

Survey of water entitlement sellers under the Restoring the Balance Program

3rd August 2012

ANU Water Markets Workshop

Overview



Overview

- **Introduction:** study context; scope of assessment; approach
- **Buyback to date:** focus on volumes, regions, partial versus whole entitlement sale;
- **Survey results:** focussing on what irrigators said the impacts of their sales were, and the future of RtB.
- **Observations, conclusions and next steps**

Introduction



Introduction

- In December 2011, the Department engaged Marsden Jacob Associates and UniSA to survey irrigators who had applied to or sold water entitlements to *Restoring the Balance* (RtB). Study objectives were to develop a better understanding of:
 - the consequences of selling water for individual irrigators and their farm businesses;
 - how sellers had used the proceeds of Commonwealth water sales;
 - how applicants had applied to sell water through the tender process;
 - how irrigators thought RtB administration could be changed in the future; and
 - answer questions about RtB and the future.
- The study delivers an evidence based assessment of the impacts of RtB on individual irrigators who have participated, and provides insights into how individual irrigator impacts may have affected irrigation communities.
- Study and findings complement other recent evidence based research, including the NWC (2012) *Impacts of water trading in the southern Murray–Darling Basin between 2006–07 and 2010–11*



Study context

- *Restoring the Balance (RtB)* being implemented as part of the Commonwealth's \$14 billion *Water for the Future* program;
- is the largest market based environmental water recovery program in the world, committing almost \$3.5 billion between 2007-08 and 2016-17;
- to 2012 20+ tender rounds. Tender rounds progressively becoming more frequent, regionally targeted, and shorter in duration;
- implemented during a period of significant national water reforms;
- implemented during a period marked by significant changes in water availability;
- program viewed with apprehension by many irrigators and irrigation communities, as evidenced by the findings of the Windsor Inquiry.

Scope of the assessment

- **Focus:** impacts and outcomes on individual irrigators participating in RtB buybacks;
- **Time period:** 2007-11. Surveyed irrigators commencing 2008-09;
- **Geographic coverage:** all major trading regions of the MDB;
- **Types of irrigators surveyed:** survey focuses on three types irrigators participating in RtB and consented to being surveyed:
 - irrigators who sold some or all water from an entitlement to the Commonwealth and remained in farming. Note these sellers may hold other entitlements that they didn't seek to sell;
 - irrigators who sold water to the Commonwealth and exited farming (either staying on farm or leaving the farm subsequent to sale);
 - irrigators who applied in one or more of the tender rounds and had trades delayed by the Victorian 4% limit or subsequently withdrew the sale.
- Excludes irrigators who did not apply to sell water to the RtB program

Approach

- Literature review
- Evaluation of buyback databases
- Surveys of irrigators
- Case studies of irrigators

The Buyback to Date



Applications and acceptances

- Since 2007-08, 7,591 individual offers to sell water to the Commonwealth, with a total LTAAAY of around 1,700 GL;
- Since 2007-08, Commonwealth has accepted 4,166 applications from roughly 3,150 individual sellers (around 15% of all irrigators in the Basin).

