



THE UNIVERSITY OF
MELBOURNE



Improving system efficiency: Developing water markets

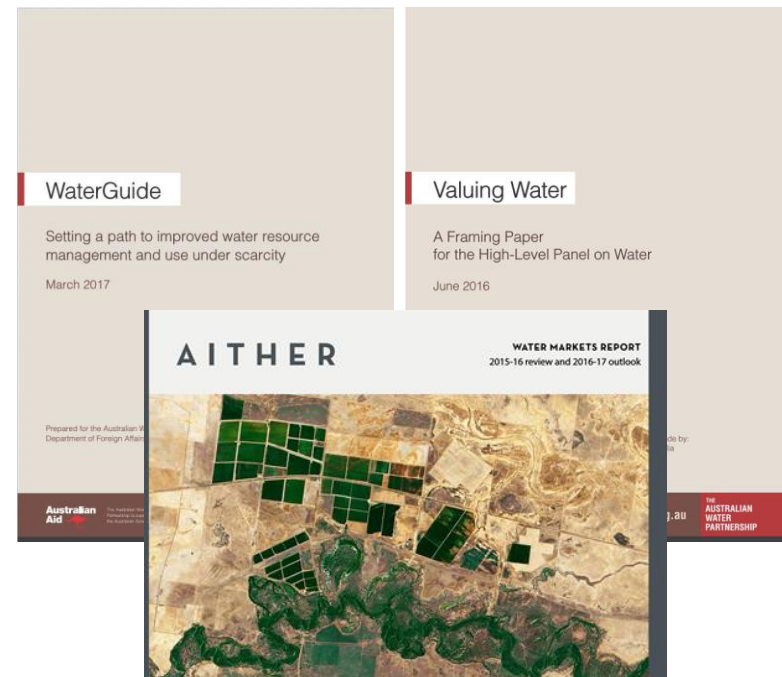
Will Fargher

Co-founder and Director, Aither

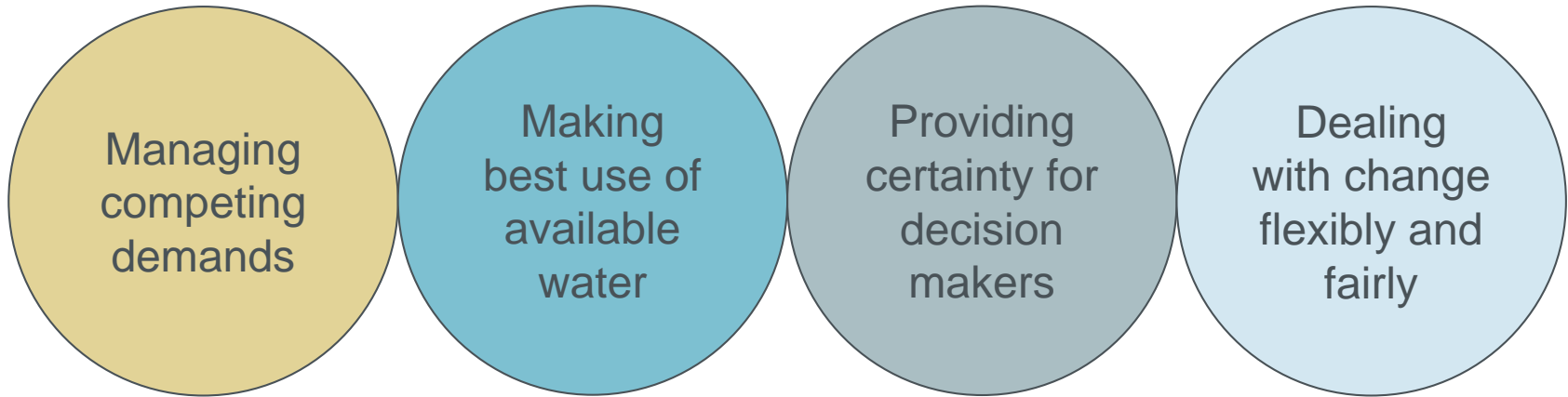
Capacity Building Workshop, Ministry of Energy (Iran)

