



**Australian Government**  
**National Water Commission**

# The NWI and the Importance of Scientific Knowledge 1 September 2008

**Ken Matthews**  
**Chairman and CEO**  
**National Water Commission**



# Today's Session

Introduction



Speakers



Open forum



Media discussion



# NWI Objectives

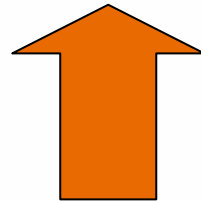
1. Secure entitlements (science)
2. Quality water planning (science)
3. Improved environmental water management (science)
4. End of over-allocation (science)
5. Development of water markets
6. Sharing of risks of reduced water (science)
7. Improved water accounting (science)
8. Water use efficiency and innovation (science)
9. Managing adjustment
10. Managing surface water and groundwater jointly (science)



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# The need for science

Calculating the  
consumptive  
pool



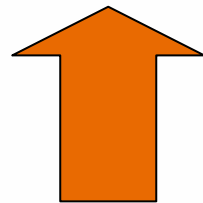
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# The need for science

**Evidence based  
water planning**



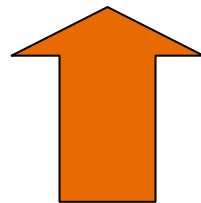
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# The need for science

**Returning  
over-allocated  
and overused systems  
to sustainable  
levels of extraction**



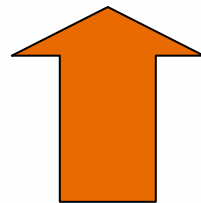
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# The need for science

Dealing with  
water interception  
e.g. forestry



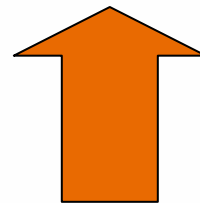
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# The need for science

**Managing surface  
water and ground  
water, jointly**



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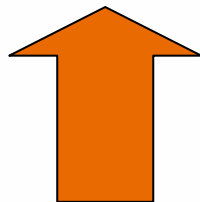




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# The need for science

Dealing with  
environmental  
externalities



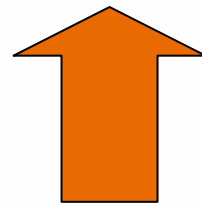
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# The need for science

Integrated  
management  
of environmental  
water



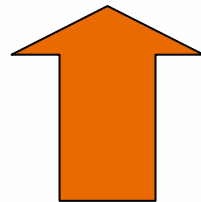
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# The need for science

**Environmental  
water accounting**



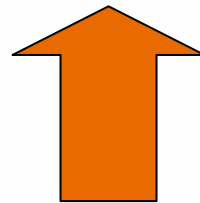
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# The need for science

**Water sensitive  
urban design**



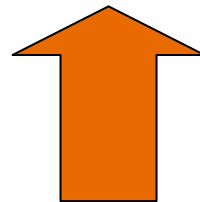
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# The need for science

**Knowledge and  
capacity building**



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# Can't we “take the politics out of water”?

- Science, data and knowledge are essential
- But ultimately these are social (i.e., political) choices
  - Which environmental assets should be nurtured?
  - How big a redgum forest?
  - How green a wetland?
  - How often a hatching or nesting event?
  - How resilient do we want the ecosystem?
  - What risk will be acceptable?

*Hence, decisions should be science-based but not science-determined. Choices, judgements and trade-offs will always be required.*



# Water science and the NWI

**Water science:** R + D in the water sector lacks coherence

- *E.g. no national research priorities*
- *Weak “demand pull”*
- *Disparate water science institutions and processes*
- *Separate state efforts*
- *Incoherent funding programs*

NWC has suggested a national water science strategy

COAG





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