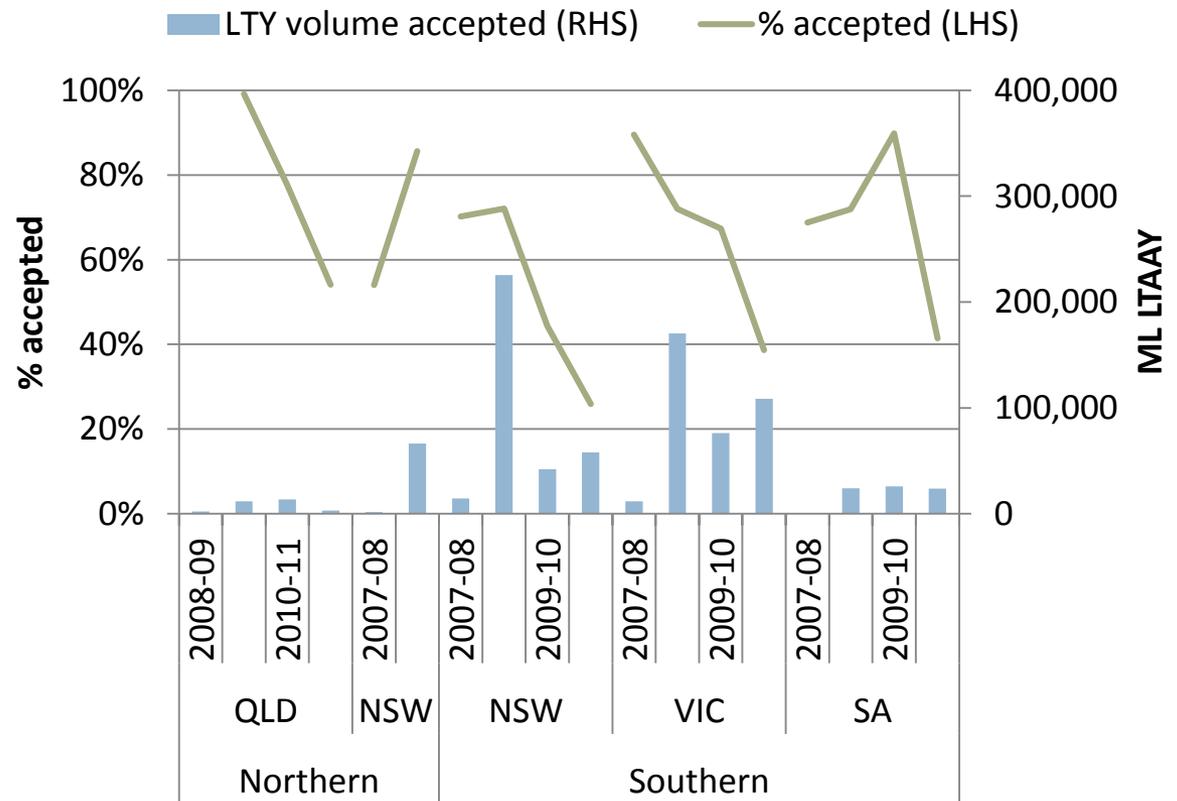
Number and yield of tender offers by Basin region, 2007-2011

	Acceptance status	Northern Basin	Southern Basin	Basin Total
Applications	Bid Accepted	107	4,059	4,166
	Bid Rejected	90	2,924	3,014
	Withdrawn	23	388	411
Total applications		220	7,371	7,591
Long term average annual yield (ML)	Bid Accepted	98,409	780,940	879,349
	Bid Rejected	175,420	553,666	729,086
	Withdrawn	6,379	81,301	87,680
Total long term yield (ML)		280,208	1,415,907	1,696,115

Volumes and acceptance ratios

- Since 2009-10 proportionally more LTAAY water from Victoria;
- 90%+ (LTAAY) of NSW water has been GS;
- 90%+ (LTAAY) of Victorian water has been HR;
- Acceptance ratios falling across in most States over time. Several reasons identified in report for this.

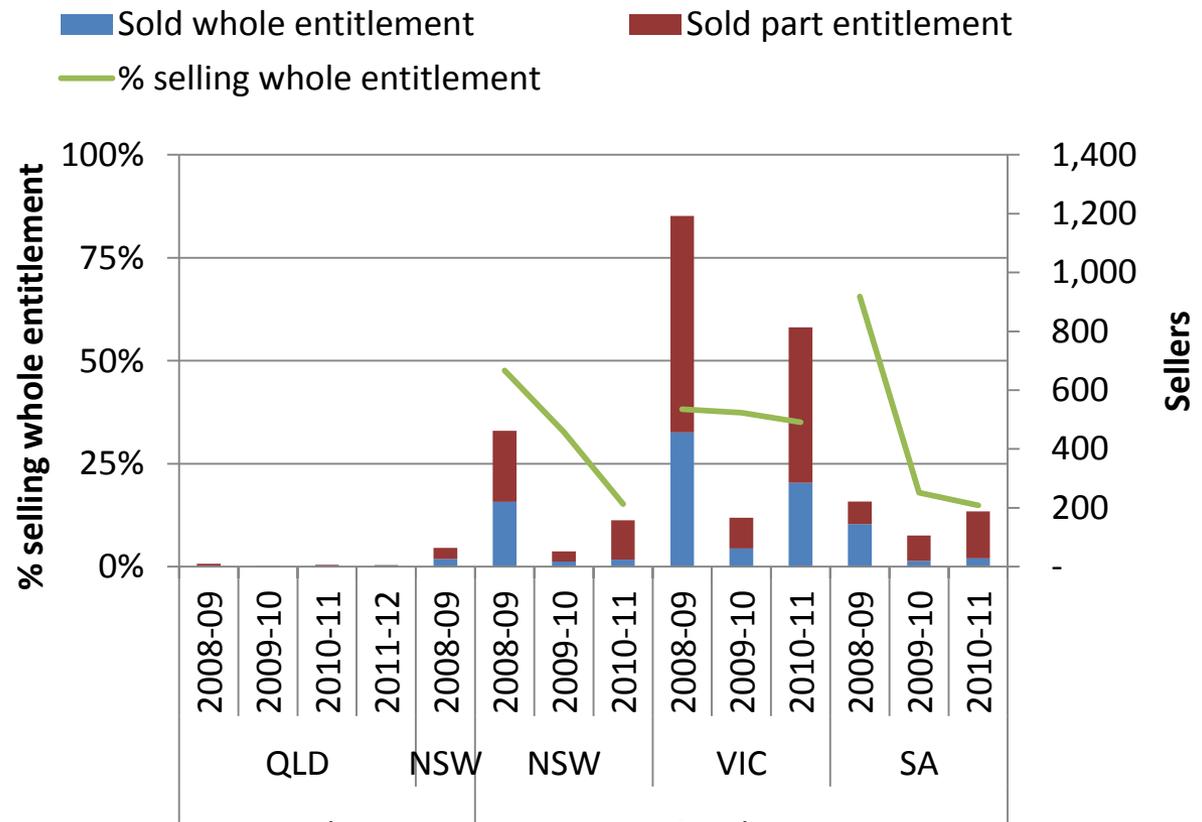
LTAAY of accepted offers and acceptance ratios by Basin region and State, 2008 to end 2011



