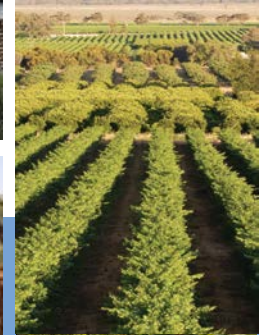




**Australian Government**

**Department of Sustainability, Environment,  
Water, Population and Communities**



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# Urban Water Developments in Australia

Mr Bruce Edwards, Assistant Secretary, Waste Policy

Farm Irrigation (DSEWPaC) Murray-Goulburn (J. Baker) Murrumbidgee River Corridor (J. Houldsworth)  
River Murray at Bunyip Reach (J. Baker) Rainwater tank (M. McAulay) Agriculture in the Murray-Darling Basin (J. Baker)

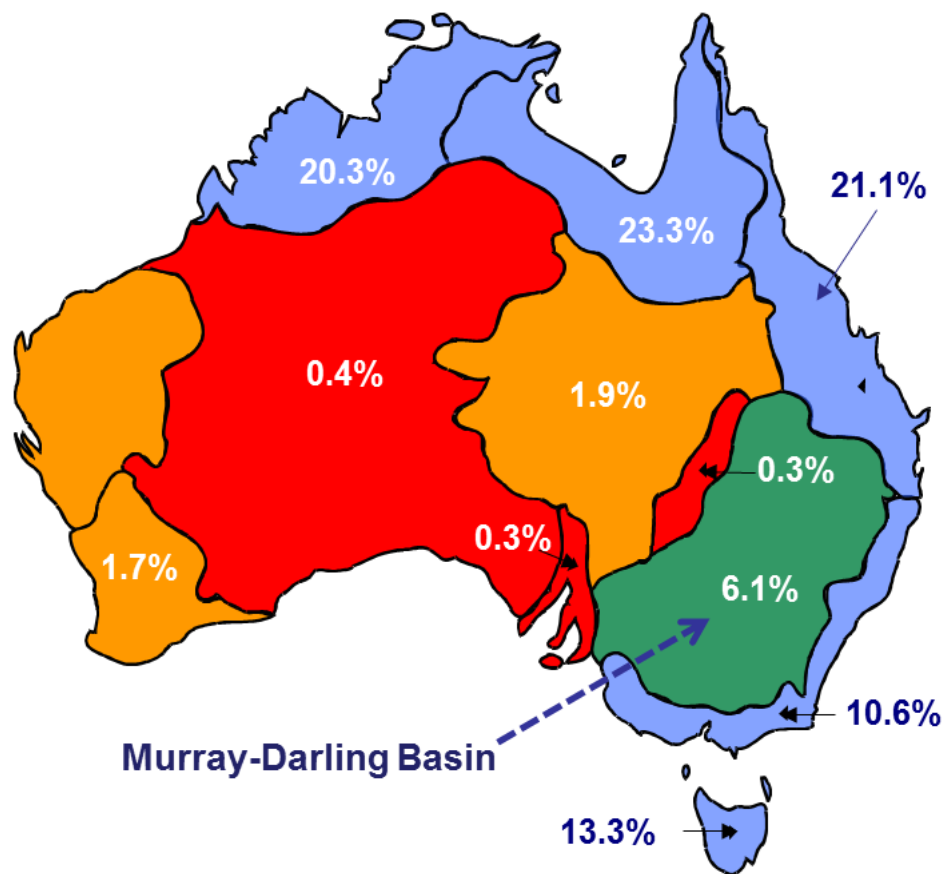


# Governance in urban water

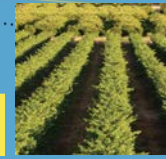
- State governments
  - Primary responsibility
  - Water and sanitation services delivered by government monopoly enterprises or local governments
  - Economic regulators in some states for pricing review and determination
- Australian (federal) government
  - Leadership, national coordination and guidelines for health and environmental protection
  - Funding for infrastructure projects and research during the drought



