



Water trade & sustainable water management

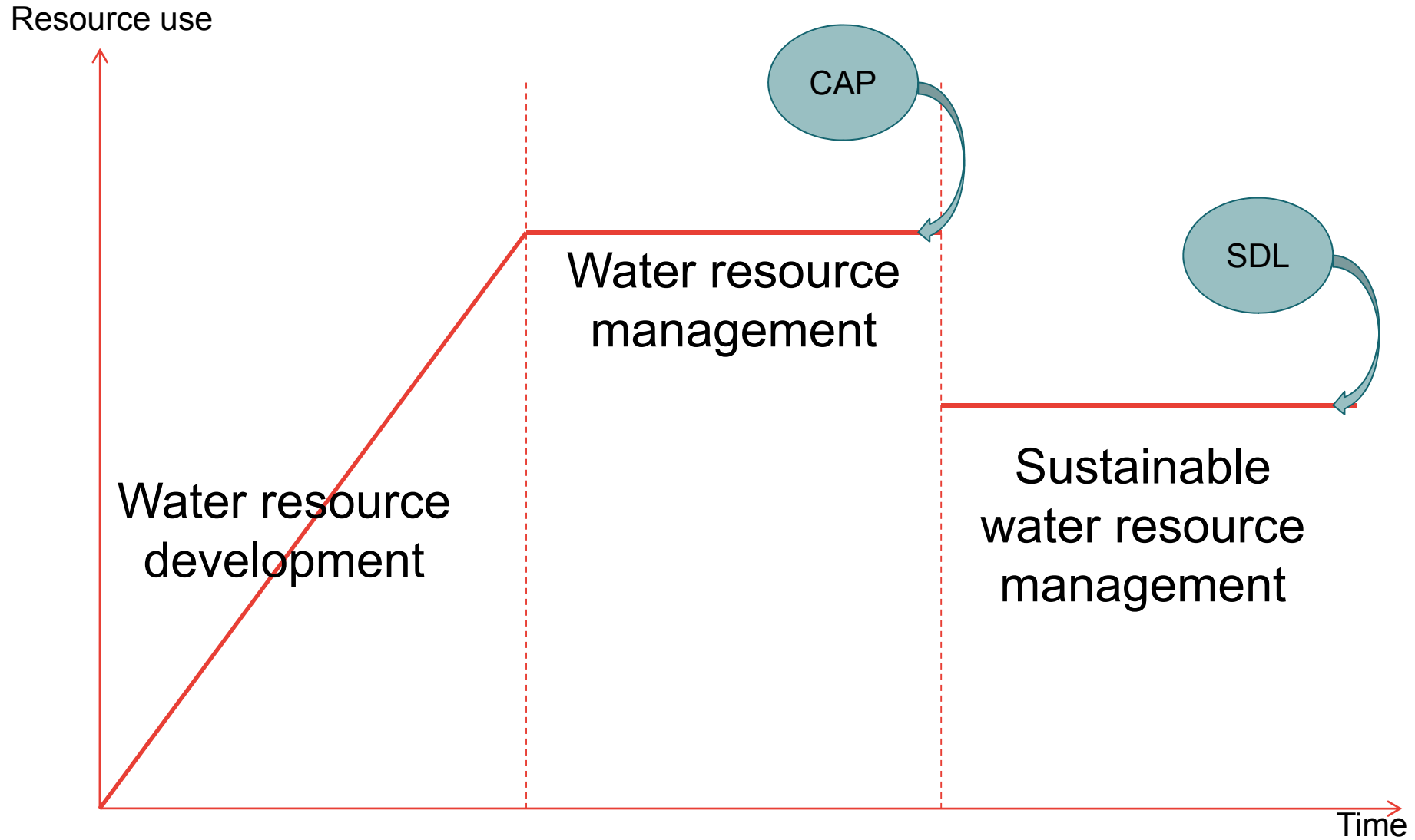
Presentation at *Riversymposium 2010*

11 October 2010

Water trade 101

- How can water be tradeable?
 - Usually water held in a large dam for storage
 - Property rights over water access and extraction
- Two types of water products
 - Entitlements – The ongoing right to a share of a water resource
 - Allocations – An actual amount of water in a given year (ML)
- Where is water trading observed?
 - Southern connected MDB
 - Within valleys of the northern MDB
 - Surface water / groundwater & rural / urban