Collaboration in Water Research and Management
between Iran and Australia
supported by Australian Water Partnership (AWP)

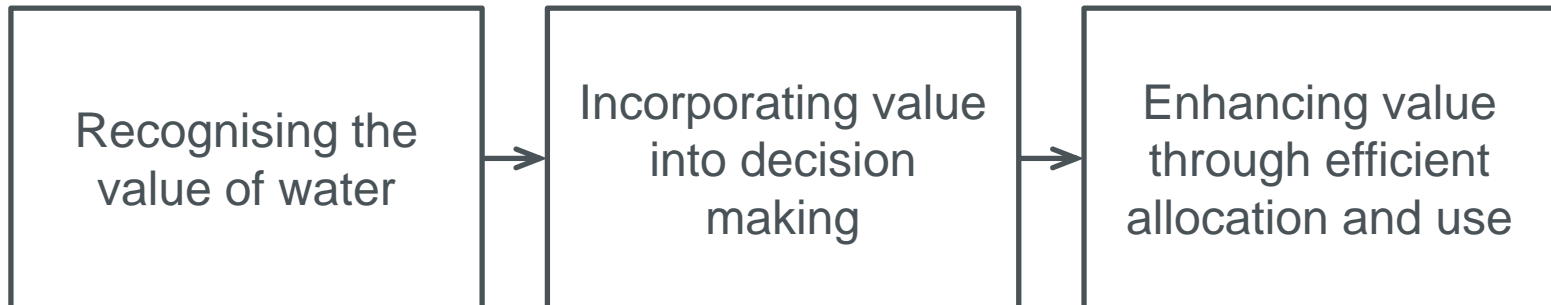
- **Leading Australian water advisory practice**
 - markets, resources, infrastructure, risks
- **Economics and policy**
 - analysis, insights and strategic advice
- **Government**
 - policy design, implementation, review
- **Private sector and industry**
 - commercial and strategic advice
- **Thought leadership**
 - insight pieces, independent reporting



- Balancing competing demands for scarce water resources is an increasing challenge
 - solutions are urgently required
- Australia has three decades of experience in water rights and market reforms, and market operation
 - can offer insights and guidance
- Water management is context-specific
 - no ‘one size fits all’ approach
- Focus must be on
 - lessons with universal applicability
 - practical actions aimed at accelerating progress

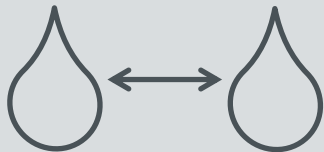


Valuing water should be a cornerstone of any agenda



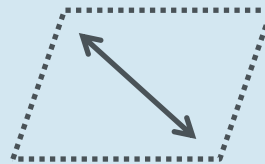
Allocative efficiency

Optimal allocation of water between different users and uses



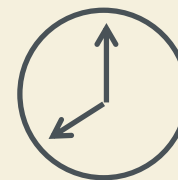
Productive efficiency

Maximised output of production per unit of water consumed



Dynamic efficiency

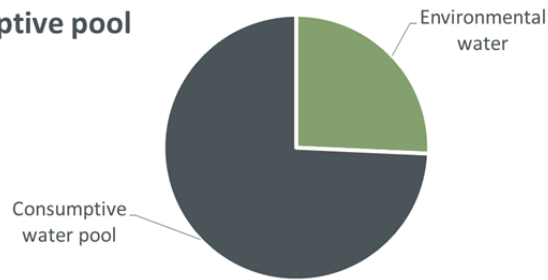
Improved water allocation and use across time and space



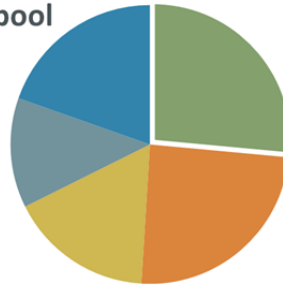
Water markets have proved key in revealing, incorporating and increasing value