# Distribution of Australia's rainfall run-off

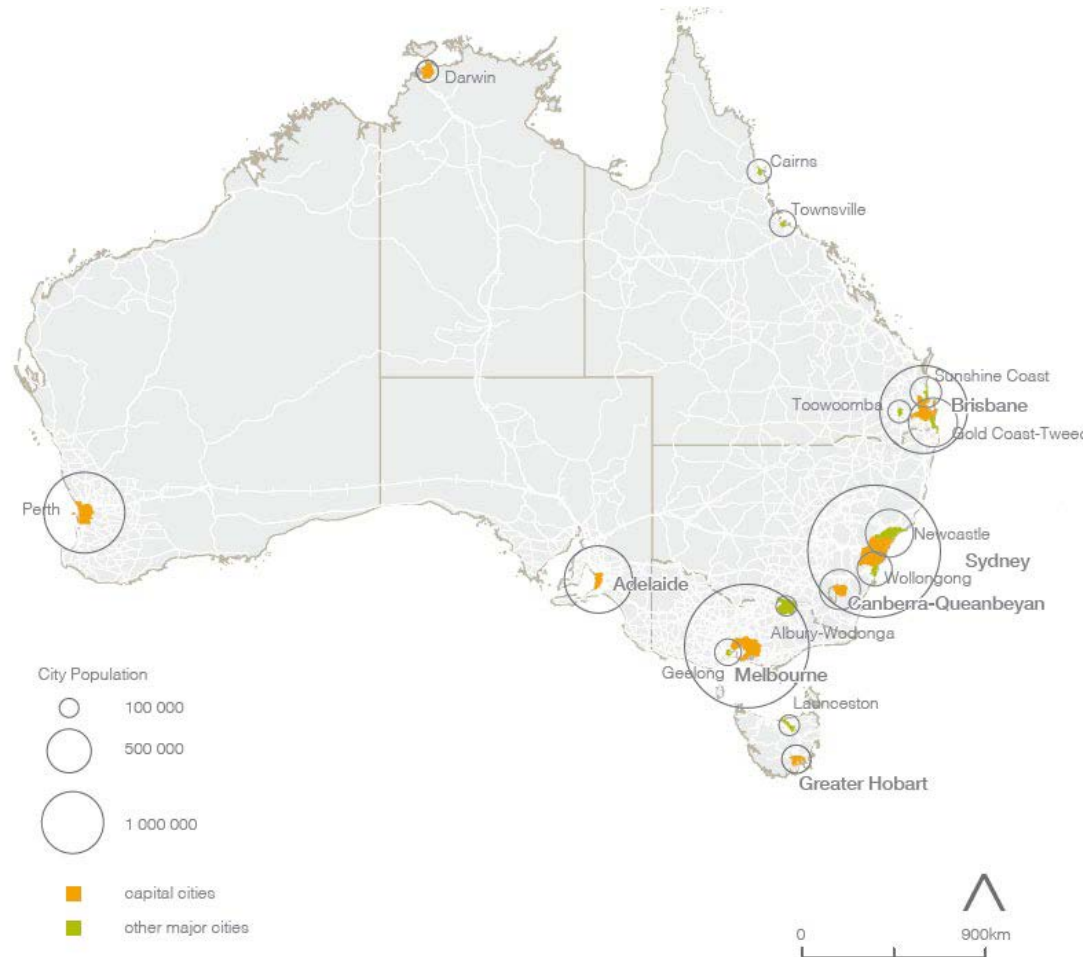


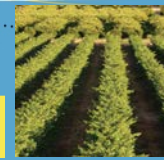
- 65% of run-off in the north
- Only 6% of run-off in the Murray-Darling Basin, which produces 40% of our food
- Total annual rainfall varies widely, eg
  - 707 mm in 2012
  - 331 mm in 2003