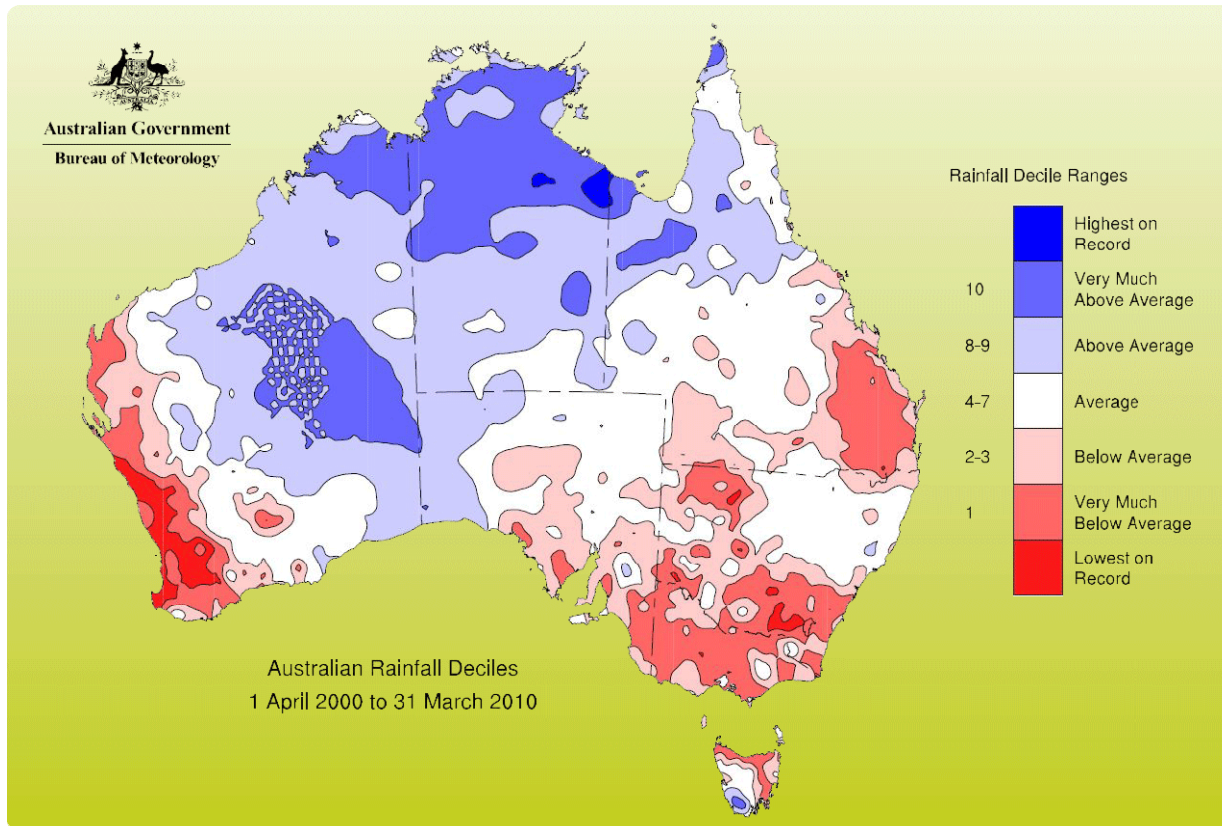
3 stages of water resource maturity



Water trading under a cap

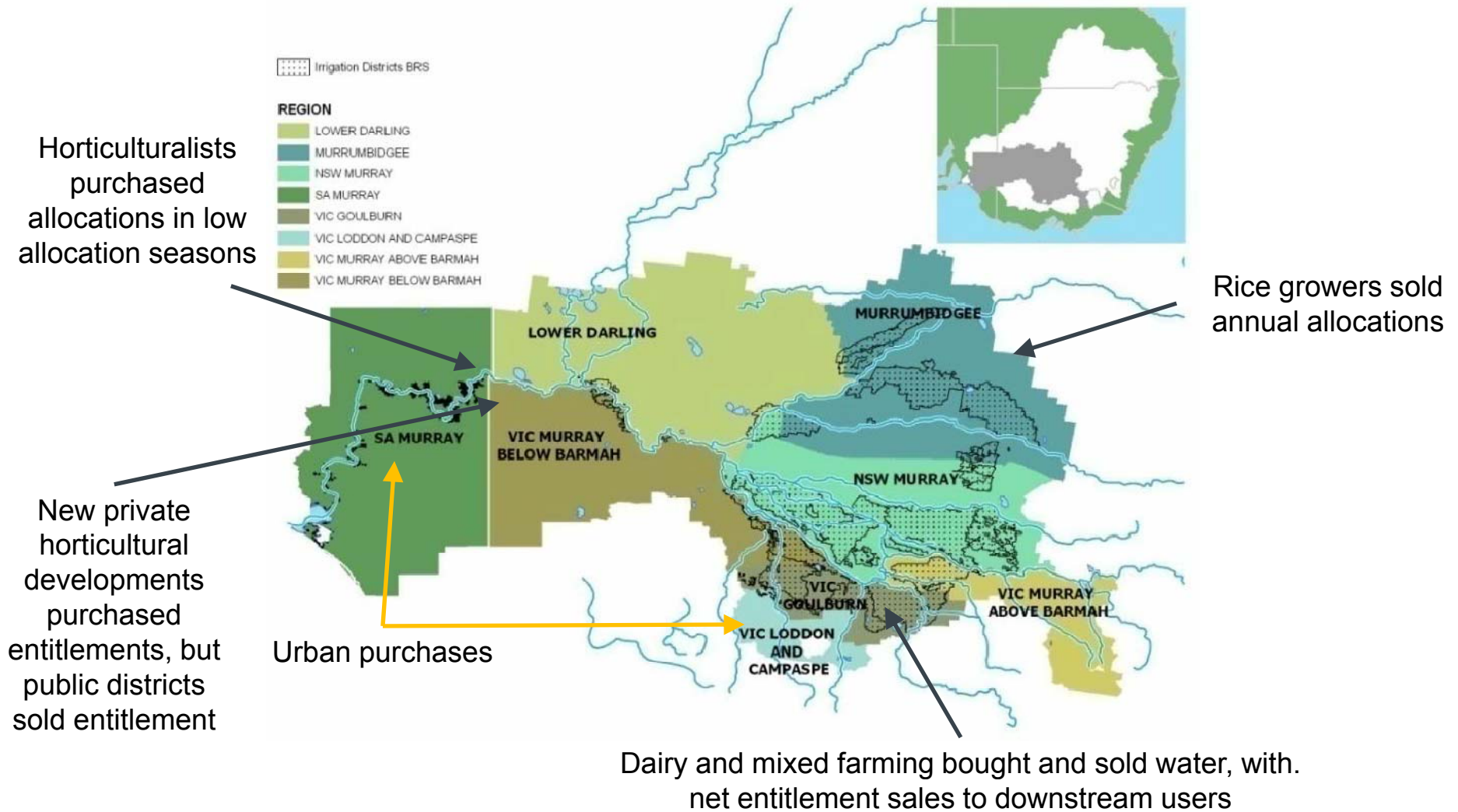
- Trading water provides flexibility
- Long-term changes in water use
 - Increases in urban populations and industry
 - Change in crop type and farm infrastructure
 - New irrigation on greenfield sites
- Short-term reactions to season conditions
 - Reallocation under drought conditions
 - Irrigation industries / urban users / environment have different requirements

Water trading was critical during the drought



Irrigator: *“I think trade has been very important in the last few years but that’s because of the impacts of the drought”.*

