



DAMIEN GIURCO INSTITUTE FOR SUSTAINABLE FUTURES

L'ACQUA È VITA

ASSOCIAZIONE NAPOLETANA 18 NOV 2007



THINK.
CHANGE.
DO



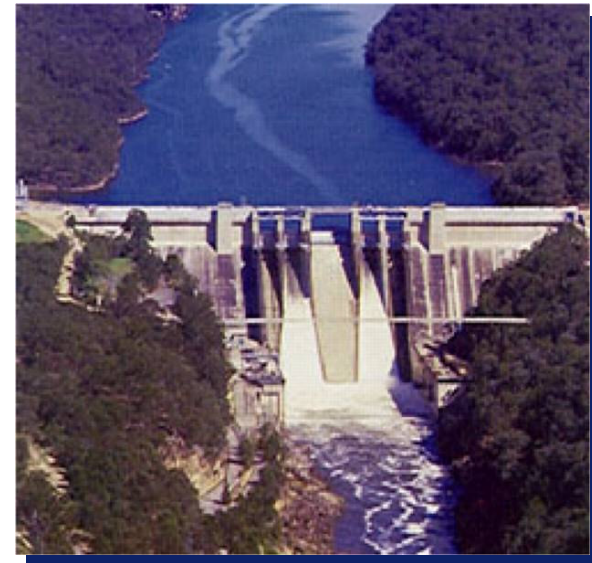
Institute for
Sustainable
Futures



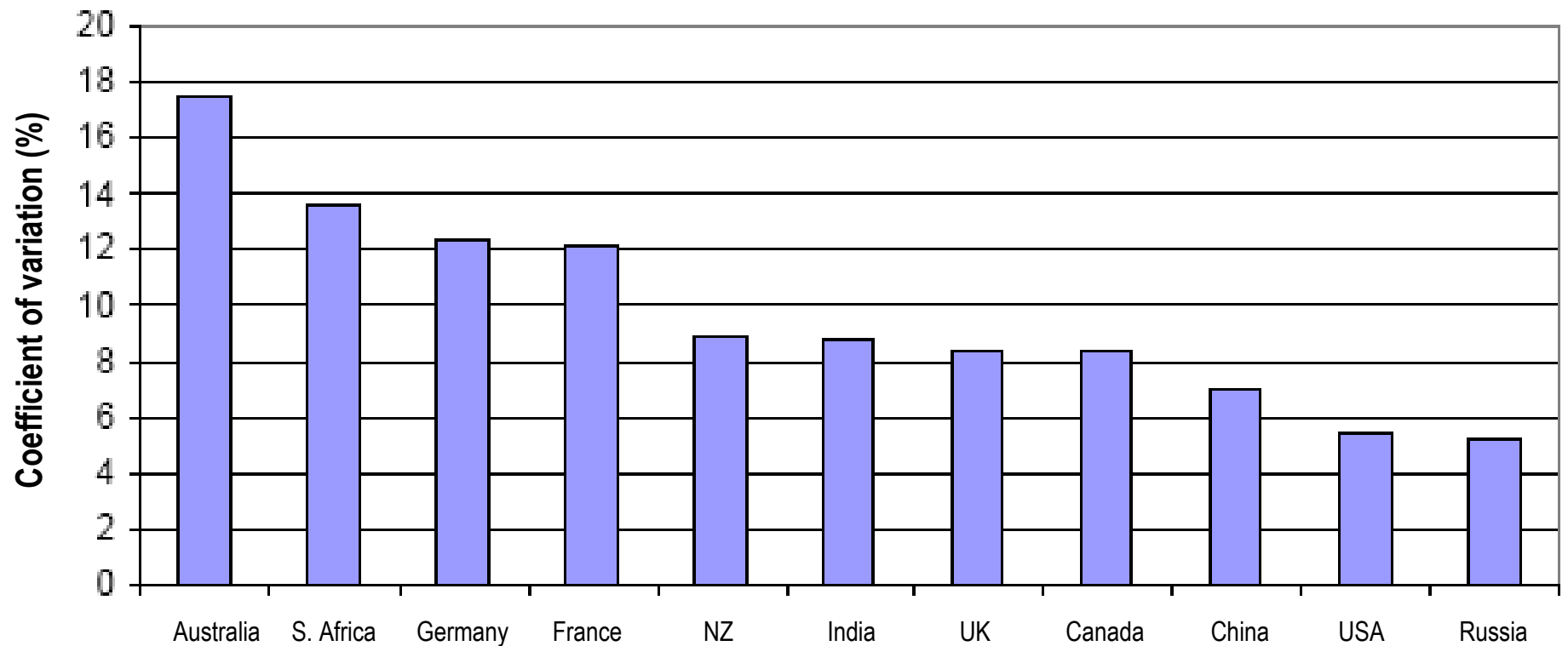
UNIVERSITY OF
TECHNOLOGY SYDNEY

Overview

- > **Water availability, climate trends and pressures around Australia**
- > **Sydney's Metropolitan Water Plan**
- > **Future directions and innovations**

