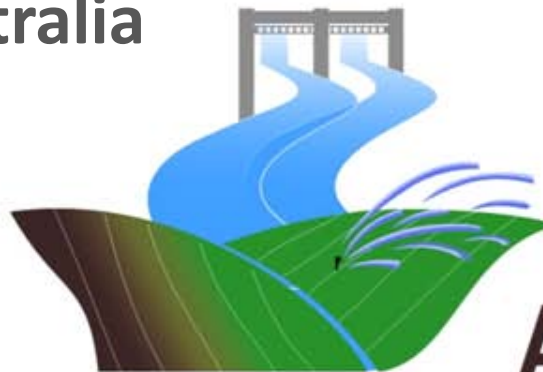


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# Water markets reform: lessons from the Australian experience

**Will Fargher**  
**Director, Aither Pty Ltd**  
**Australia**

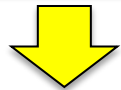


**Asian  
Irrigation Forum**

11-12 April 2012 • Asian Development Bank, Manila, Philippines

# Water market and pricing reform in Australia

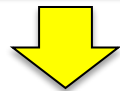
Scarce and variable water supplies, competing users, legacy of government-led development



Inefficient water distribution and use outside environmental limits



Inefficient and unviable infrastructure investment and service provision

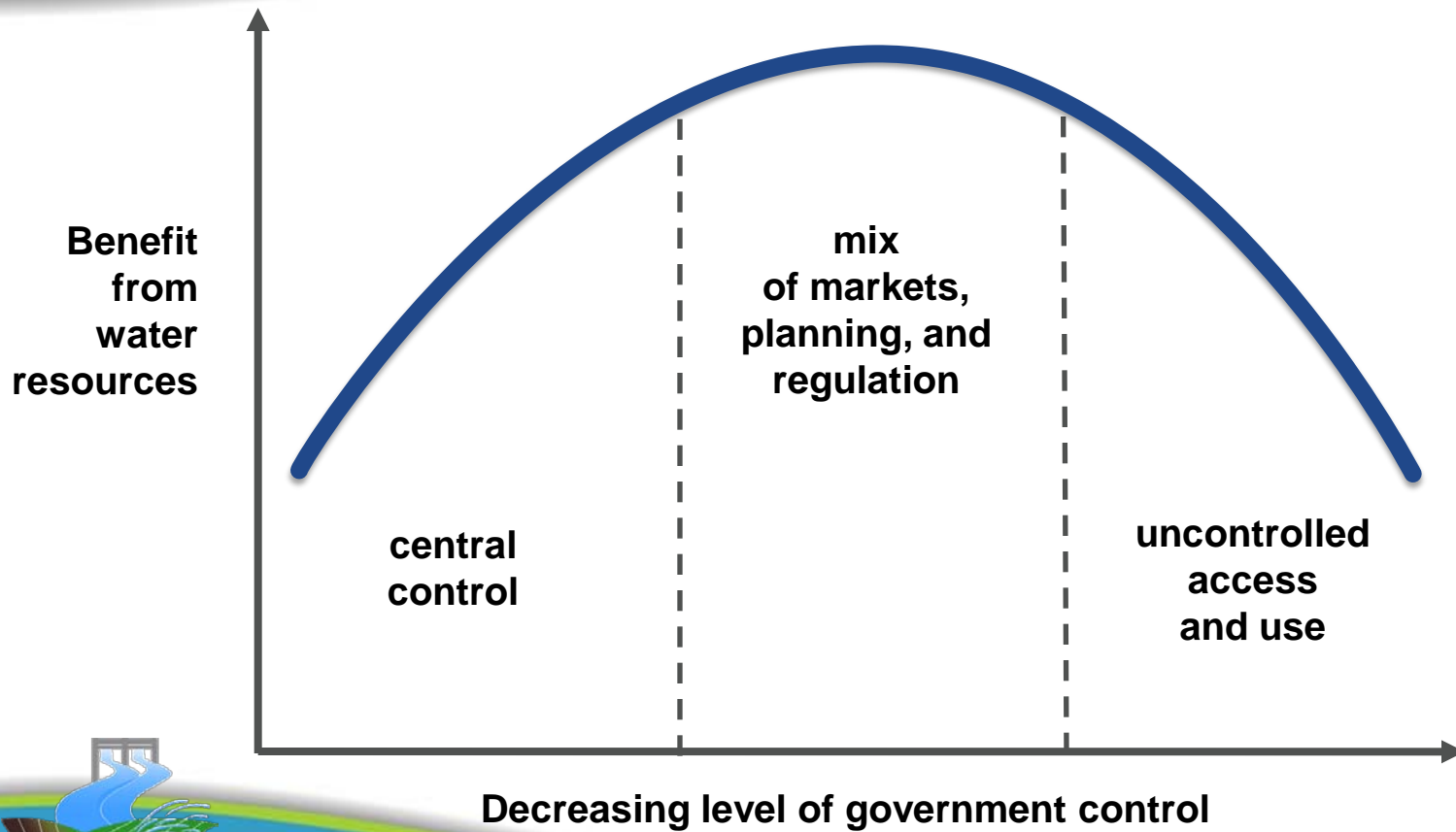


Introduced markets for water resources



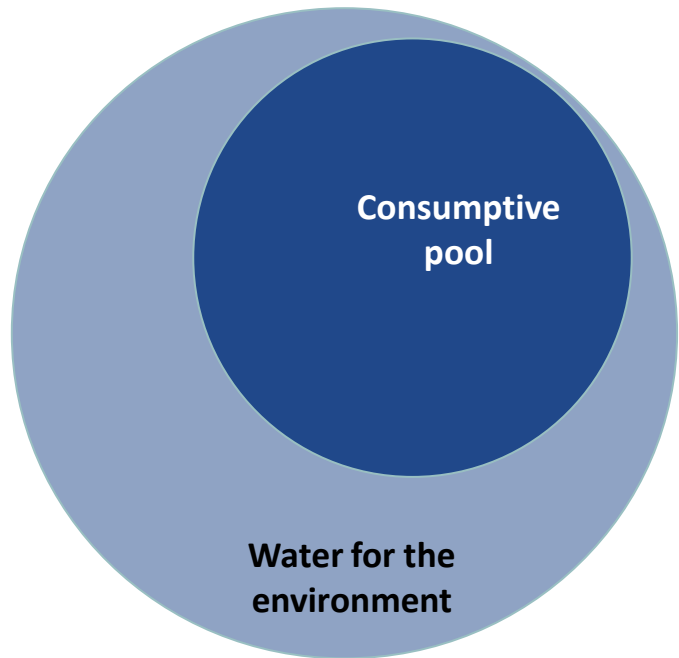
Improved pricing for water delivery services

# Increase efficiency of water allocation and use, increase private investment, protect environment

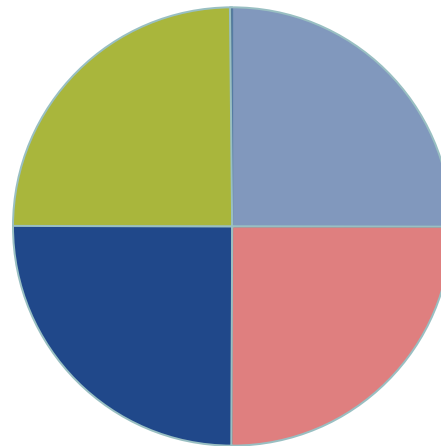


# Establishing water markets via 'cap and trade' approach

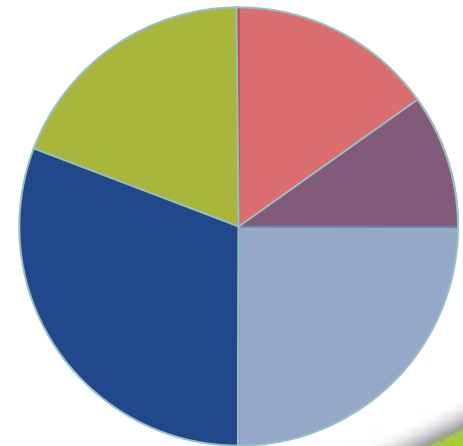
## 1) Limit total extractions from water resource