Irrigators selling whole entitlement

- 35% of sellers sold all water on their entitlement;
- % offering all water generally falling over time;
- Irrigators selling part entitlement sell around 50-60% of entitlement on average;
- LTAAAY volume similar to on-market sales;
- More information in Annex 1 of report.

Number of applicants selling whole versus part entitlement, by Basin region and State, 2008 to end 2011



Survey insights



Respondents



Respondent profile

- A total of 589 respondents were surveyed. The survey achieved high contact, response and acceptance rates. Of the respondents:
 - 520 had sold water to the Commonwealth and the transaction had settled;
 - 49 applicants had had their sale of water delayed by the Victorian 4% limit; and
 - 20 had tried to sell water but the transaction was subsequently withdrawn by the Commonwealth or the seller.
- Of the 520 survey respondents who had sold water to the Commonwealth and the transaction had settled:
 - 312 (60%) had sold part of their water entitlement and continued to farm;
 - 50 (10%) had sold all of the surface water on their entitlement and continued to farm; and
 - 158 (30%) had sold all of the water on their entitlement and had exited farming.
- Survey respondents representative of participation by year and State, by whole or part sale;
- Potential under-representation in 2008-09, but this does not appear to change key findings;
- Sample size delivers 99% confidence level and +/-5 CI.

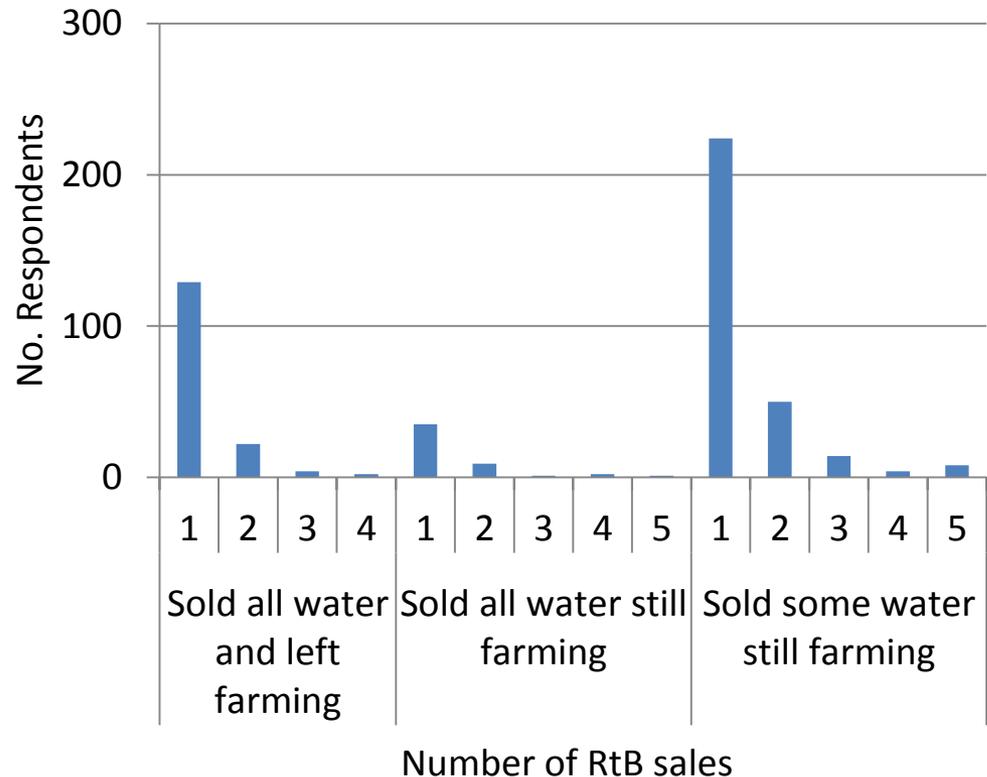
Impacts of selling water for individual irrigators