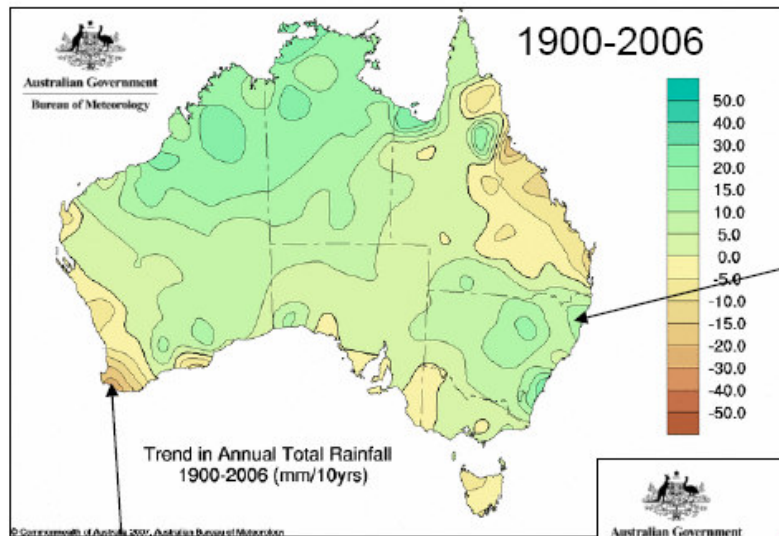


Rainfall variability – Australia has highest



Love, 2006 OzWater

Rainfall – wet epoch, dry epoch, what's next?



Eastern seaboard

1900: DRY

1950: WET

2000: DRY

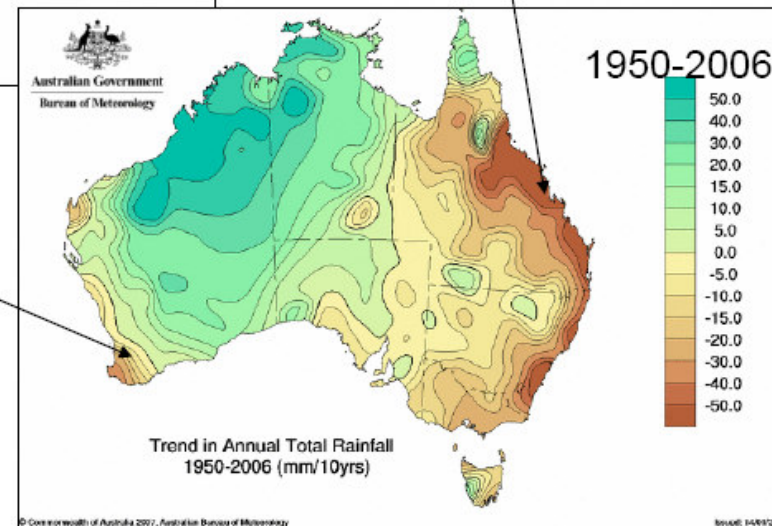
2007.....???