## 2) Limit/specify extractions for each user

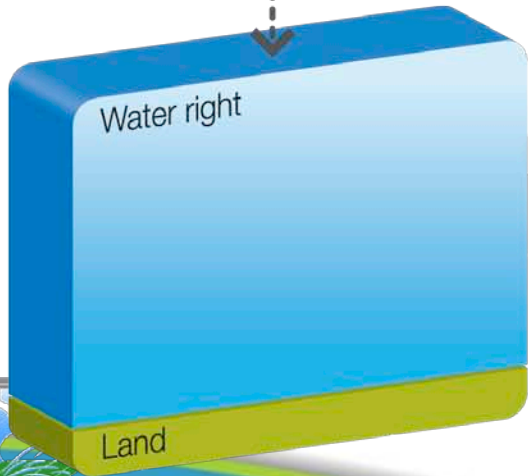


## 3) Trade allows individual water use to be reallocated



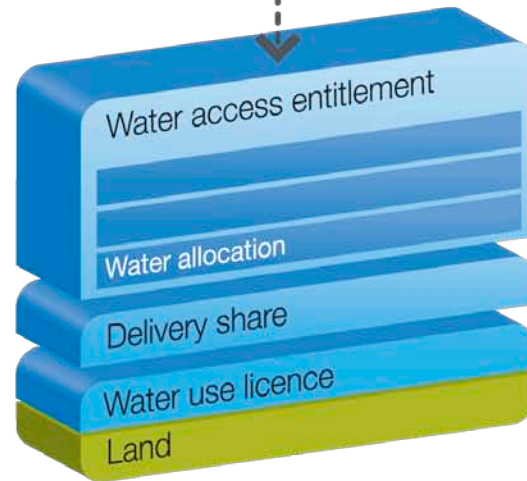
# Defining water rights and use conditions