Most irrigators have sold to the Commonwealth once

- Almost 80% of survey respondents have only sold water to the Commonwealth once;
- Almost 95% have sold water to the Commonwealth twice or less;
- Frequency of sales do not differ between farmers selling some or all of the water on their entitlement;
- Recall 35% sell whole entitlement. 65% selling part generally sell 50-60% of entitlement, but this is falling.

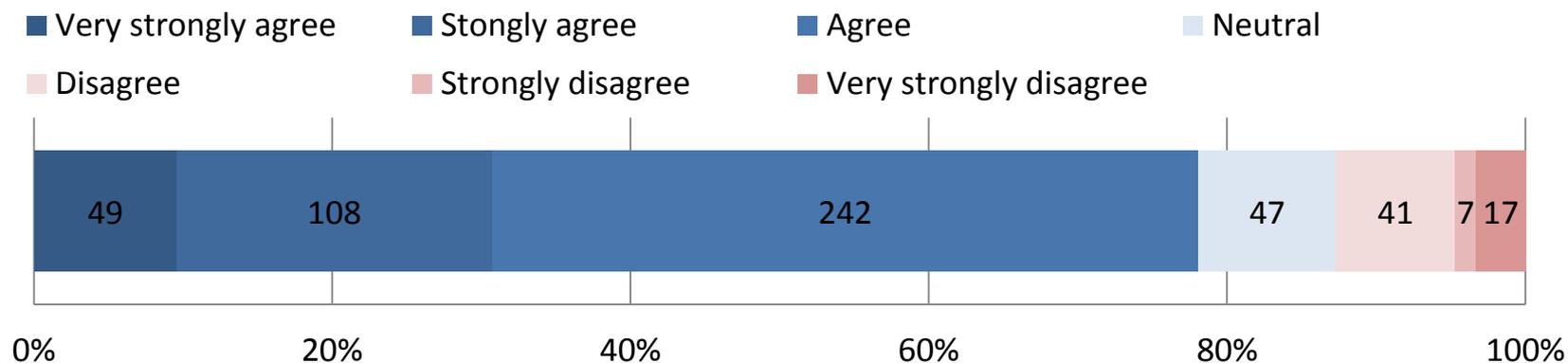
How many sales have you made to the RtB?



Significant majority of irrigators say participating in RtB was a positive decision