South West WA

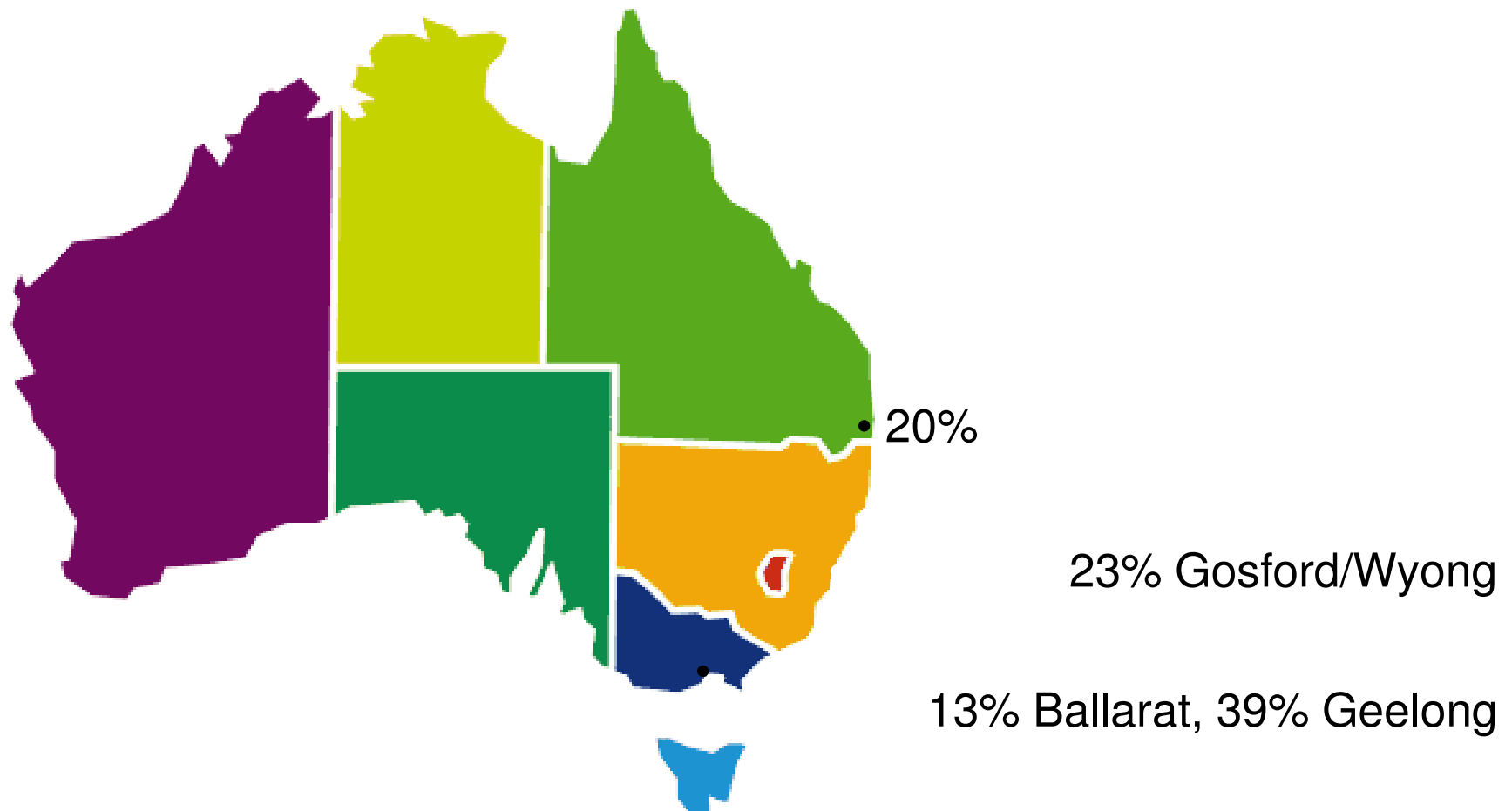
1900: WET

1950: DRY

2000: DRIER

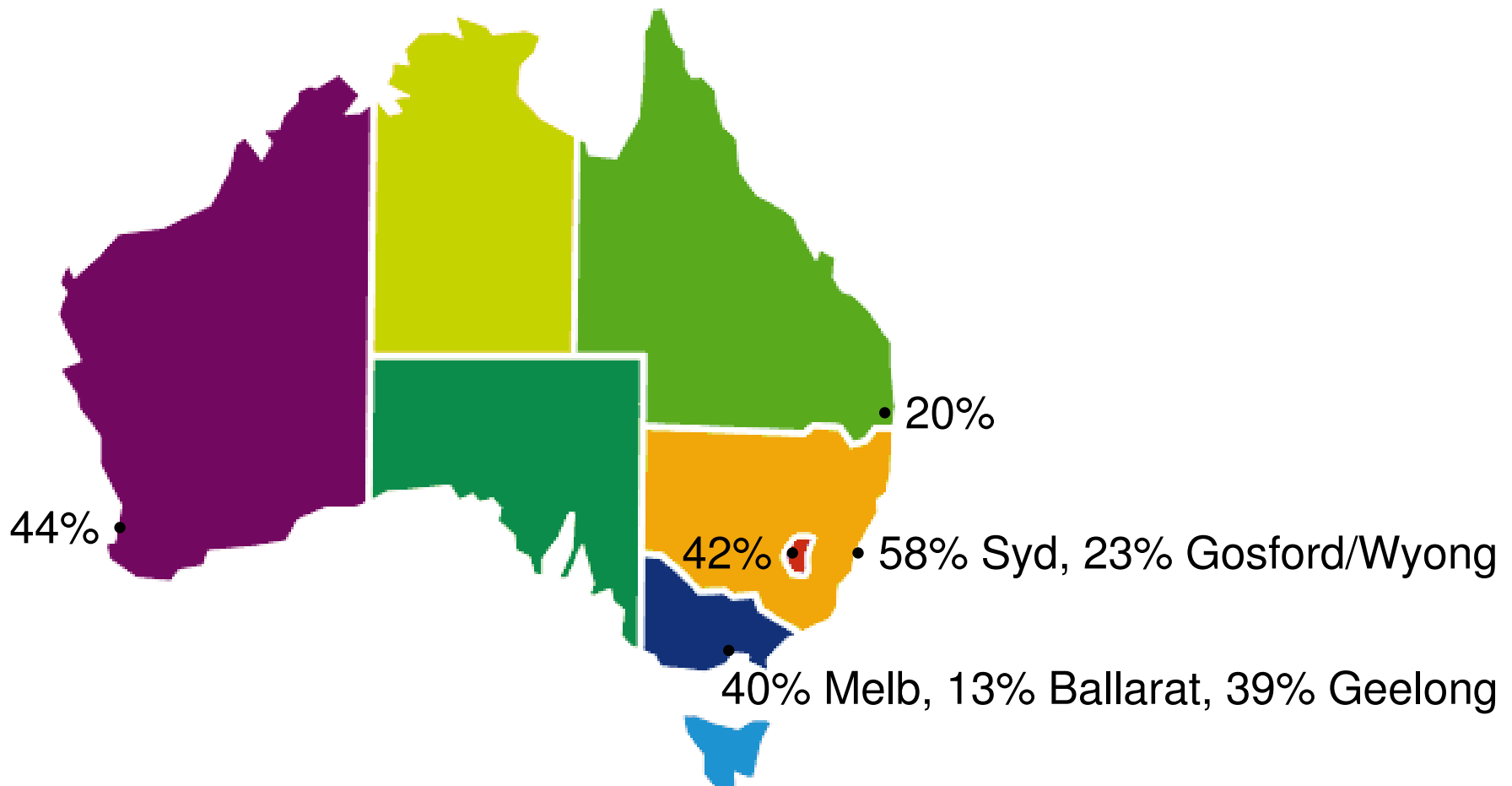


Dam levels



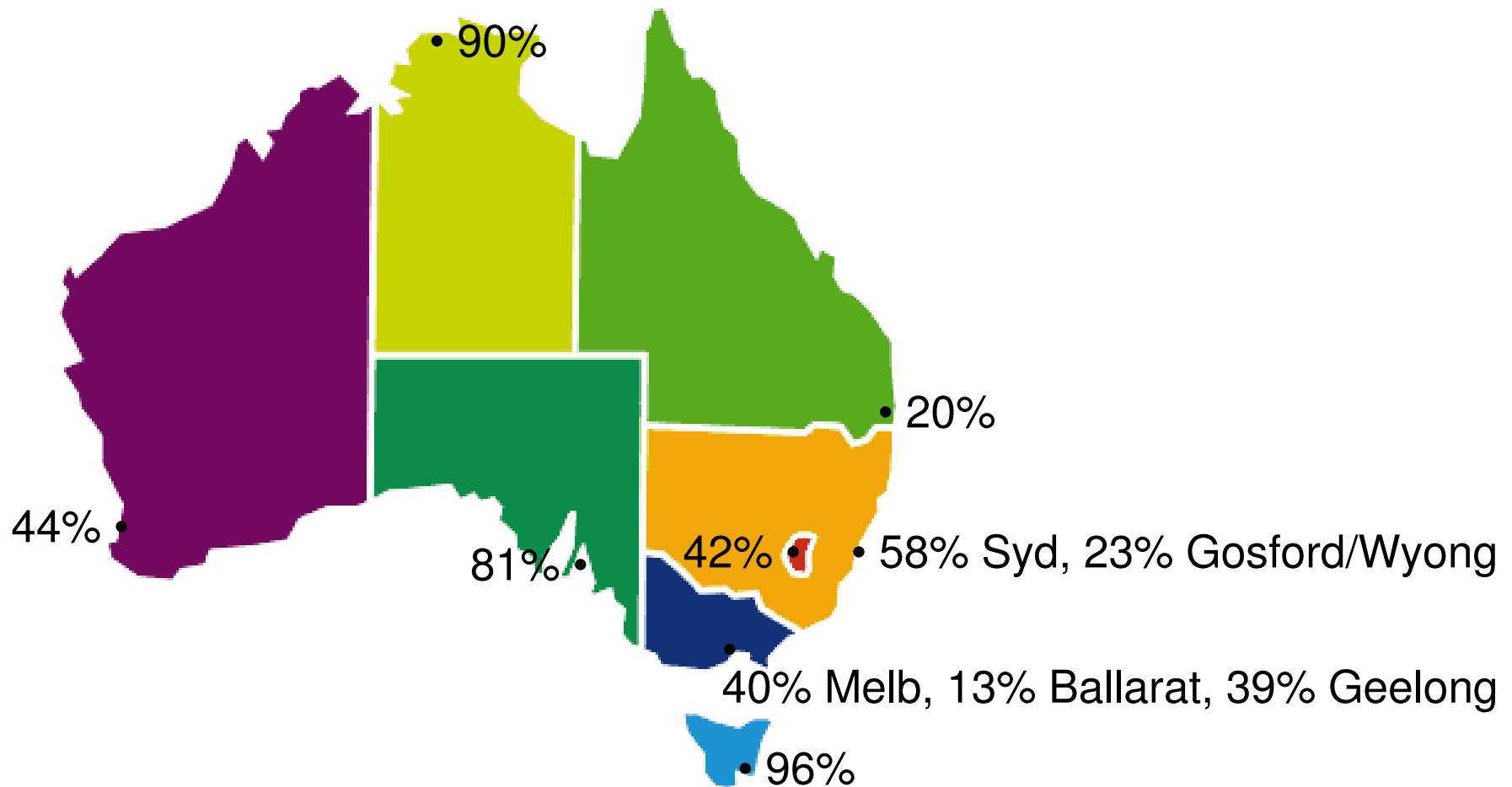
Dam levels as at 15/11/07