## PRE-WATER REFORM

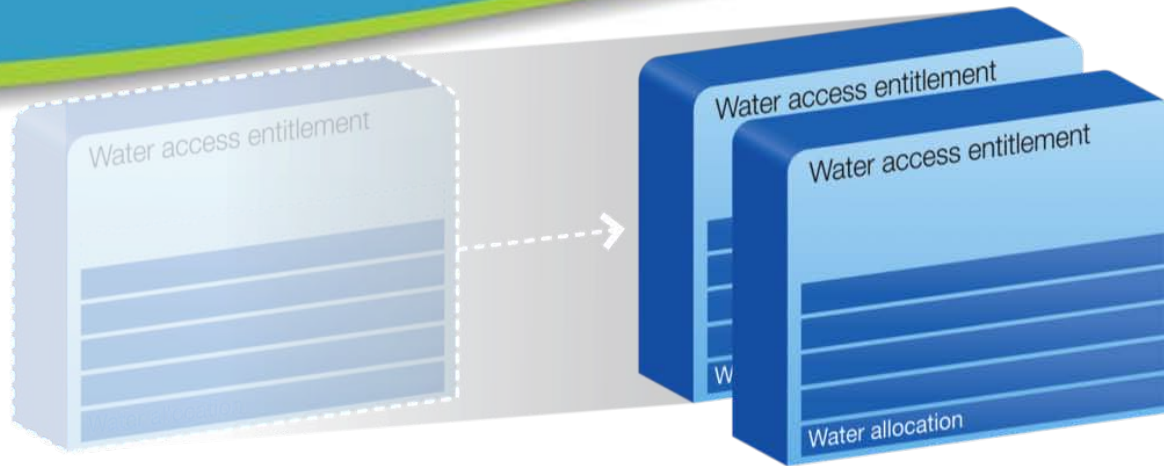


Unbundling

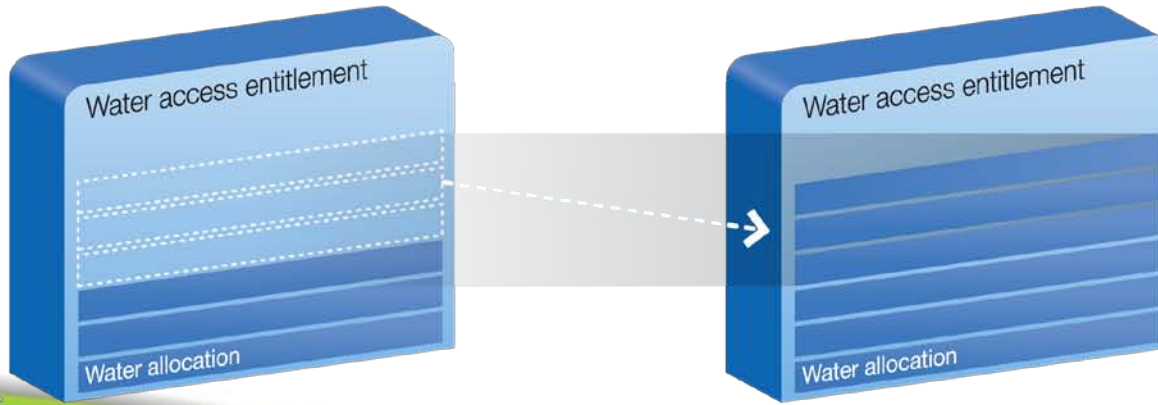
## NWI REFORMS



# Trade in water entitlements and allocations

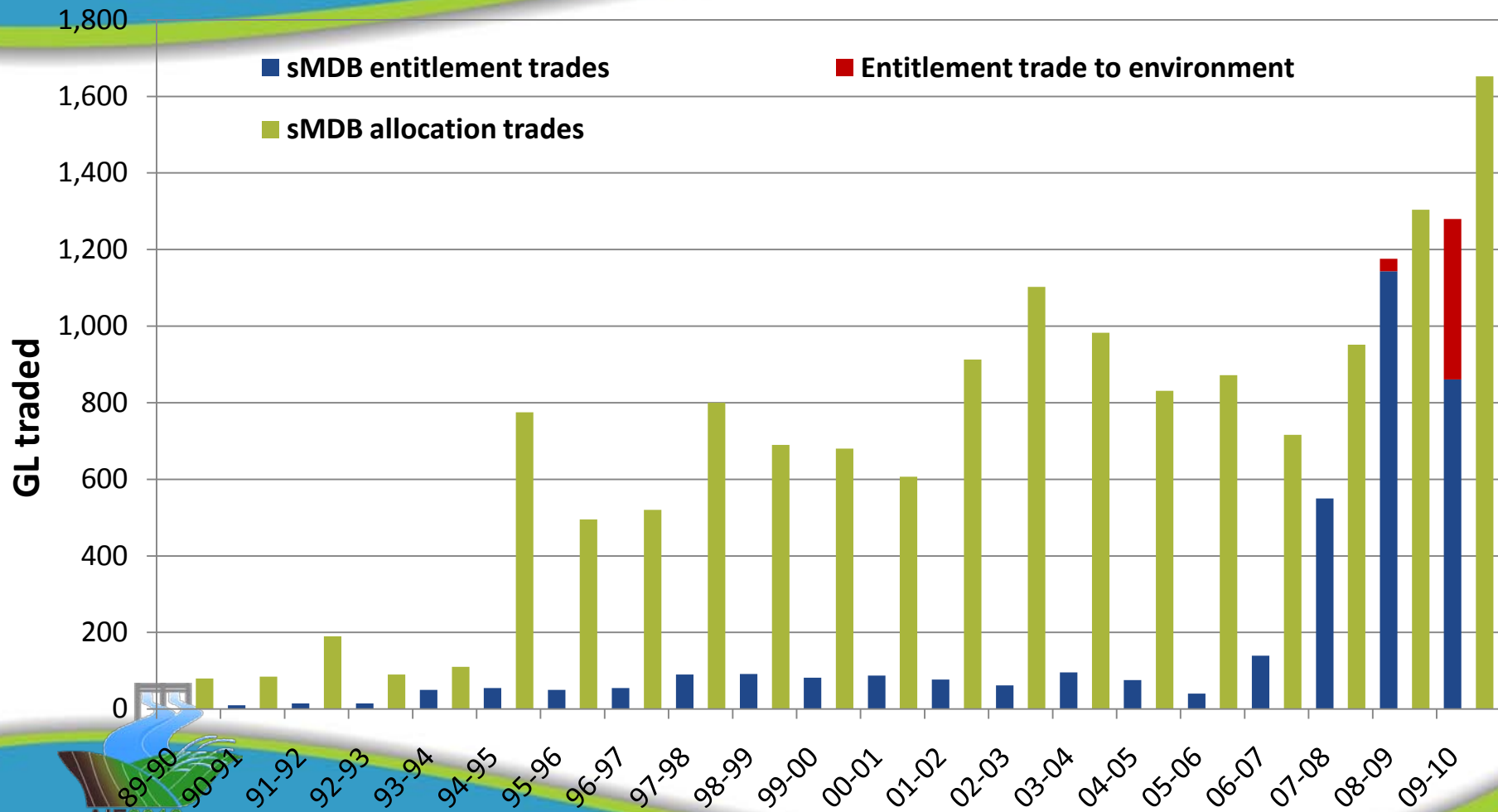


