

Future-proofing the Basin

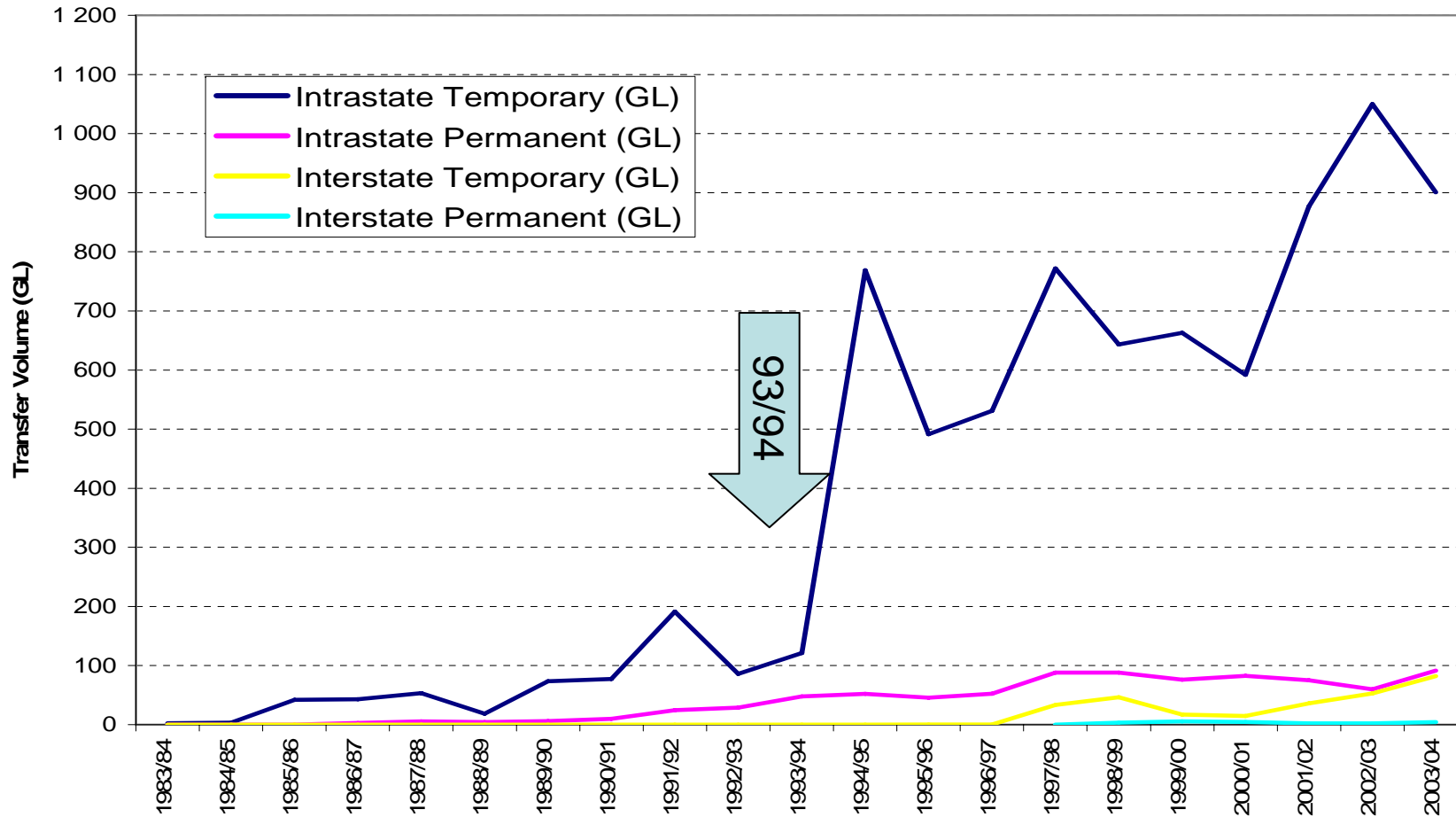
Where are water markets taking us?