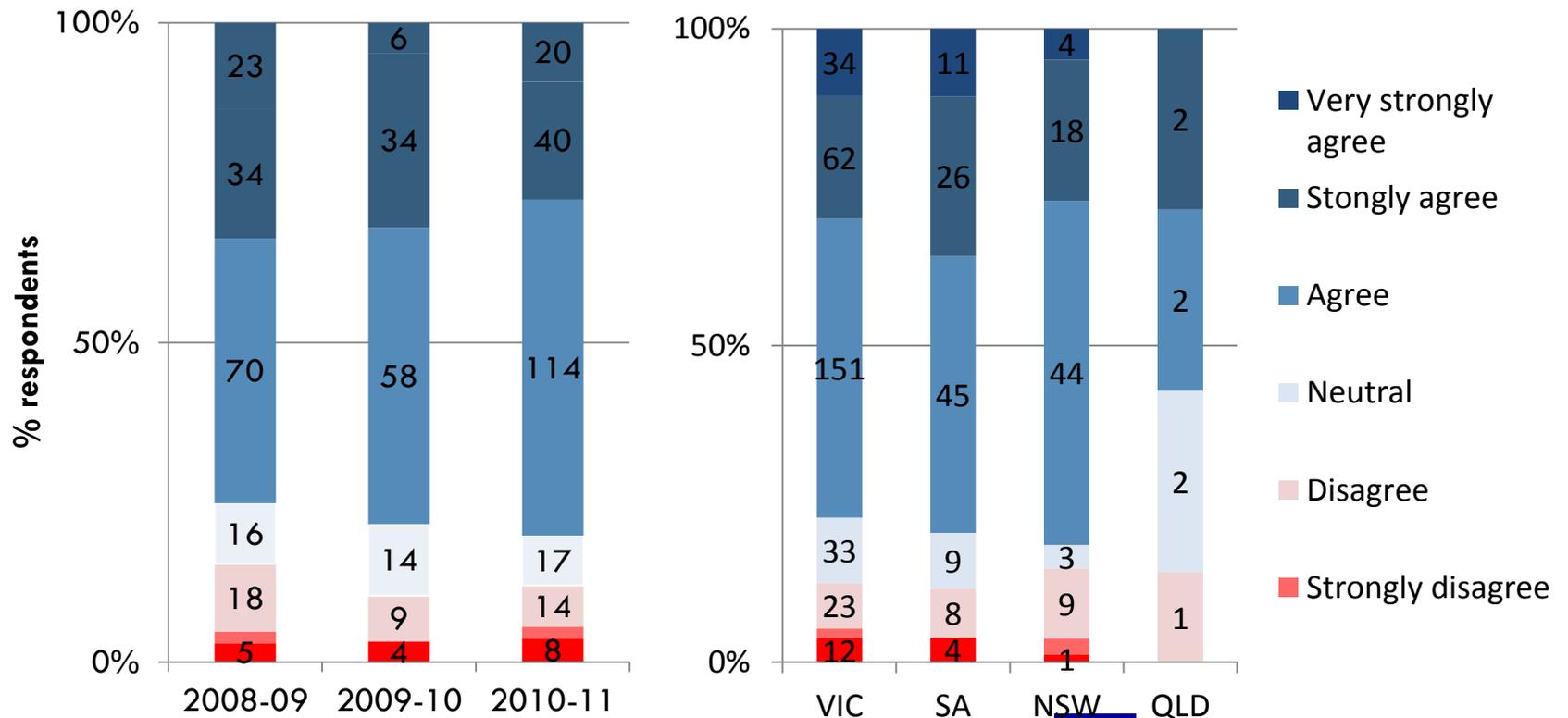
- Overall, almost 80% of respondents said their decision to sell water had been a positive decision for them. Around 12% said selling water hadn't been a good decision;
- Farmers who sold all water and remained in farming were most likely to state that had not been a positive decision; around 20%. Recall these are 10% of total irrigators selling water.

Overall, do you think selling water to the Commonwealth has been a positive decision for you?



Positive decision view stable over time and States

Overall, do you think selling water to the Commonwealth has been a positive decision for you?



Irrigators mainly sell water to generate cashflow

- Around 50% of irrigators reported selling water for debt and farm viability reasons
- Response rates are consistent across farmer response types (no sale, continuing, exiting farming) with some logical exceptions;
- Around 10% sold surplus water and 7% for on farm investment;
- Reasons for selling stable across tender years and States (see report section 2.3).

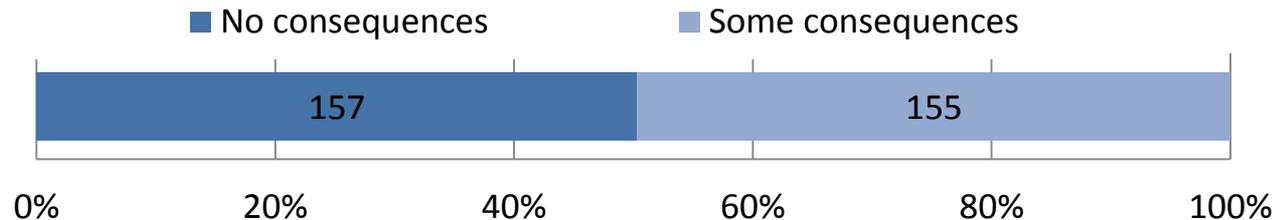
What was the main reason for your water sale?