**Seller** ← **\$** **Buyer**



**Seller** ← **\$** **Buyer**

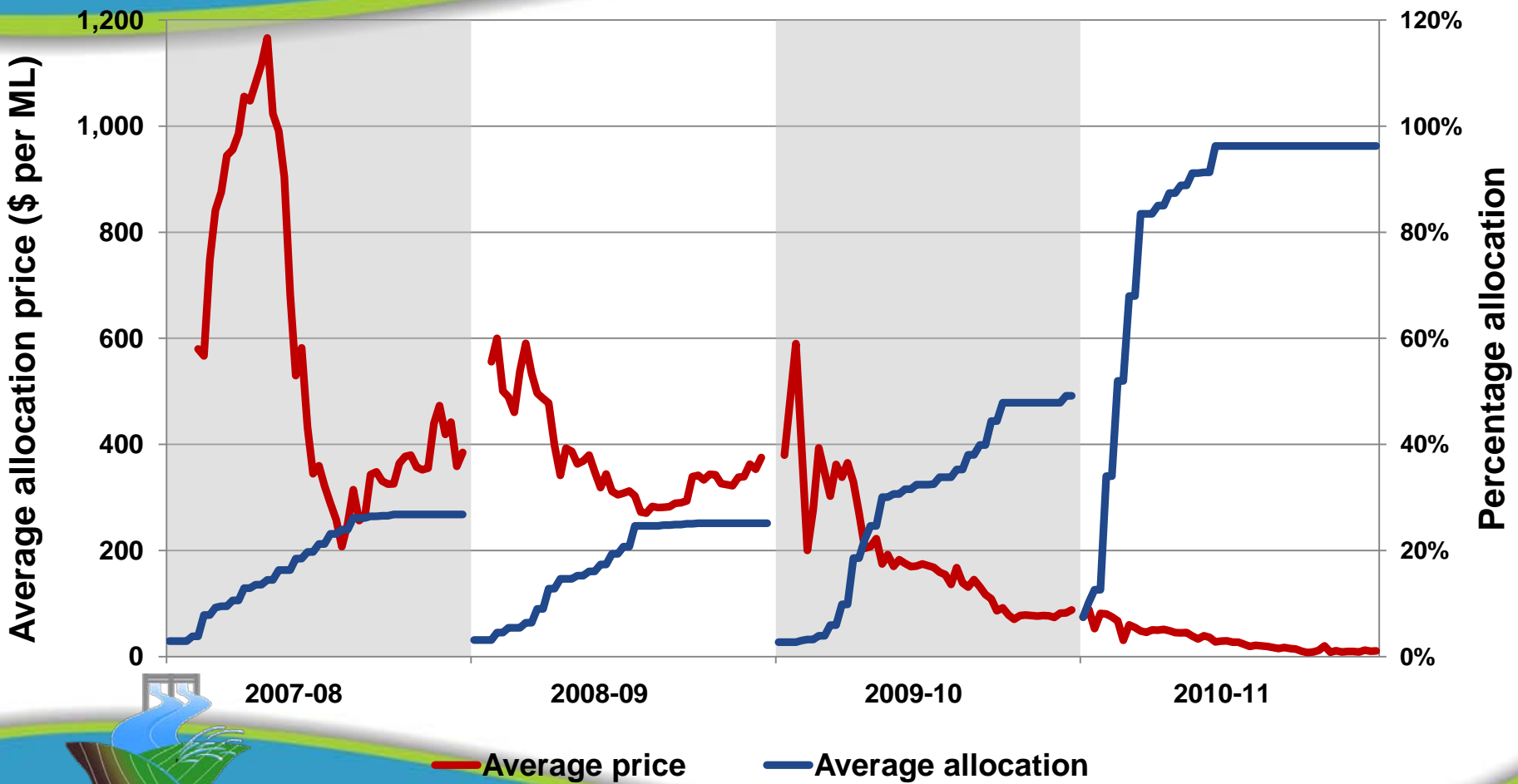
# Entitlement and allocation trade: southern Murray-Darling Basin