Prof Mike Young,
The University of Adelaide

Melbourne, 17th November 2008

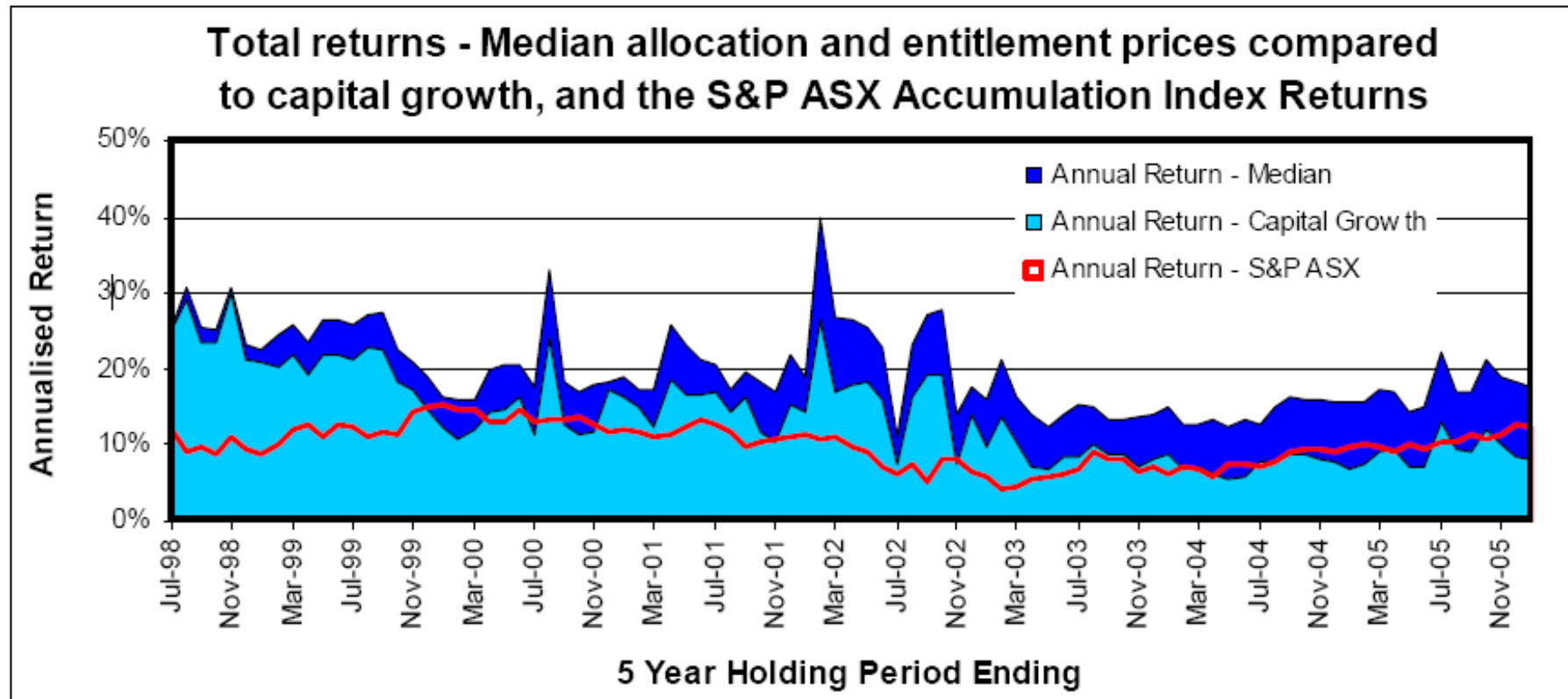
Scarcity and Trading

Murray-Darling Basin Water Entitlement Transfers - 1983/84 to 2003/04



Trading has enabled adoption of new technology and "greenfield" development

Benefits of trading



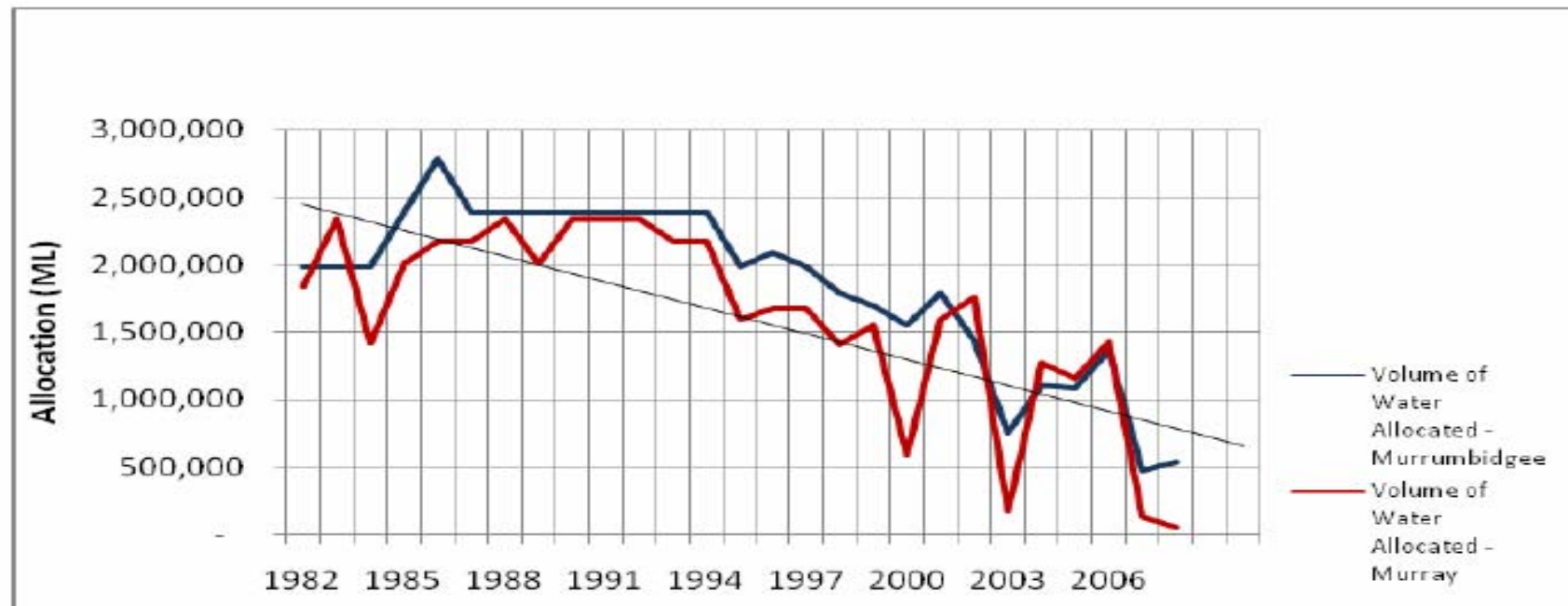
Bjornlund and Rossini 2007

But we have traded into trouble

- We traded off flawed entitlement, accounting management systems
 - Activated licences without reducing allocations to others
 - Did not offset impact of
 - Forestry
 - Farm dams
 - Ground - surface water interaction
 - Increased water-use efficiency
 - Increased overland flow harvesting
 - Salinity interception
- Adverse climate change and long dries were not included adequately in water sharing plans
- Problems more than over-entitlement and over-allocation

Reliability is being eroded

Figure 8 – Water Allocated (ML) of High and General Security – NSW Murray and Murrumbidgee Systems 1983-2008