	No sale	Sold some water still farming	Sold all water still farming	Sold all water and left farming	Total
Respondents	69	312	50	158	589
Reduce debt	32%	36%	28%	15%	29%
Low farm income viability	26%	23%	22%	19%	23%
Exiting farming	13%	4%	17%	38%	16%
Surplus water	7%	13%	2%	6%	10%
On farm investment	4%	9%	6%	5%	7%
Age	7%	3%	6%	6%	4%
Death or divorce	4%	2%	0%	5%	3%
Other	9%	10%	17%	6%	9%

Many partial sellers report few farm production consequences from their sales

- Recall 65% of sellers are partial sellers;
- Around half report no farm production consequences;
- Most do not change farm setup; crop mix; employees. Around 40% increase irrigation efficiency;
- Subsequent water trading lower than anticipated, may result from high allocations.

What were the impacts for your farm production from selling some of your water to the Commonwealth (partial sale)?



'Since selling water to the Commonwealth, what changes have happened on your farm?'

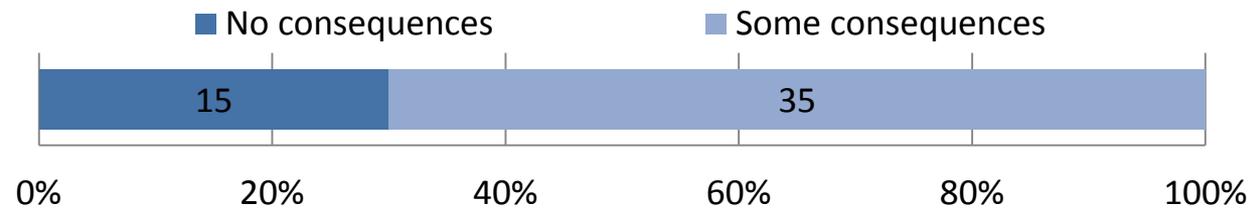
	No change	Increase	Decrease	Total	% no change
Farm area					
Irrigation area	235	26	51	312	75%
Dryland area	252	50	10	312	81%
Employees	262	13	37	312	84%
Irrigation efficiency	188	124	-	312	60%
Off farm employment	135	99	78	312	43%
Disposed of delivery right	213	14	-	227	94%



Irrigators who sell all of their entitlement and stay on farm report more consequences

- Recall 10% of sellers are whole sellers who stay on farm;
- Around 25% report no farm production consequences;
- Small respondent numbers mean these results need to be treated with due caution.

What were the impacts for your farm production from selling some of your water to the Commonwealth (partial sale)?



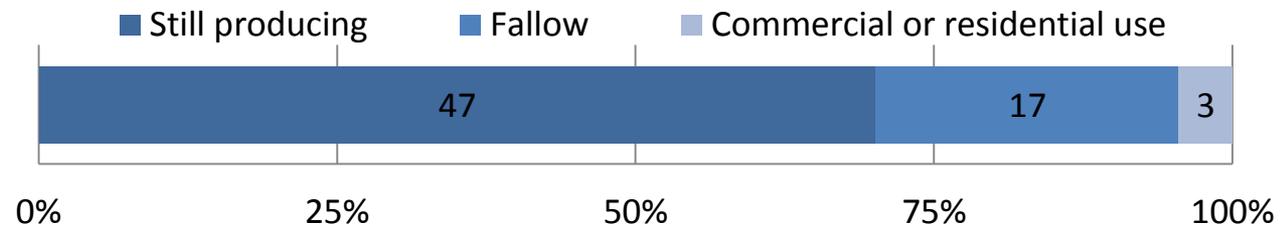
'Since selling water to the Commonwealth, what changes have happened on your farm?'

	No change	Increase	Decrease	Total	% no change
Farm area					
Irrigation area	27	3	20	50	54%
Dryland area	37	11	2	50	74%
Employees	28	7	13	48	58%
Irrigation efficiency	31	16		47	66%
Off farm employment	25	5	18	48	52%
Disposed of delivery right	30	6		36	83%

When irrigators sell and exit, most farms don't lie fallow; most irrigators say they find other work or retire

- 70% of all respondents who sold all their water and exited said that the farmland was still producing, versus 25% fallow;
- Most non-retiree age farmers exiting have moved into trades other than farming. Only 3% are unemployed;
- Less than 10% of irrigators who have sold all water have left their region.

Do you know what is happening on farm now?



What are you doing now?