Dam levels



Dam levels as at 15/11/07

Dam levels



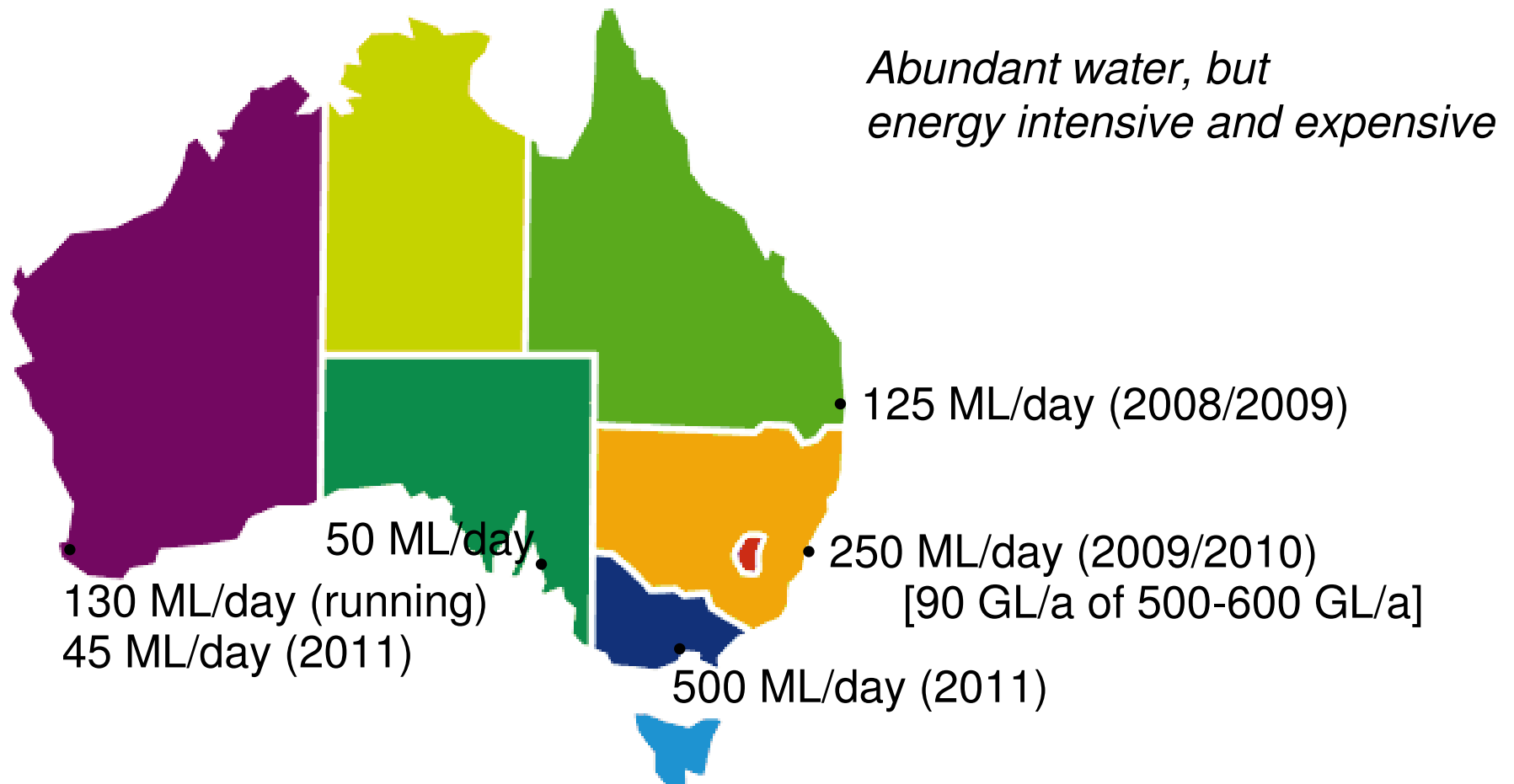
Dam levels as at 15/11/07

Climate change effects

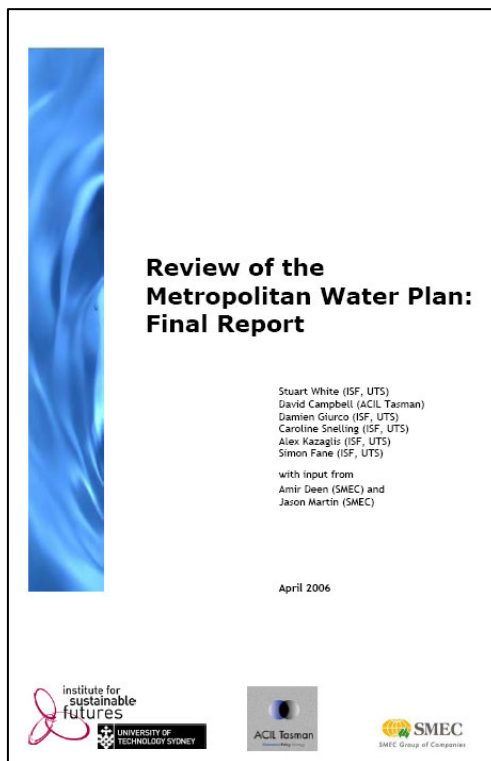
- > **Climate change effects on sustainable yield of catchments still being understood**
 - Average rainfall predictions
 - Rainy days / storm predictions
 - Community attitudes to restrictions/ system reliability