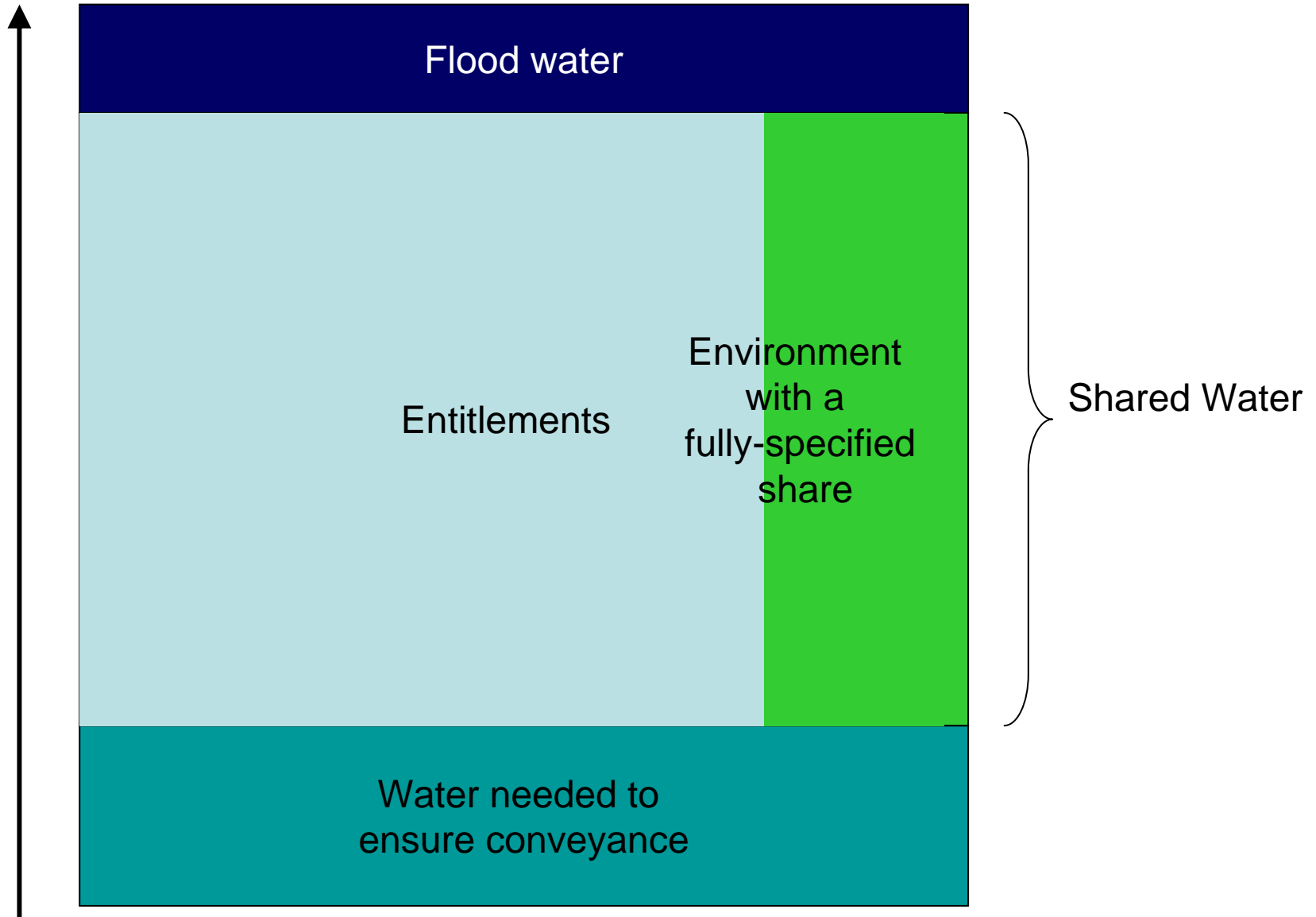
Source: <http://waterinfo.nsw.gov.au/ac/allocation.shtml>