	Respondents	%
Total	157	100%
Work a trade apart from farming	65	41%
Working in farming	17	10%
Retired	55	35%
Other	15	10%
Unemployed	4	3%



Most RtB sales proceeds appear to remain in the region

- Difficult issue to get at directly;
- When asked around 35% of irrigators directly said money had been spent “in the region” compared to 5% who said money had been spent “outside the region”;
- Most irrigators said they use proceeds to retire debt;
- When retire debt are increasing ownership in productive capital;
- When this happens proceeds are staying in the region;
- Critical point is how much of proceeds are used up paying interest versus paying down the principle sum;
- A point for discussion. Survey results don’t give all the answers, but do further our understanding of this issue.

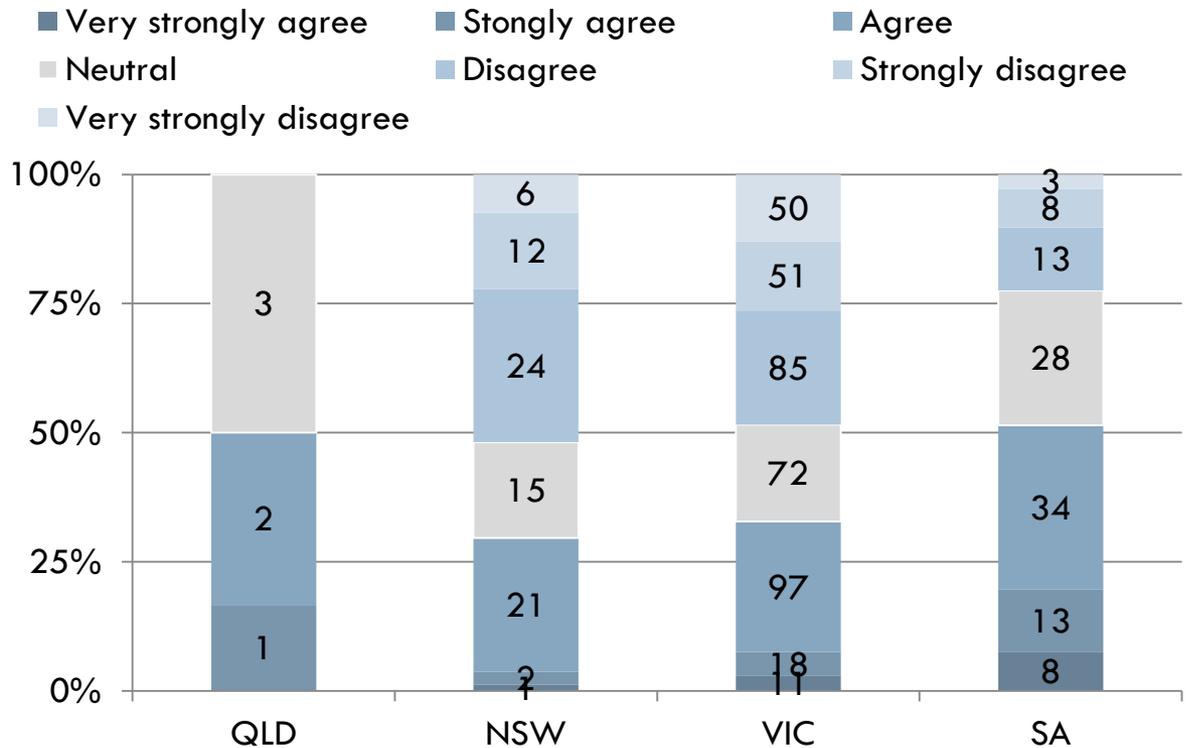
The future



Many sellers currently disagree with Commonwealth environmental water purchasing objectives

- 44% disagreed to some extent with Commonwealth environmental water recovery;
- Support linked to location;
- Support did not differ significantly as a function of exit, whole sale or partial sale.