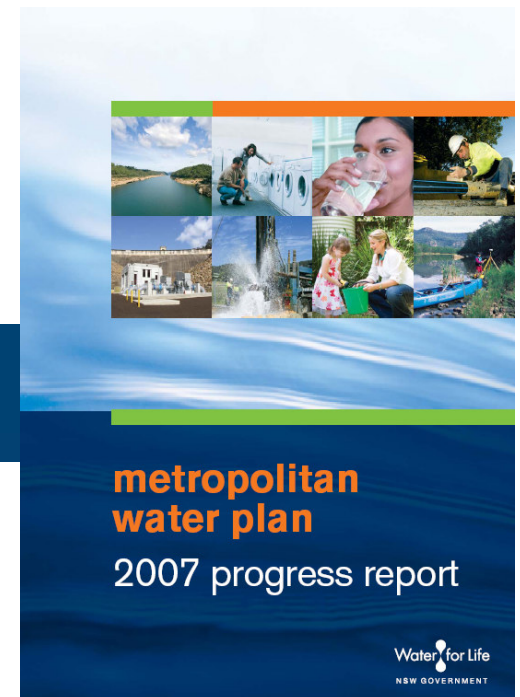
Popular response: desalination projects



Sydney's Metropolitan Water Plan



2006 Metropolitan Water Plan



<http://www.waterforlife.nsw.gov.au/>

Where do we use water?

- > **Nationally 70% of water used in irrigation**
15% in households
15% in industry

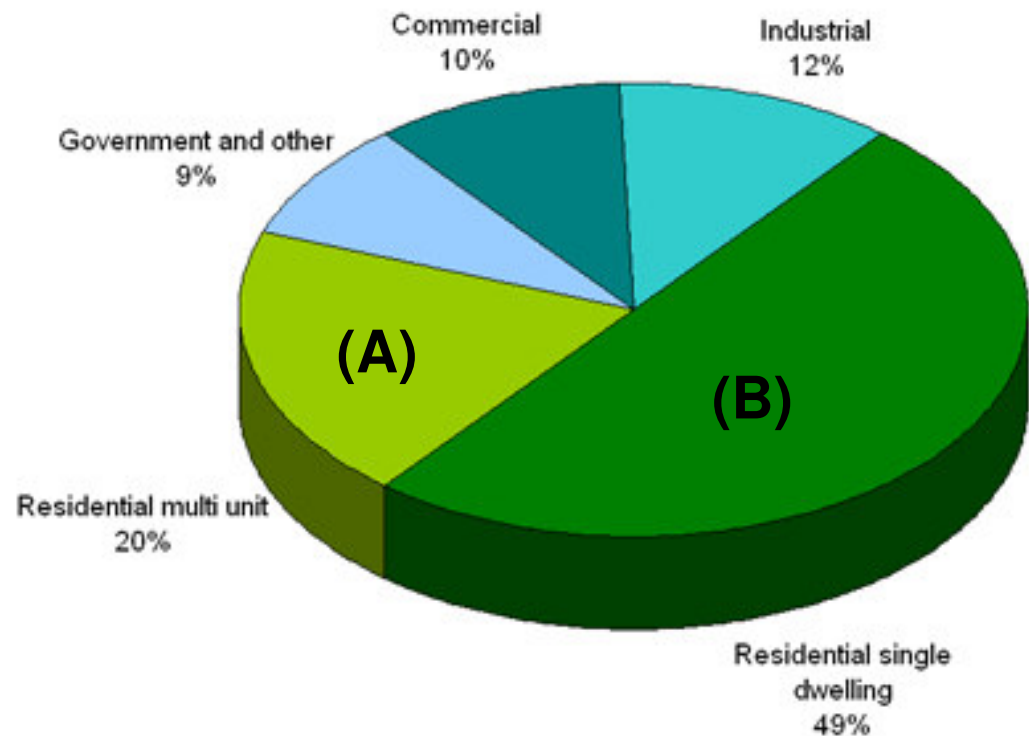
<http://www.abs.gov.au> 4610.0

Where do we use water?