Source: NWC



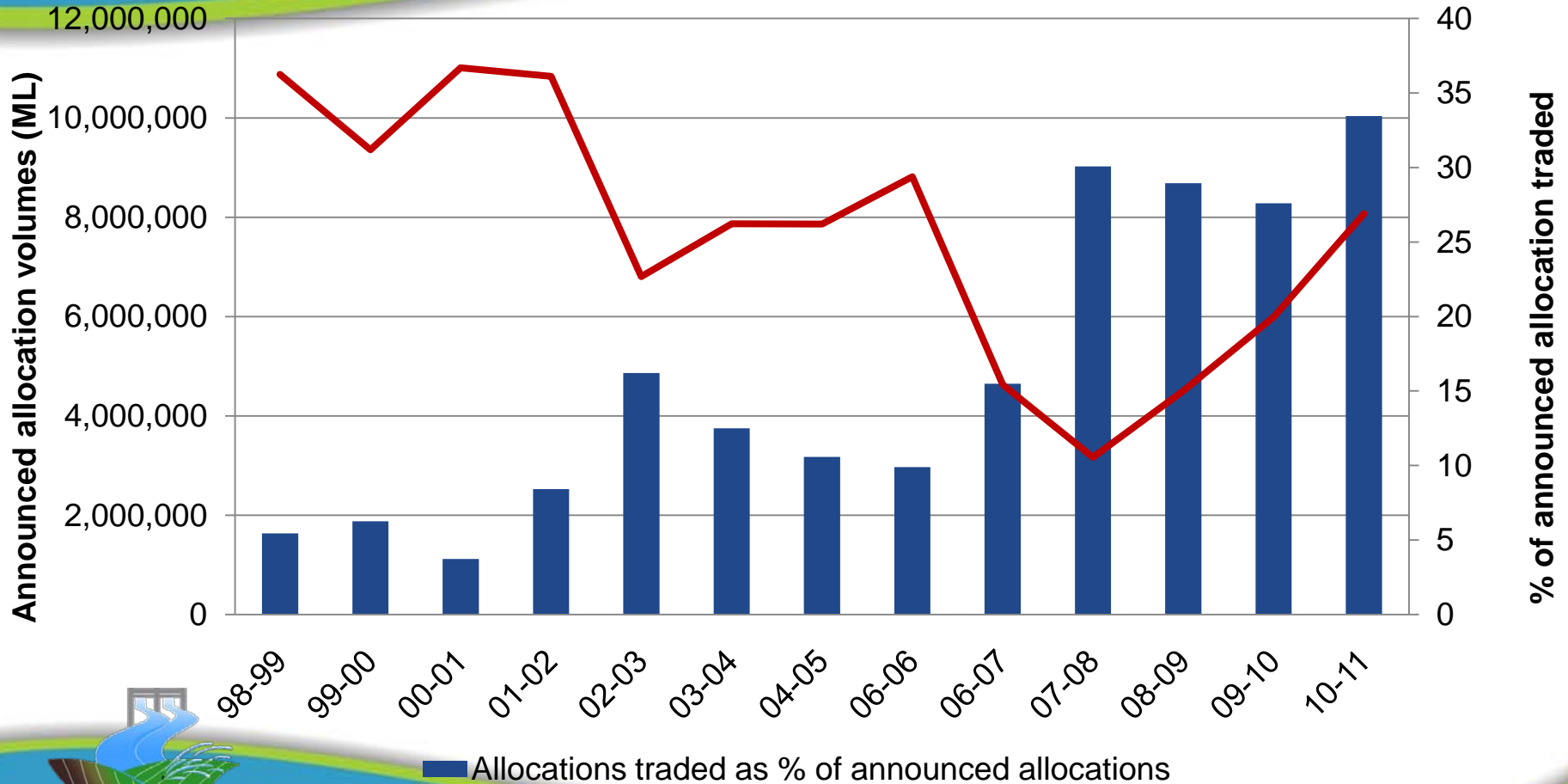
# Relationship between allocation levels and prices: southern MDB