Source: Waterfind Annual Water Market Report

Need full system specification

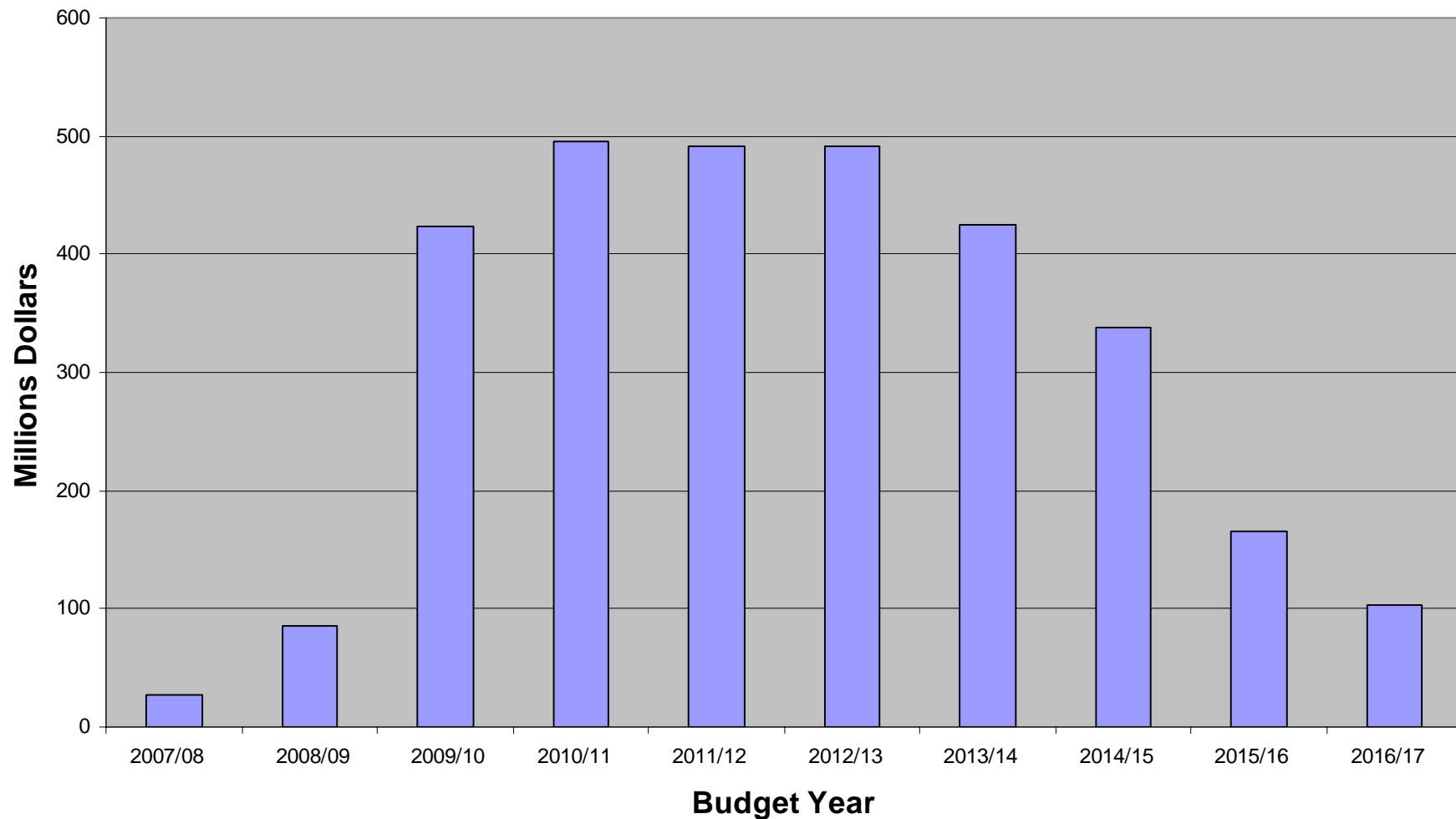
- A challenge for the MDB Authority and its plan
- Especially as it may not be able to specify the environment's share without support from all states

Volume of water available



\$1.8billion now or up to \$3.1 billion over 10 years?

Buying water for the environment



How much water will \$1.8b buy?

- At \$3,000 per ML of cap equivalent
- 1 GL costs \$3,000,000
- $1,810,000,000 / \$3,000,000$