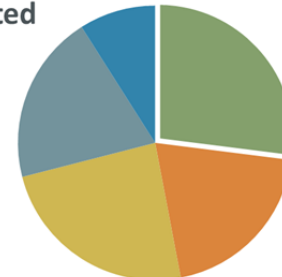
1) Limit total extractions and define consumptive pool



2) Specify individual rights to the consumptive pool

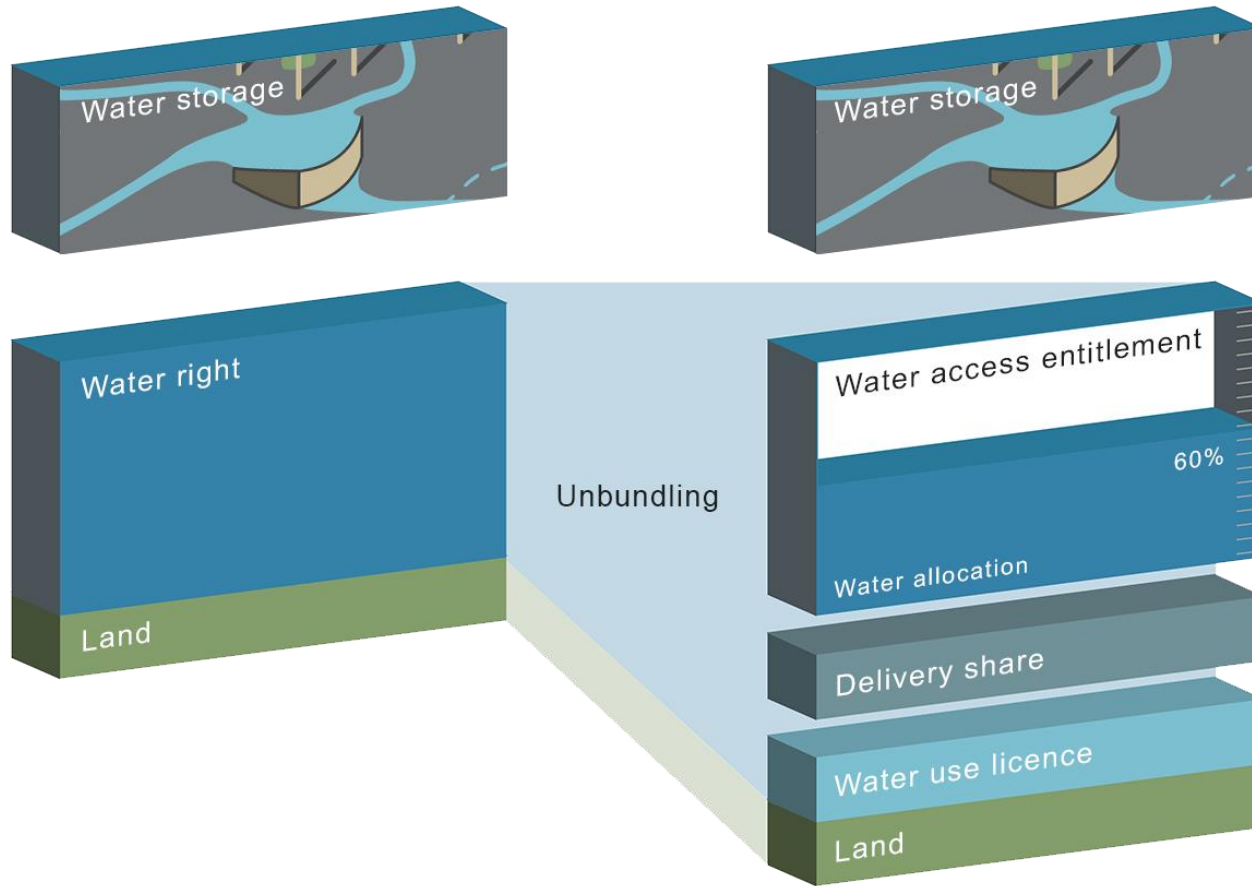