# Population distribution

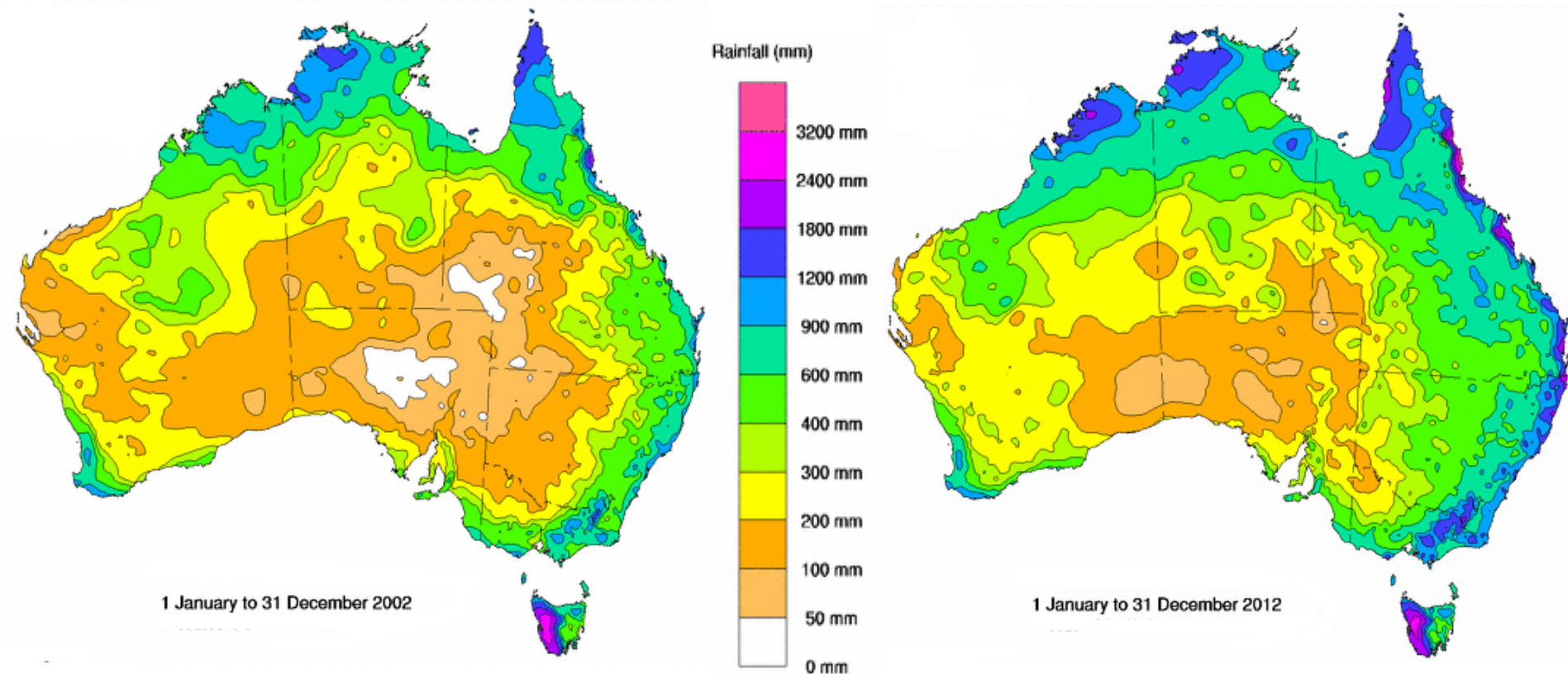
- 87% of Australians are in urban areas, mainly in the south
- Most cities are well served with dam and river water
- Six desalination plants serve major metropolitan areas