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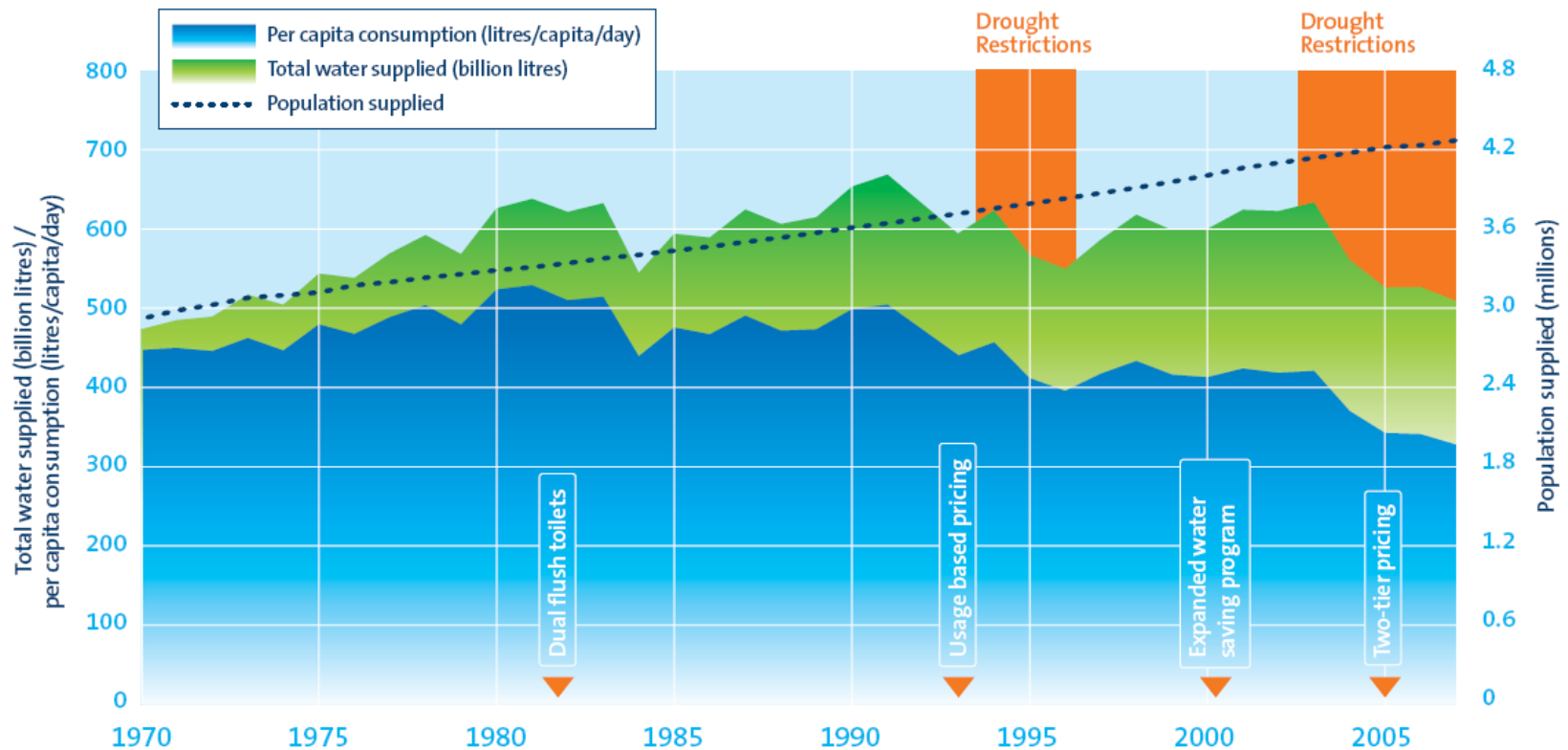
- > In Sydney 70% used in households (A + B)