3) Trade allows individual water rights to be reallocated



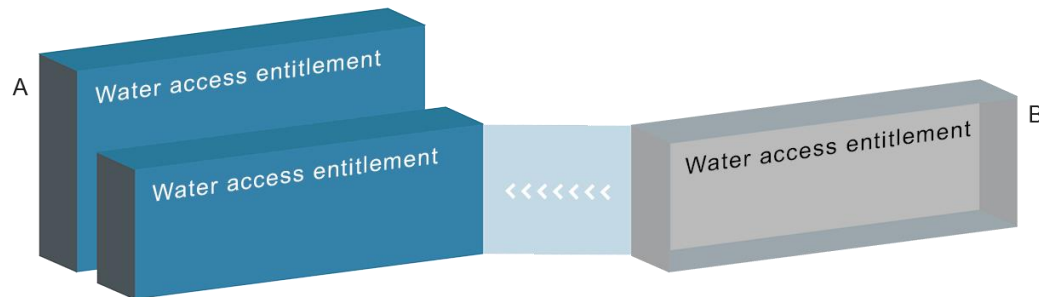
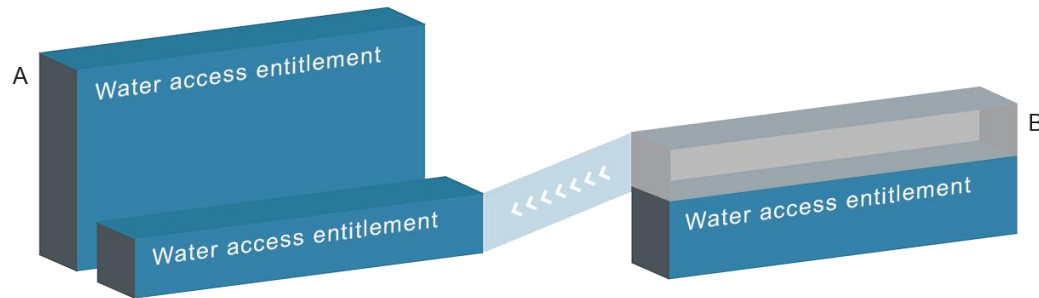
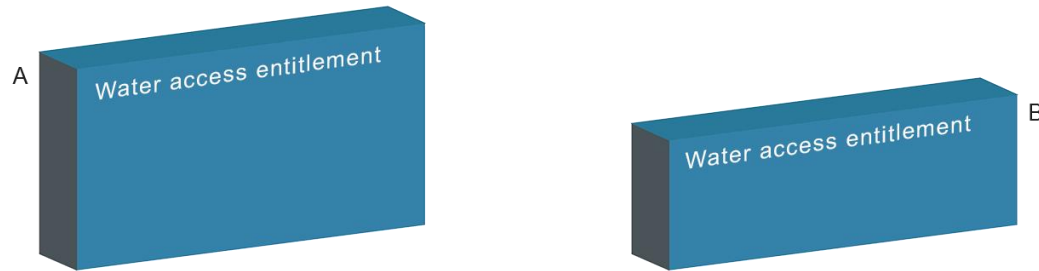


