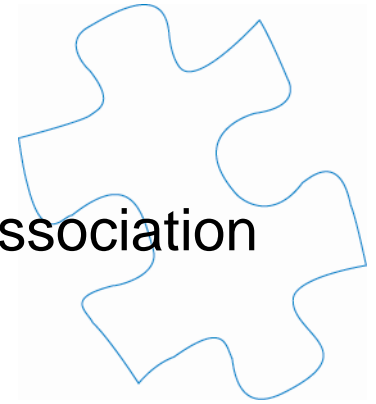
# Presentation outline

- Local government is becoming increasingly aware of the potential risks of climate change and the need to effectively plan for adaptation
- An effective approach must involve (at least) scientific, policy, government, legal and commercial considerations
- This presentation will consider the issue of climate change adaptation as it relates to planning and development in terms of:
  - Local government risks and action
  - Legal implications of planning decision-making and climate change
  - Environmental planning policy, processes and decision-making



# Local Government risks, liability and action

Melanie Bainbridge  
Climate Change Coordinator  
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Department of  
**Environment and Conservation**  
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# Climate change and local government

- Highly vulnerable to impacts of climate change including sea level rise, extreme weather and natural disasters, and increased pressures on services and infrastructure
- Under-resourced in terms of information, skills, resources and funding to cope with impacts and/or initiate proactive management responses
- Open to liability and litigation



# Responses to climate change

- Mitigation - reducing emissions of greenhouse gases via improved energy efficiency, sequestration programs and educational or behaviour change programs
- Adaptation - managing the inevitable changes that will result from climate change now and in the future
- Strong link between mitigation and adaptation as many mitigation strategies increase a community's resilience to climate change impacts



# Mitigation responses

- Cities for climate protection and energy efficiency
- Water campaign and water efficiency
- TravelSmart and transport efficiency
- Climate responsive building design
- Greening of townscapes for biosequestration and heat island effect



# Adaptation responses

- Risk and hazard assessment
- Coastal planning and processes
- Building resilient communities
- Planning, infrastructure and buildings
- Legal liability and compensation



# WALGA actions

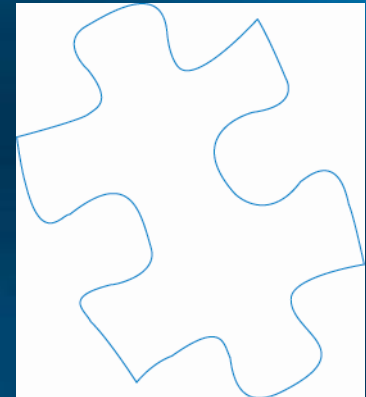
- Climate change management tool kit
- Developed project to assist local government to consider climate change adaptation as part of the planning system



# Legal implications of planning decision-making and impacts of climate change

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# Potential legal risks

## ○ Local councils:

- liability risk limited
- appeals against approval decisions
- injurious affection claims
- community uncertainty