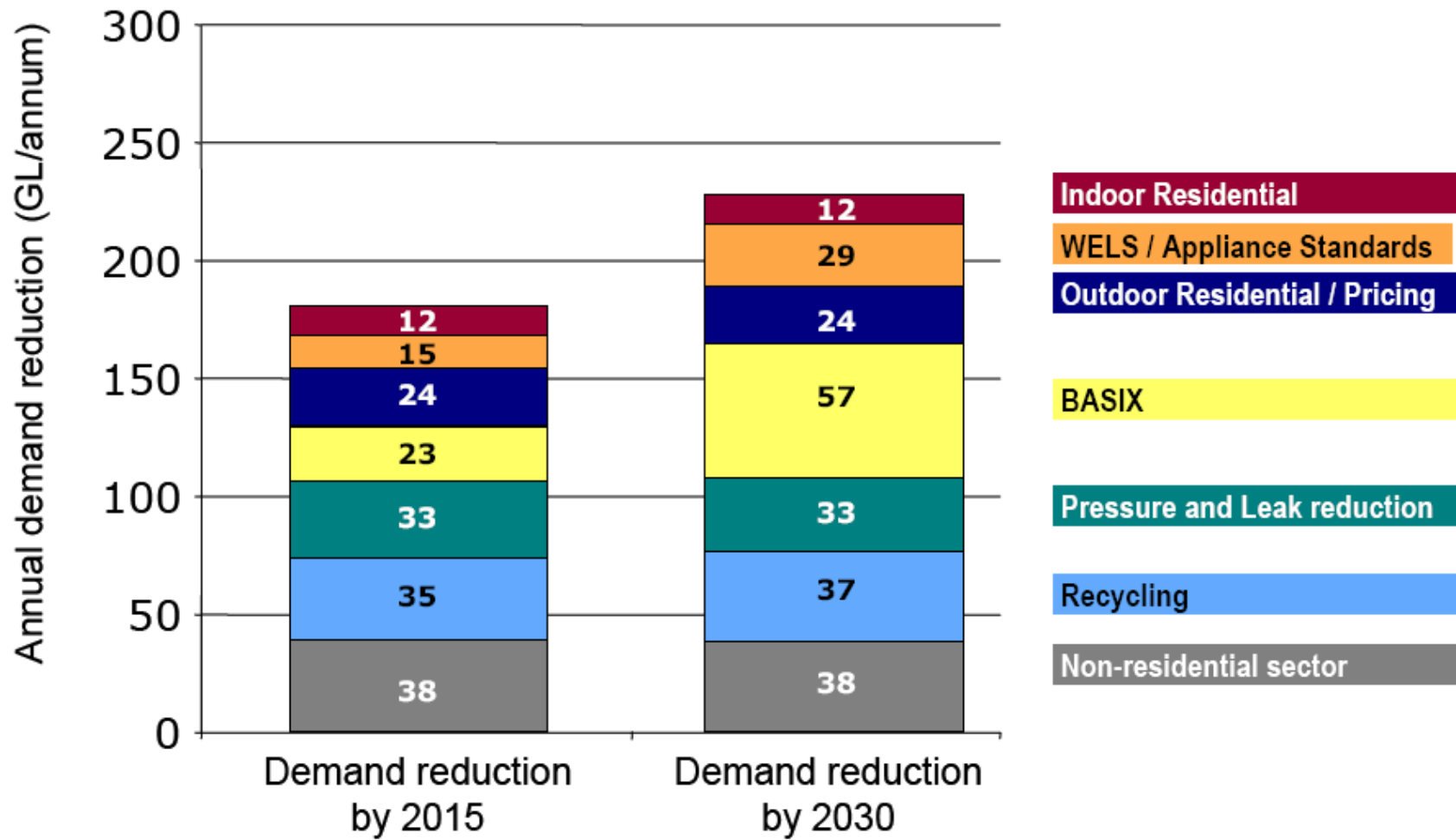
<http://www.waterforlife.nsw.gov.au/>

Trends in water use in Sydney

Sydney's population growth and water consumption



Where will we save water?



Recycling and new supply initiatives

- > **Recycling (not for drinking)**

- Residential
- Industrial
- Private companies



- > **Deep water from dams**

- > **Shoalhaven River**

- > **Groundwater**

- > **Desalination: high security, high cost**



- > **Alternatives?**

Saving water inside and outside your home

The image shows a screenshot of the Sydney Water website. The top left features the Sydney Water logo. A navigation menu on the left lists various services, with 'In Your Home' highlighted. The main content area is divided into two sections: 'In Your Home' and 'In Your Garden'. The 'In Your Home' section has a breadcrumb trail 'Home > Saving Water > In Your Home' and a sub-header 'Households use around 70% of water in greater Sydney.' It includes a paragraph about saving water and a list of four offers: 'Get a free Water Saving Kit', 'WaterFix your home', 'Washing Machine Rebate', and 'Rainwater Tank Rebate'. The 'In Your Garden' section has a breadcrumb trail 'Home > Saving Water > In Your Garden' and a sub-header 'In Your Garden Helping you save water'. It includes a list of three offers: 'Love Your Garden', 'Rainwater Tank Rebate', and 'Plant Selector'. A search bar is located at the top right of the page.

Sydney WATER

Quick information: [dropdown] Quick services: [dropdown] [input] Search

Home > Saving Water > In Your Home

In Your Home

Households use around 70% of water in greater Sydney.

Helping you to save water is part of the overall plan for water for life. Take advantage of one of these great offers, or find out about other steps you can take to

Helping you save water

- ▶ **Get a free Water Saving Kit** - And save around 100 litres of water a day. Register online for your free kit.
- ▶ **WaterFix your home** - From only \$22* a qualified plumber will visit your home to install water saving devices. Book here or call the WaterFix hotline on 1800 995 811.
- ▶ **Washing Machine Rebate** - You can get a \$150 rebate from Sydney Water to buy a water efficient washing machine.
- ▶ **Rainwater Tank Rebate** - Get a rebate of up to \$2,500 for installing a rainwater tank in an existing home.

Home > Saving Water > In Your Garden

In Your Garden

Helping you save water

- ▶ **Love Your Garden** - Get expert advice on your garden's watering needs for just \$33 or \$55 depending on the size of your property.
- ▶ **Rainwater Tank Rebate** - Get a rebate of up to \$1,500 for installing a rainwater tank in an existing home.
- ▶ **Plant Selector** - Save water by choosing plants to suit your soil and weather conditions.

www.sydneywater.com.au

Look for these labels

Dentro
la casa



Fuori /
in giardino



Future Innovations and Challenges

> Smart metering

- Water, energy, gas (South East Water, Melbourne)
- Near real-time information (Wide Bay Water, QLD)
- Current research with CSIRO on event recognition

> Smart developments

- Distributed systems, less transport costs

> Challenges

- Climate change
- Behaviour post-drought
- Future role of efficiency / role of desalination



Eco-meter

Further information

> **Institute for Sustainable Futures, UTS**

- Damien.Giurco@uts.edu.au 02 9514 4978
- www.isf.uts.edu.au (publications downloadable)
- Visit us at Level 11, 235 Jones St, Ultimo Sydney

> **NSW**

- www.waterforlife.nsw.gov.au
- www.basix.nsw.gov.au
- www.sydneywater.com.au

> **AUSTRALIA** (find approved products)

- www.waterrating.gov.au
- www.smartwatermark.info