Australia's unbundling of water rights





Trading water entitlements



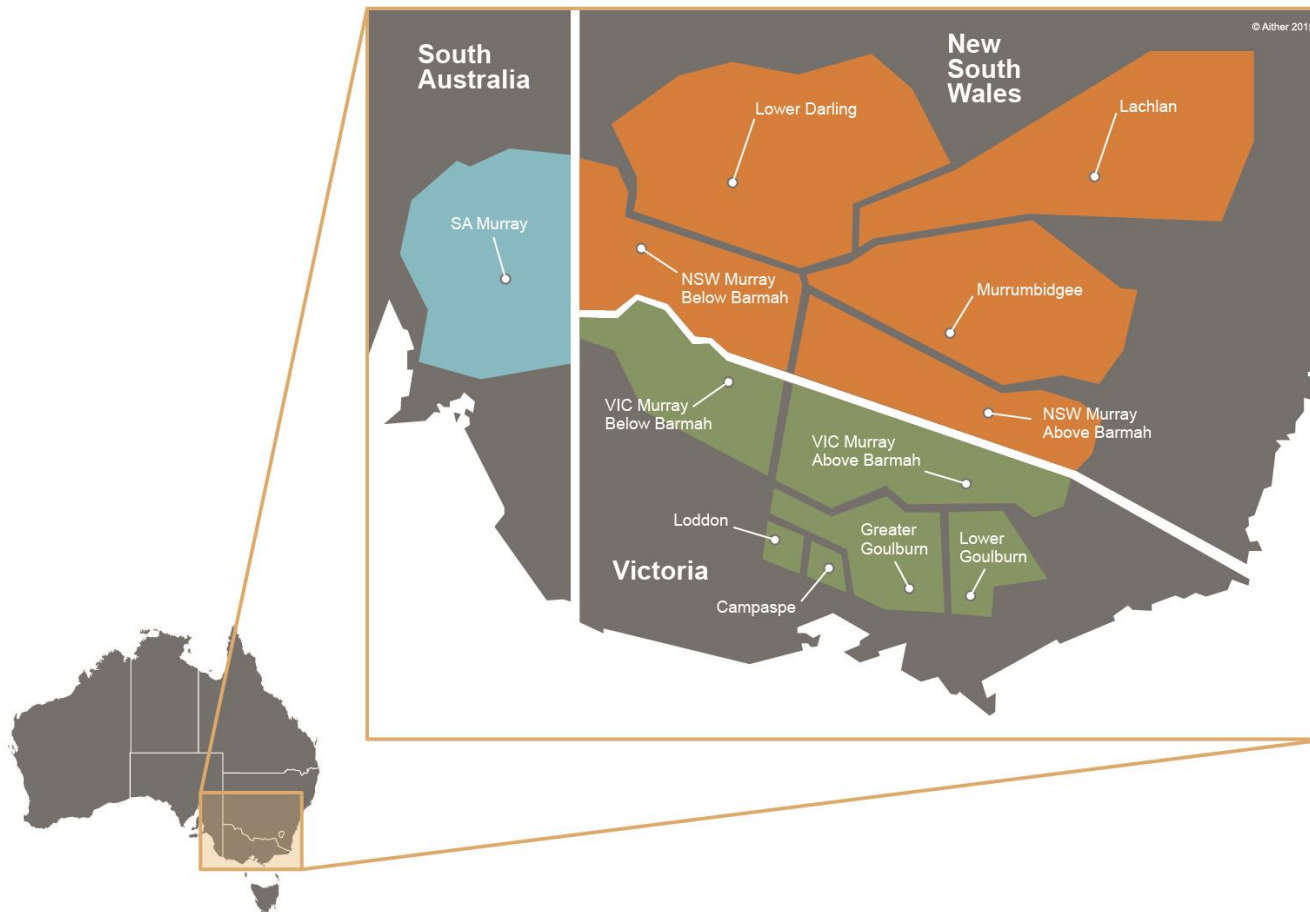


Trading water allocations





Markets can develop over large, diverse areas





Trading is now business as usual