## ○ Developers:

- approvals denied
- future liability

## ○ Owners/operators

- granted approvals open to challenge
- adaptation strategies



# Proper planning to manage risks

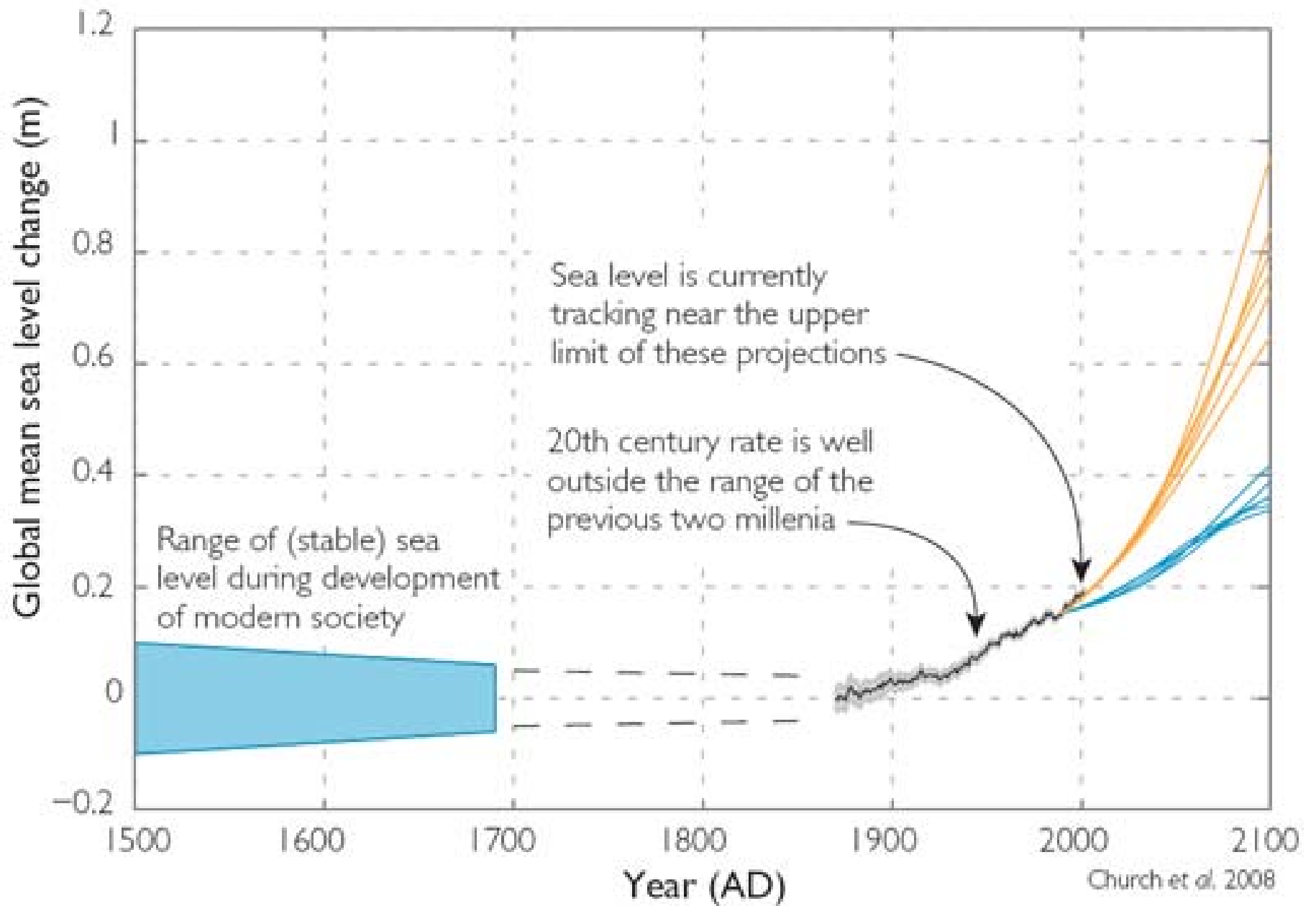
- ‘Proper’ consideration of climate change risks minimises actual and legal risks
- Numerous studies, strategies, initiatives & bodies → constantly evolving
- Very difficult to determine ‘proper’ approach without expert scientific advice



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# State approaches

## Western Australia

WA 90 cm by 2100

## IPCC AR4 predicts:

- 30cm by 2050 &
- 90cm by 2100



## Queensland

- 30 by 2050 &
- 80 cm by 2100

## New South Wales

- 40 cm by 2050 &
- 90 cm by 2100

## Victoria

80 cm by 2100

## South Australia

- 30 cm by 2050 &
- 100 by 2100



# Proper planning to manage risks

- Land use planning is appropriate approach
- WA needs stronger State leadership within National approach
- Need Commonwealth/COAG approach
- Significant compensation issues → \$\$\$
- In absence WA local governments move forward



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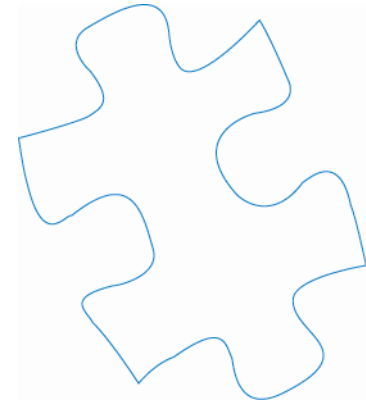




# Local Government planning response to climate change

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# State Government guidance for adaptation planning

- State Planning Policy 2: Environment and Natural Resources (2003) - Greenhouse Gas Emissions and Energy Efficiency
  - Promote energy efficient development and urban design incorporating such issues as energy efficient building design, walkable neighbourhoods, higher densities in areas accessible to high quality public transport, local access to employment, retail and community facilities, and orientation of building lots for solar efficiency.
  - Support the retention of existing vegetation and revegetation in subdivision and development proposals.
  - Support the use of alternative energy generation, including renewable energy, where appropriate.
  - Support the adoption of adaptation measures that may be required to respond to climate change.