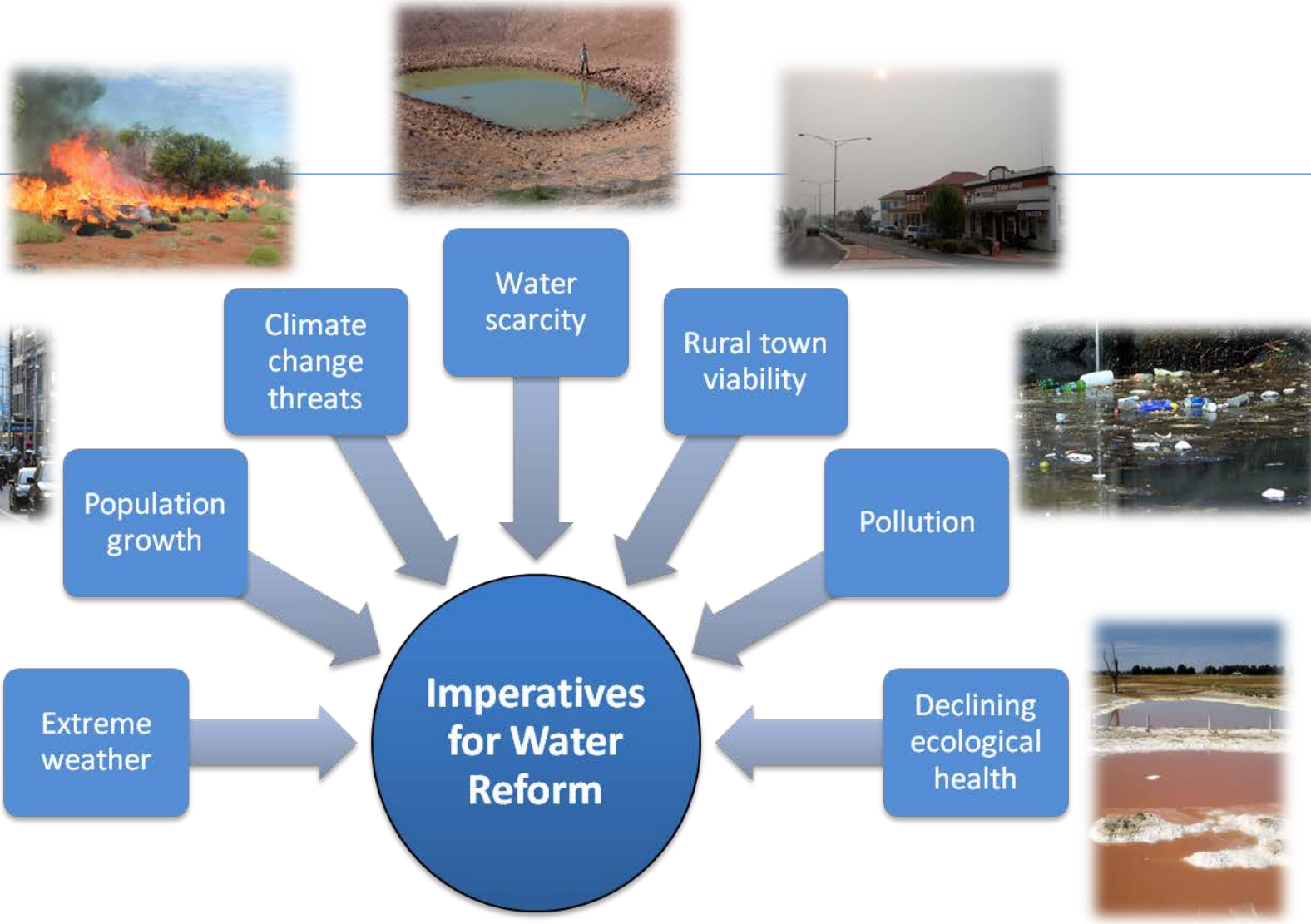


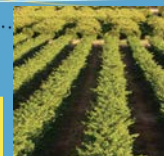


# From drought to floods: 2002 to 2012

## Variation in annual rainfall across the continent



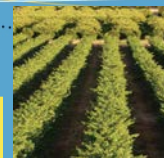




# National Water Initiative 2004

- Actions implemented by all governments
- Progress monitored and reported by an independent agency
  1. Efficient water pricing for sustainable use
  2. National performance reports on water utilities
  3. Water efficiency labelling & standards for appliances
  4. Improved water information and accounting
  5. Guidance on water sensitive cities
- Many initiatives to improve rural & environmental water management