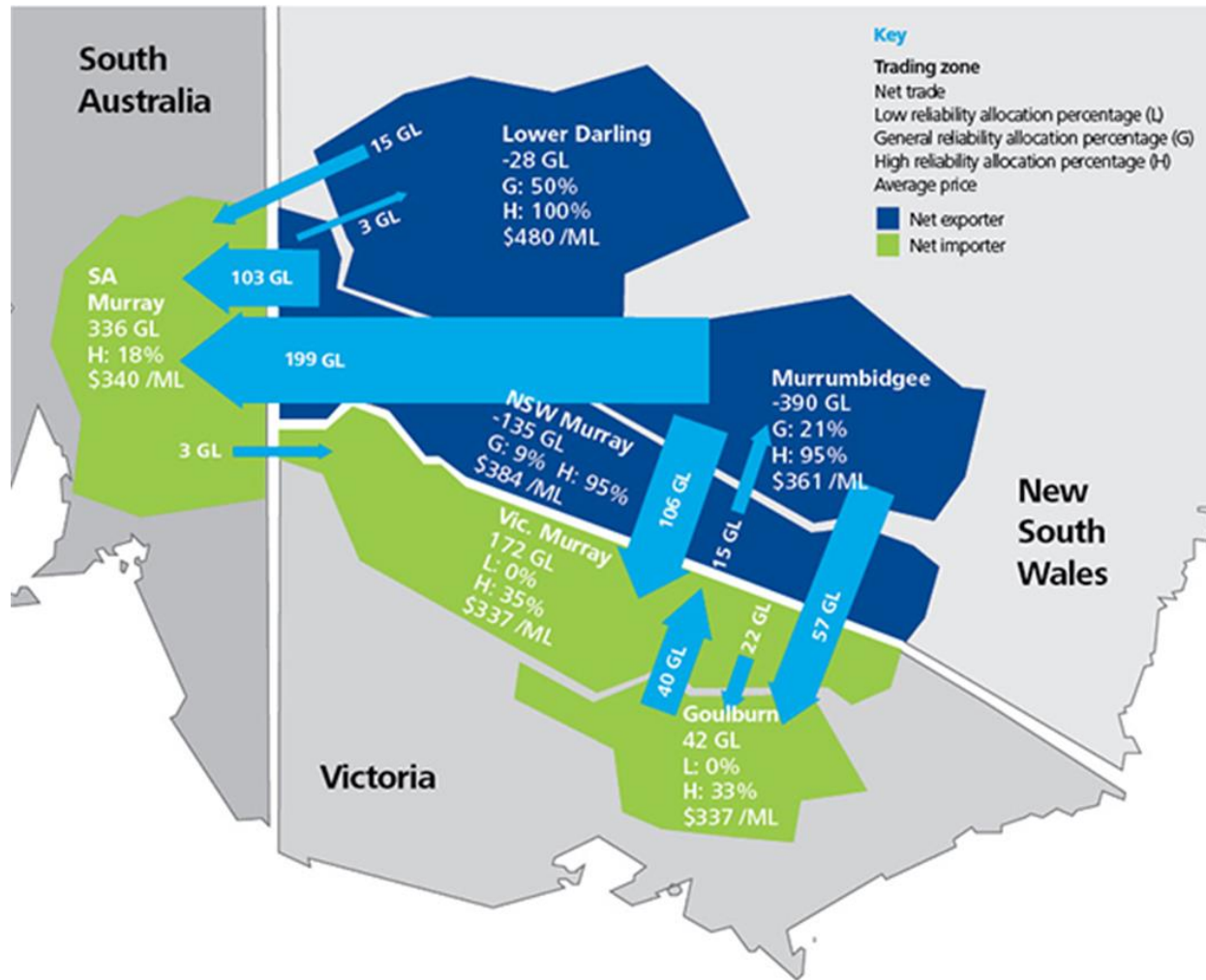
- Entitlement and allocation trade have both increased strongly over the last decade

Significant trade year on year

- AUD 400 million in entitlement trade
- AUD 260 million in allocation trade, 2015-16