# State Government guidance for adaptation planning

- State Planning Policy 2.6: Coastal Planning Policy (2006)
  - General Measures - Public Interest, Coastal Foreshore Reserve, Coastal Strategies and Management Plans, Environment, Development and Settlement, Physical Processes Setback
  - Coastal Plan Requirements
  - Building Height Limits
  - Schedule one: Coastal development setback guidelines for physical processes
- WAPC Position Statement - State Planning Policy No. 2.6 State Coastal Planning Policy Schedule 1 Sea Level Rise

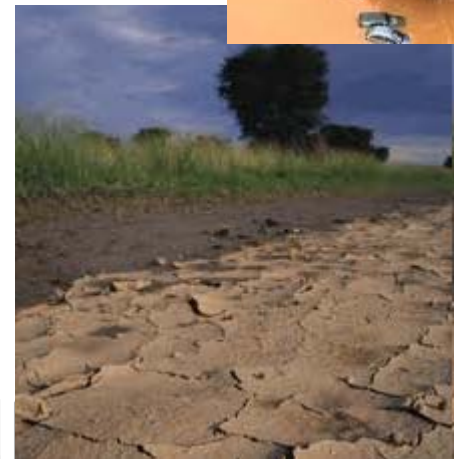


# State Government guidance for adaptation planning

- State Planning Policy 3.4: Natural Hazards and Disasters
  - General measures - have regard to...the potential for long-term changes to risk such as climate and land use change
  - Hazard Considerations – Flood, severe storms and cyclones, storm surge, coastal erosion, bush fires, landslides and other land movements, earthquakes

# Local Government response

- Provide clarity regarding issues which need to be addressed and how
- Undertake a risk assessment of their municipality – develop a climate change adaptation strategy
- Integrate these issues into local planning strategies
- Develop a local planning policy to provide guidance for structure planning and development control



# Guidelines for local planning for natural hazards and disasters and coastal vulnerability

- Adaptation actions only and include
  - Sea level rise
  - Flooding
  - Storms, cyclones and storm surge
  - Bush fires
  - Erosion – coastal and waterways
  - Drought
  - Heatwaves
- Guidance for
  - Local planning strategies
  - Structure planning
  - Development control





# Draft policy measures

- No development shall be supported in an area affected by the **1 in 100 year flood level** (the floodway) and consideration shall be given to any development proposed within the floodplain.
- Development in coastal areas shall **provide appropriate setbacks for coastal processes**, consistent with *State Planning Policy 2.6: Coastal Planning Policy*.
- Avoid development in areas where there is a significant risk to life and property from **bushfires** as determined through application of the criteria in *WAPC Policy DC 3.7 Planning for Bush Fire Protection* (2004).
- Where development is proposed in areas of coastal or waterway **erosion risk, management** measures must be employed to firstly avoid, then minimise and manage any impacts.

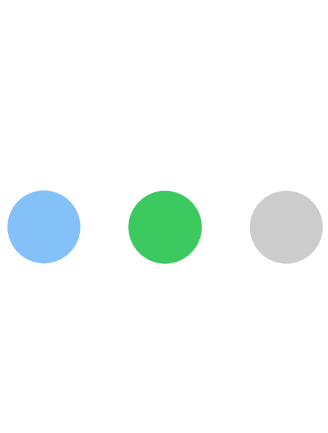
# Draft policy measures

- Development shall comply with the principles of **water sensitive urban design** and deliver appropriate, alternative water supply options wherever possible, consistent with *State Planning Policy 2.9: Water Resources* and *Better Urban Water Management* (WAP, 2008).
- Development shall demonstrate compliance with the principles of **climate responsive design** consistent with *Liveable Neighbourhoods* (WAPC, 2007) and reduce heat island effects wherever possible.
- All development shall comply with appropriate **standards for building** in areas at risk of extreme weather events such as cyclones, floods and bushfires.
- Where development exists in an area at risk from coastal impacts, natural hazards and disasters and/or climate variability, ensure community awareness and readiness for implementation of an appropriate **disaster response plan**.

# Next steps

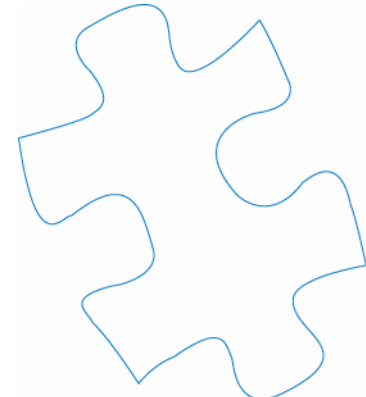
- Incorporate comments from recent workshop
- Develop guideline and liaise further with key stakeholders
- Any thoughts or comments to:
  - Shelley Shepherd 0403 170 040
  - [shelley@essentialenvironmental.com.au](mailto:shelley@essentialenvironmental.com.au)





# Thank you!

## For your attention



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