— Average price — Average allocation



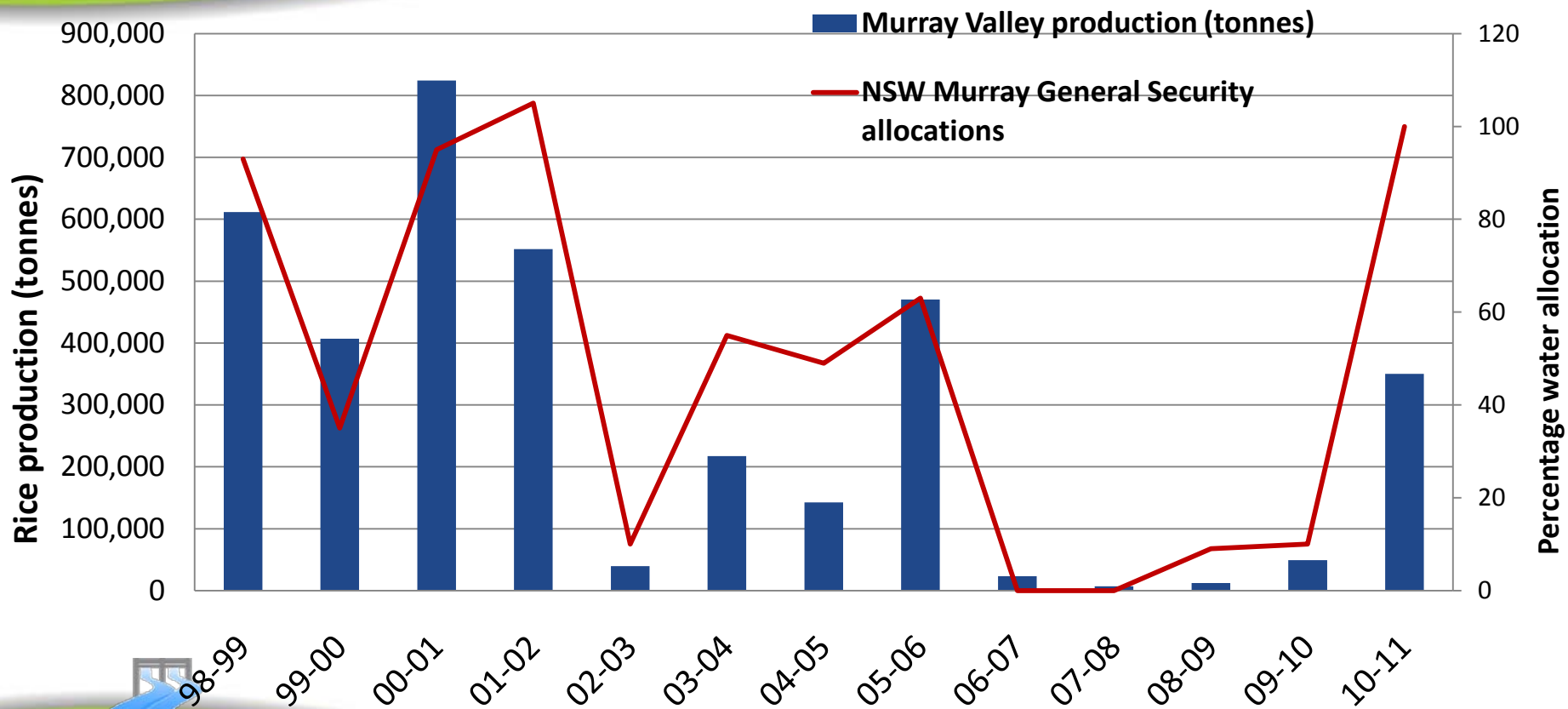
# Volume of water allocation and proportion traded