# Improving pricing practices

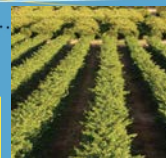
- Independent bodies to set or review prices and publicly review and report on pricing
- Guidance on efficient water pricing addressing
  - Recovery of capital expenditure
  - Water planning and management
  - Recycled water and stormwater reuse
  - Urban water tariffs
    - Two part tariffs made up of an access charge and water usage charge
    - Aim is to send pricing and investment signals
- Next steps: review progress in 2013-14





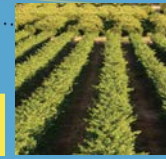
# National performance report on urban utilities

- Detailed account of performance over the year and comparison with previous years
- Addresses critical areas of urban water systems management such as
  - Pricing
  - Capital and operational expenditure
  - Water quality indicators
  - Volume of water supplied in total and per property
  - Numbers of property serviced
- 79 Australian water utilities included supplying water and sanitation services to over 80% of the population



# Water Efficiency Labelling and Standards (WELS) scheme

- National scheme that ensures consumers can choose the most water efficient appliances
- The scheme requires selected water-using products to be registered and display a water efficiency rating label where they are offered for sale.
- Appliances: toilets, clothes washing machines, dishwashers, urinals, taps and showers
- Since 2005, approximately 18,000 products have been registered.
- Estimated that by 2021, the scheme will have saved a total of 800 gigalitres in total.



# An example of a WELS label

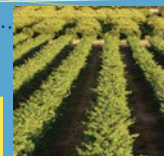


- This is a WELS label applied to a washing machine.
- A more efficient appliance has more stars, with three or more stars regarded as efficient
- The water consumption label differs for each product
- Washing machine and dishwasher labels show consumption using a specific wash program



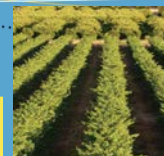
# National Water Information System

- The Bureau of Meteorology's long term collaborative program to deliver online, single-point, access to water data collected across Australia
  - Flood warnings & forecasts
  - Annual national water resources assessments
  - Real-time water reporting & availability forecasts
  - National Water Information standards
  - Compiling & maintaining water accounts, eg the National Water Account
- Improving water management, policy, research & emergency services
- Publicly available



# Water Sensitive Cities

- National Guidelines for evaluating options for water sensitive urban design
- Cooperative Research Centre for Water Sensitive Cities announced in 2011, delivering across four programs:
  - **Society:** social transformations to support water sensitive cities
  - **Water Sensitive Urbanism:** a new paradigm to improve urban sustainability and liveability
  - **Future Technologies:** use of multiple water sources at a range of scales to support fit-for-purpose uses
  - **Adoption Pathways:** partnership between government, industry, the water sector, universities and the community
- More than 70 research, industry and government partners in Australia, Singapore and Europe



# Australian research to support the National Water Agenda

- Water for Healthy Country Flagship
  - To develop science and technologies that improve the social, economic and environmental outcomes from water:
    - Urban water
    - Integrated water resources management
    - Ecosystem and contaminants
    - Water resource assessment
  
- Climate Adaptation Flagship
  - To equip Australia with practical and effective options to adapt more effectively to climate change and variability
    - Pathways to adaptation
    - Sustainable cities and coasts
    - Species and ecosystems
    - Adaptive primary industries



# Challenge - Maintaining the reform momentum

- Institutional arrangements that maintain support for efficient, sustainable, integrated water management
  - Engaging the community on water management decisions, particularly building awareness that highly reliable, good quality water and sanitation services are costly
  - Ensuring the variability in water resources is represented in future water planning and investment decisions
  - Ensuring emerging data and findings are taken up.



## Further information

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- Department of Sustainability, Environment, Water, Population and Communities [www.environment.gov.au](http://www.environment.gov.au)
- Water Efficiency Labelling and Standards scheme [www.waterrating.gov.au](http://www.waterrating.gov.au)
- National Performance Reports [www.archive.nwc.gov.au/library/topic/npr](http://www.archive.nwc.gov.au/library/topic/npr)
- Cooperative Research Centre for Water Sensitive Cities [www.watersensitivecities.org.au](http://www.watersensitivecities.org.au)
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) [www.csiro.au/](http://www.csiro.au/)