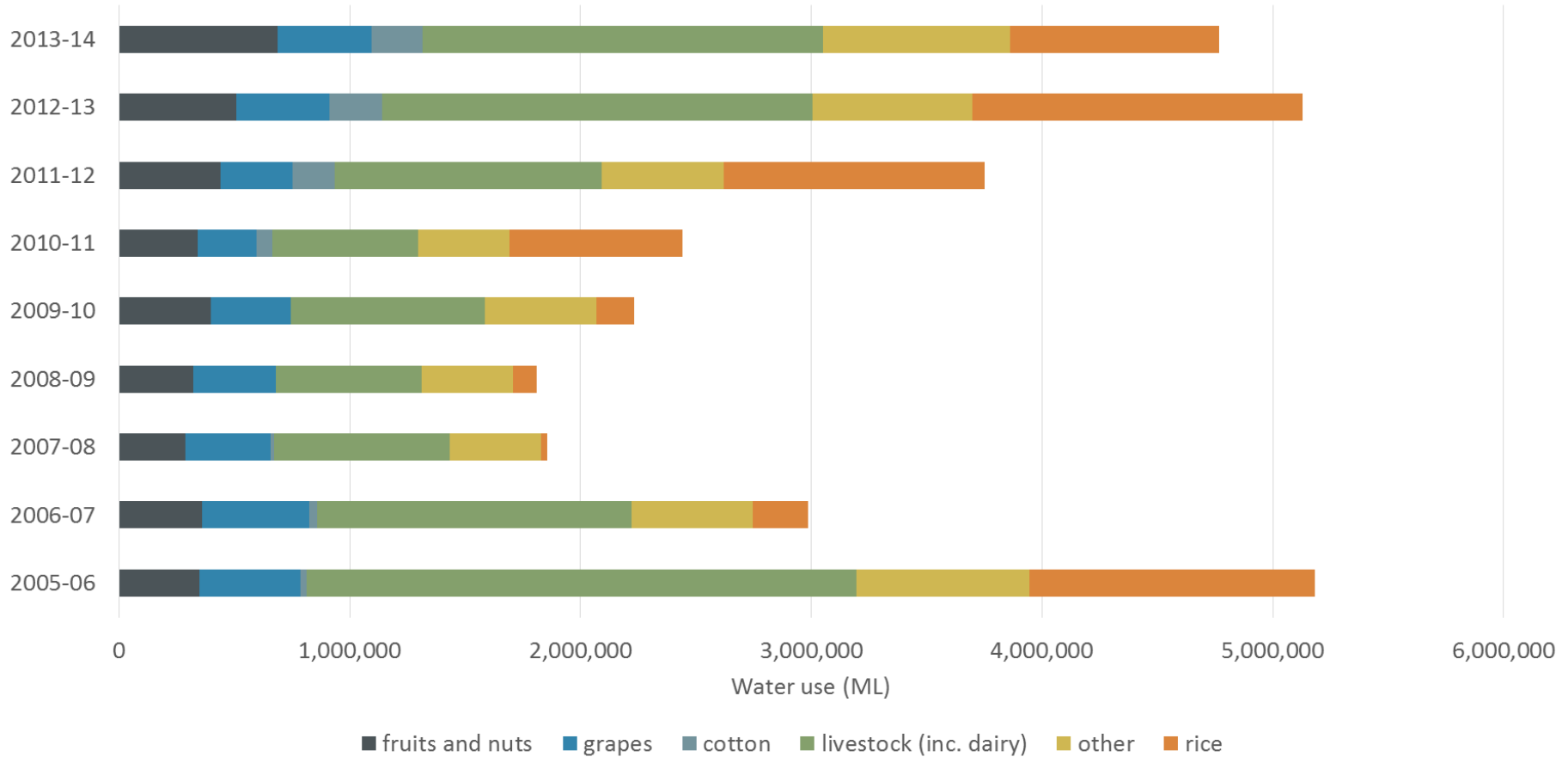
Market value has almost doubled in three years

- Market value in sMDB now AUD 11.5 billion
- Commonwealth purchases in sMDB now valued at AUD 2 billion