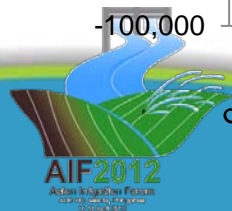
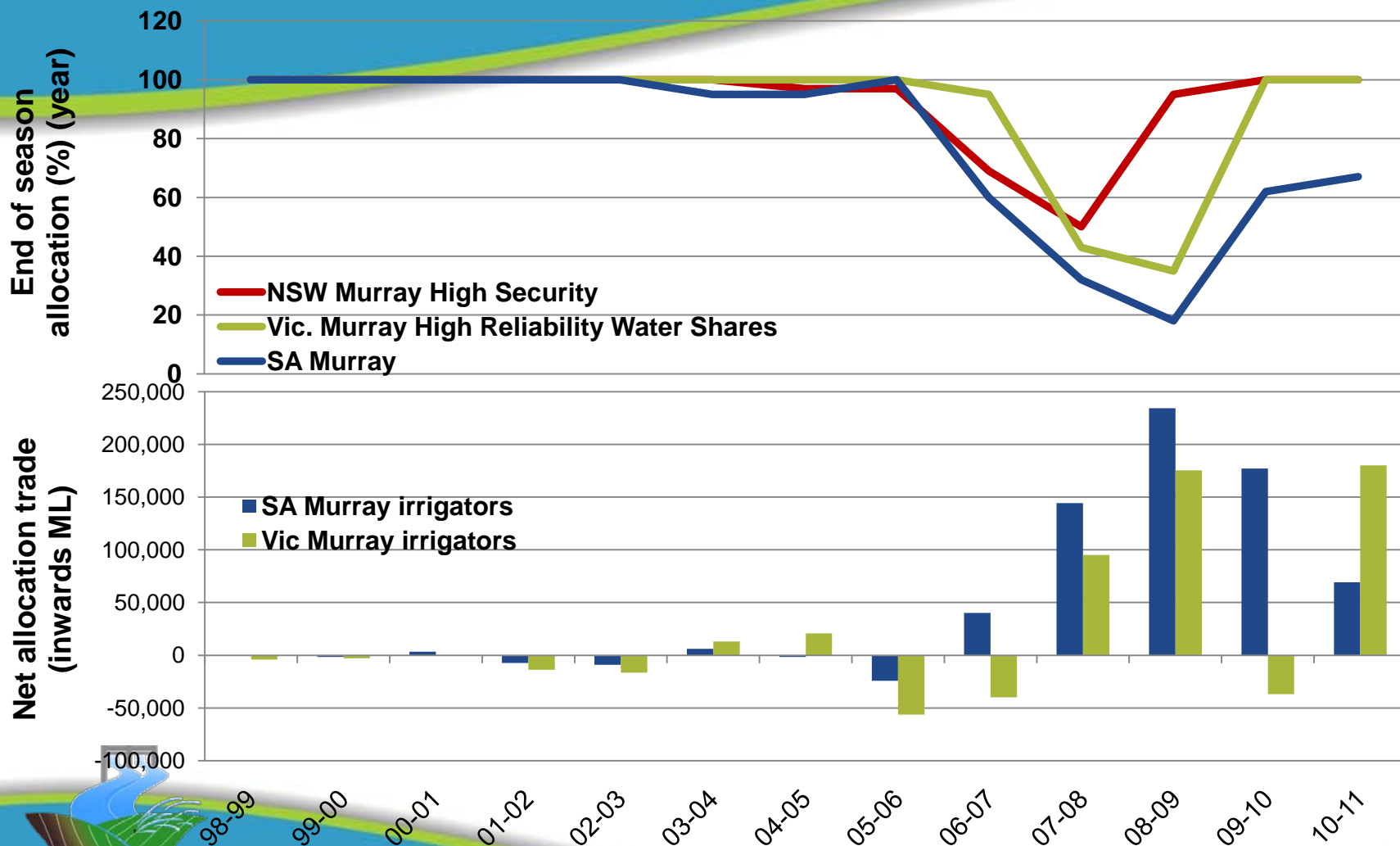
# Interzone water allocation trading 2008-09



# Murray rice production and water allocations



# Allocations to high security entitlements over net allocation trade



# Lessons from Australia's water markets

- Can work in complex systems, including across boundaries
- Have enabled private investment and supported irrigation
- Large benefits to agriculture, urban areas and environment
- Require
  - good water planning and effective cap on water extractions
  - specifying, monitoring and enforcing entitlements
  - water registers, metering and accounting
- While costly, these fundamentals support good water management
- can be introduced incrementally and participants learn quickly