$$= 603 \text{ GL}$$

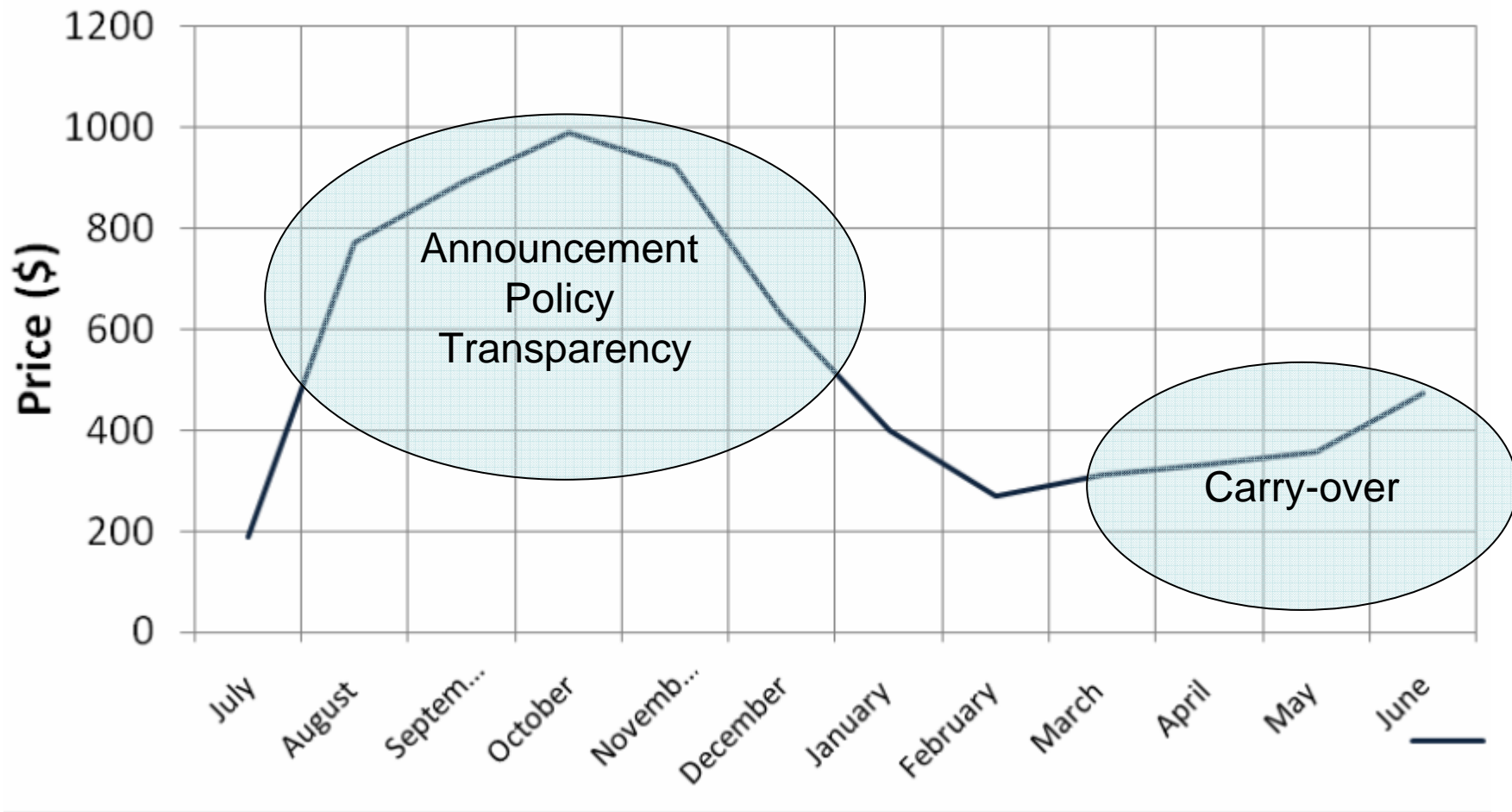
Plus Living Murray

Plus infrastructure \$\$\$

Waterfind Annual Report

- Transparency
 - Timely price information not available
 - Trading rule discovery is difficult
 - Announcement discipline is lacking
 - Governance processes are awkward
- Liquidity
 - Permanent market
 - 4% and 10% rules impeded trade
 - Tagging is impeding trade
- Administration
 - Slow between regions
- Settlement procedures
 - Slow

Temporary water price 07/08



Source: Waterfind Annual Market report

Waterfind report

- Temporary price reached \$1,200 per ML
 - Inexperience with scarcity
- Carryover announcement
 - Trade volume doubled before announcement
 - Price nearly doubled immediately after announcement
- Price rise towards the end of the irrigation season
 - Due to carry over
- Federal Government buy back
 - Put a floor in the market
 - Created speculative uncertainty
- Interstate entitlement trade nearly stopped
 - 2006-07 (Exchange Rate Regime) 14 500 ML
 - 2007-08 (Tagged Trading Regime) 200 ML

4% trade out & max 10% decoupled

- 4% limit on trade out
 - Sellers get less money
 - Less structural adjustment (exit)
 - Less income for state and nation
- 10% limit on unbundled ownership
 - Stops Environmental water holder from buying as much has already been unbundled for tax and investment reasons

Exit fees

- Would be more efficient if replaced with a variety of supply contracts
- Infrastructure redundancy and obsolescence should be anticipated and planned for
- Need new business model

Urban and Rural Trade

2032 Water Price \$/KL
with 15% less water and 5 million more
people in

	Current Water price*	No Initiative	Urban Rural Trade
Sydney	1.36	8.09	2.97
<u>Melbourne</u>	<u>1.17</u>	<u>5.96</u>	<u>1.57</u>
Brisbane-Moreton	1.27	10.51	2.61
Adelaide	1.30	1.42	1.70
Perth	1.12	11.40	6.33
ACT	1.11	3.23	1.51

Water trading frontiers

1. Fewer brokers and larger markets
 - A single trading platform?
2. Linked ground-surface water right
 - Ground-surface trading and river ownership of groundwater
3. Trading systems that allow access within two days
4. A single allocation announcement system
 - All users in all MDB states informed of a change in the same way