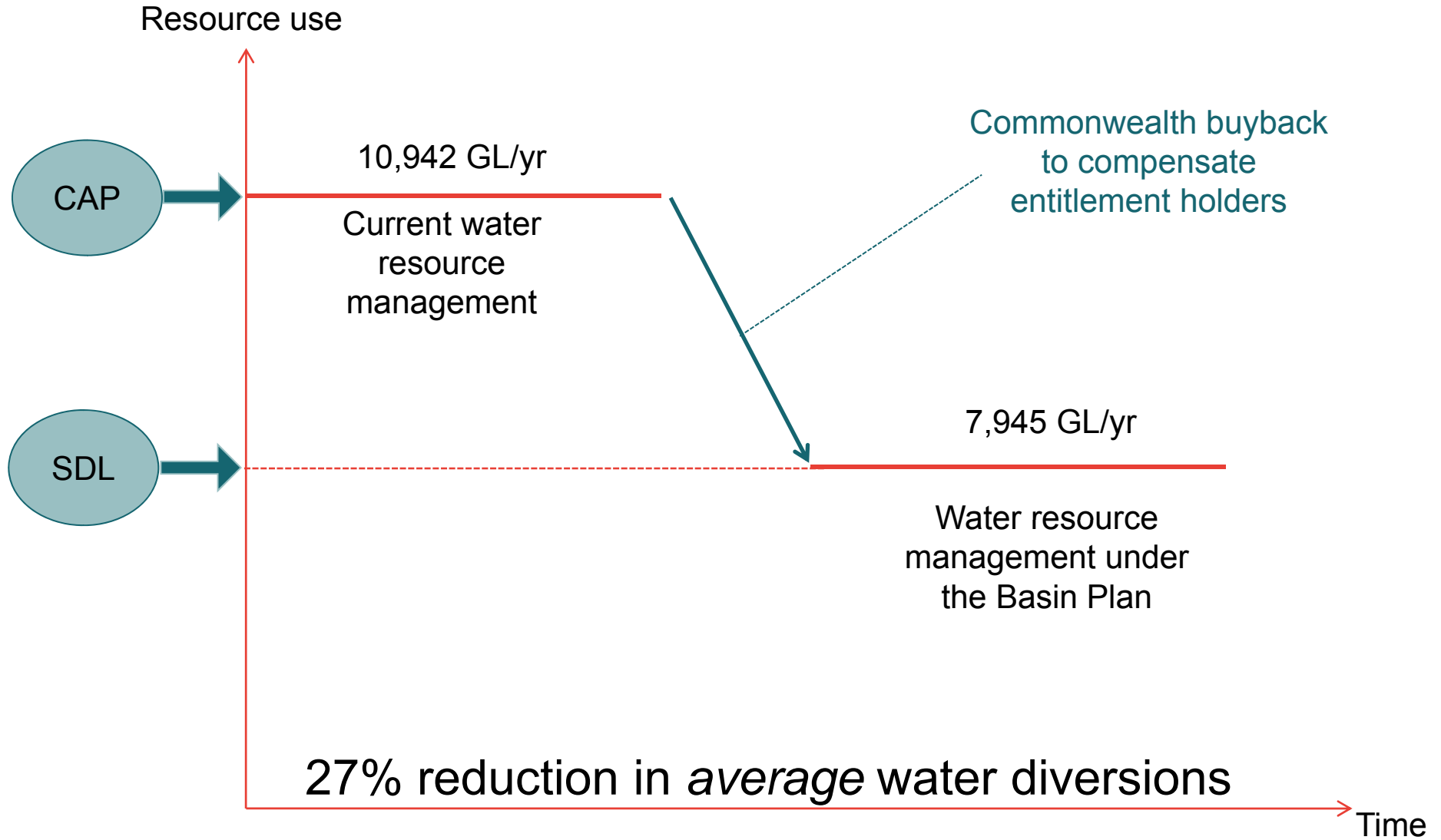
General patterns of trading



Water trading: Cap → SDL

- Range of approaches to alter balance of extractive use and the environment
 - Water planning (making less water available for extraction)
 - Environmental buyback
 - Water savings to provide increased environmental flows
- Using trading to buyback water seen as the middle ground
 - More equitable
 - More efficient use of public funds
- MDBA released its Guide to proposed SDLs last Friday

The minimum proposed SDLs



Concluding comments

- Water trade is one of many tools to support policy
- Water trade only as good as the water planning framework that allows it
- Water trade reduces the costs/losses from managing water use with a given level
- Water trade facilitates the least cost movement to more sustainable water management levels