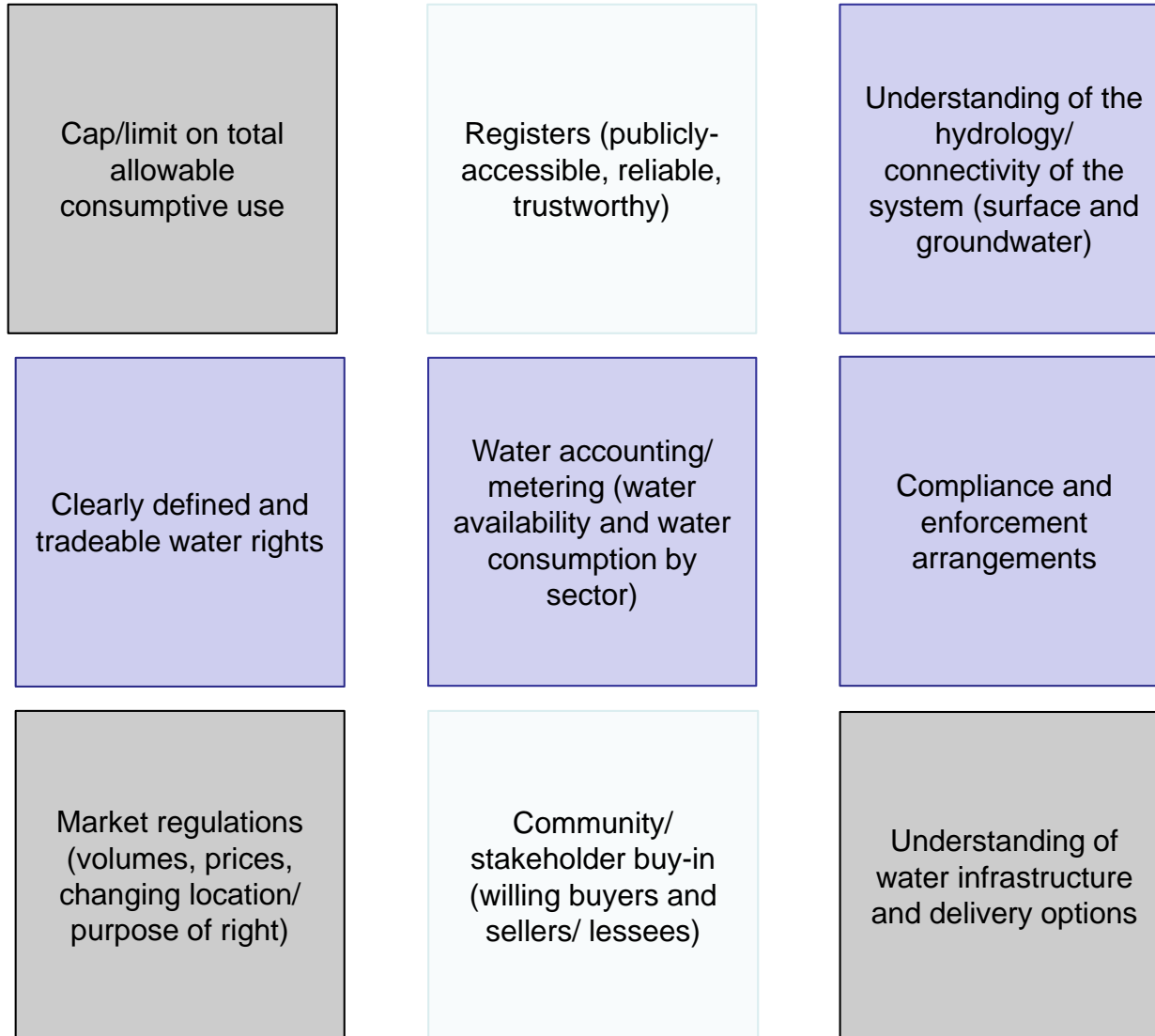
Markets support flexible & high value agriculture



- Developing water markets in complex hydrological systems is possible, including across boundaries
- Strong leadership and stakeholder engagement is essential
- Stakeholders demand clarity about trade-offs and how decisions about these will be made
- Progress stalls when government fails to communicate effectively and ensure genuine stakeholder participation
- Building support requires the demonstration of outcomes and participants need to experience benefits themselves
- Scalable, incremental change is possible, and can safeguard against unintended consequences
- Water trade has improved resilience, facilitated adjustment, increased investment and moved water to more productive, higher value use



Water market enablers



- Determine if water markets are a feasible priority (WaterGuide)
 - Including assessing where and why trade is already occurring
- Pilot further local small-scale markets
 - promotes fundamentals
 - e.g. planning, rights, accounting, metering and enforcement
 - recognises urgency and encourages leapfrogging
 - demonstrates benefits of markets to stakeholders
 - provides an innovative scalable solution to managing scarcity
- Requires fundamentals being in place, and close monitoring
 - Cap water use
 - Issue tradeable water rights
 - Establish a mechanism to enable trade in a way that can be transparently monitored
 - Document the costs and benefits of small-scale schemes to inform future policy development



Will Fargher

Director, Aither

+61 402 336 614

will.fargher@aither.com.au

www.aither.com.au