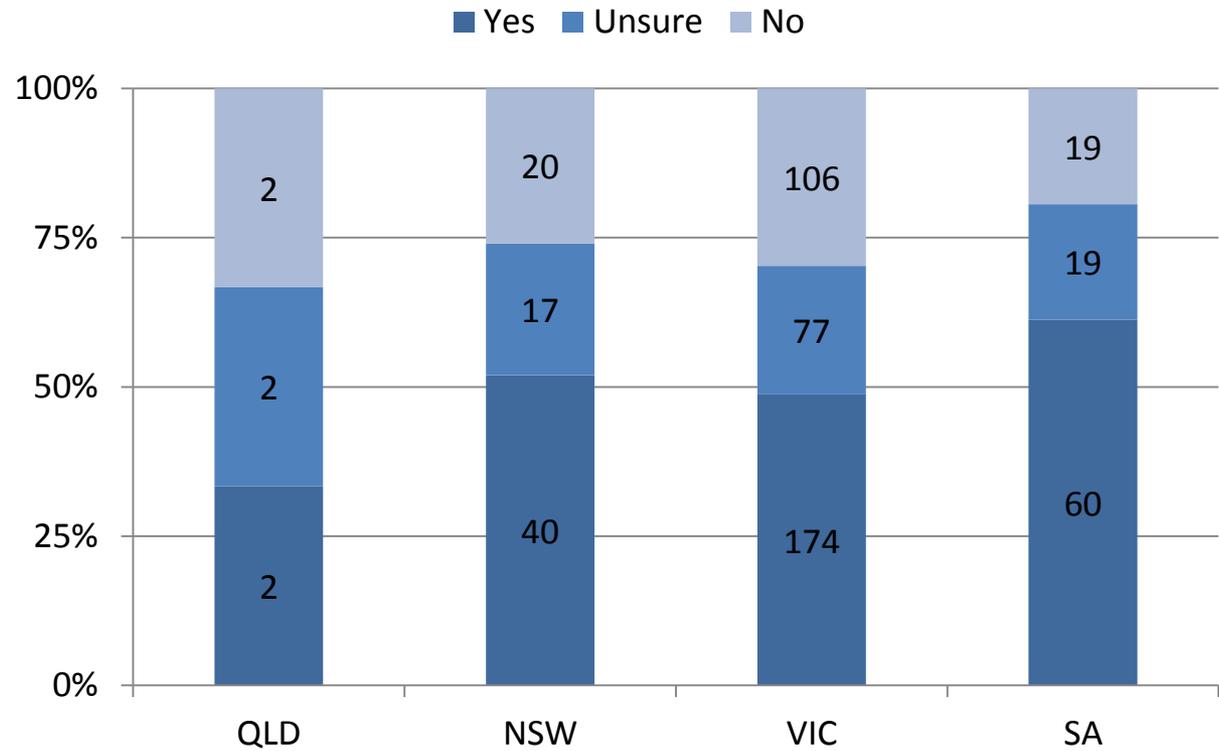
How much do you agree with the overall objectives of RtB of returning water from consumptive use to environmental use?



Many irrigators surveyed want the southern Basin tenders to resume and would participate

- 50% of all respondents said they wanted general tenders to resume in the Southern Basin (25% do not);
- 50% would sell water to the Commonwealth again in the future. Figures same across States (recognise that irrigators may not have further water to sell).

Would you like to see general tenders in the Southern Basin resumed in 2013?



Observations, conclusions and next steps

Summary of survey results

- Survey findings provide an empirical evidence base that shows the experience of 520 irrigators who have sold water to RtB (around 16% of irrigators who have sold water to RtB);
- Overall message from majority of these irrigators is that selling water to RtB has supported them to manage their farm situation and achieve their other objectives. They say their decision has been good for them. This aligns with other evidence based work;
- Most irrigators use cashflow generated by sale to manage debt and supplement income.
- Overall results suggest breaking of drought and structural changes to RtB have not changed why irrigators sell water or how they use the proceeds;
- Farmers are innovating and post-drought allocations have clearly helped to maintain production and lessen adverse consequences;
- Weight of evidence suggests the 'negative' impacts on sales on irrigation communities are likely to be less than many perceive;
- Survey results are a strong evidence base. Results can be used to deliver better community outcomes from environmental water recovery.

Report can be downloaded at

<http://www.environment.gov.au/water/publications/mdb/survey-seller-rtb-program.html>



MARSDEN JACOB ASSOCIATES

Dr Jeremy Cheesman

jcheesman@marsdenjacob.com.au

+61 (0)414 765 739

Dr Sarah Wheeler

Sarah.Wheeler@unisa.edu.au

+61 (08) 8302 0698

Marsden Jacob Associates

Financial & Economic Consultants

Melbourne office:

Level 3, 683 Burke Road

Camberwell

Victoria 3124

AUSTRALIA

Telephone: +61 3 9882 1600

Facsimile: +61 3 9882 1300

www.marsdenjacob.com.au



MARSDEN JACOB ASSOCIATES