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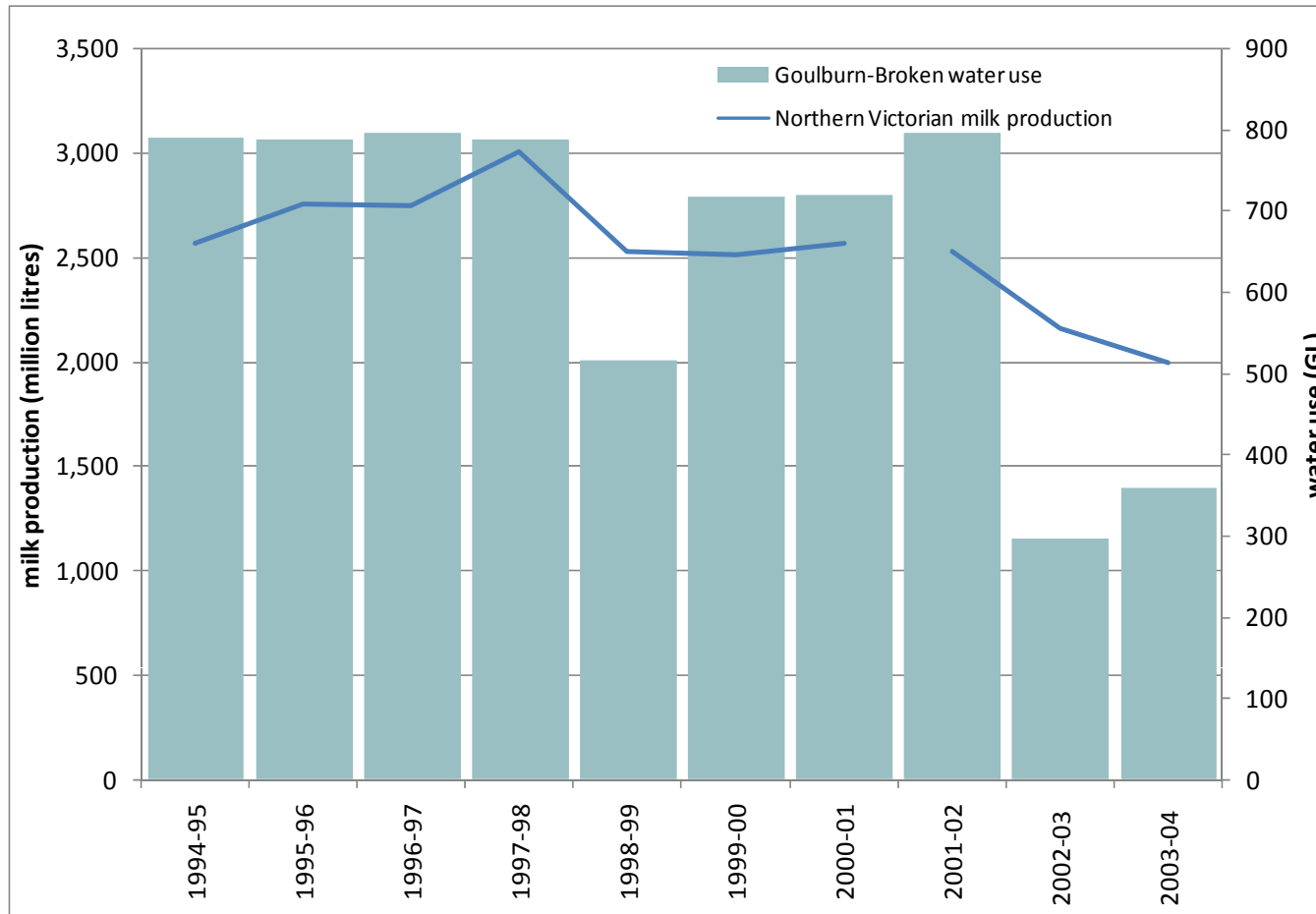
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Water products

- Water entitlements
 - The ongoing right to water from a given resource (unit shares)
 - Receive an amount of water (%) given prevailing seasonal conditions
 - Have different reliability characteristics (high, general, low)

- Water allocations
 - An actual amount of water in a given year (ML)
 - Water will be available for extraction in a given region

Within district trading and substitution



A 10% reduction in water use does not lead to a 10% reduction in the value of production.

Entitlements differ in the amount of water they provide

Water products	End of season allocations (%) (year)										
	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09
Higher reliability entitlements											
Vic. Goulburn HRWS	100	100	100	100	57	100	100	100	29	57	33
Vic. Murray HRWS	100	100	100	100	100	100	100	100	95	43	35
NSW Murray High Security ^a	100	100	100	100	100	100	97	97	69	50	95
NSW Murrumbidgee High Security	100	100	100	100	100	95	95	95	90	90	95
SA Murray High ^b	100	100	100	100	100	95	95	100	60	32	18
Lower reliability entitlements											
Vic. Goulburn LRWS ^c	0	0	0	0	0	0	0	0	0	0	0
Vic. Murray LRWS ^c	100	90	100	100	29	0	0	0	0	0	0
NSW Murray General Security	93	35	95	105	10	55	49	63	0	0	9
NSW Murrumbidgee General Security	85	78	90	72	38	41	40	54	10	13	21

Trading framework

- Seeks to be consistent with hydrological connections in order to avoid third-party impacts on the environment
- The impact of changed patterns due to trade should not be confused with impact of river regulation
- Framework is... ‘CAP and TRADE’
 - Issues of overallocation and over use are potentially separable from issues of water trading