

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.



Socio-economic evaluation of NSW Water Sharing Plans A case study of the Murrumbidgee Valley

Graham Carter, Dr Maksudul Bari, and Christine M Hill

Contributed presentation at the 60th AARES Annual Conference, Canberra, ACT, 2-5 February 2016

Copyright 2016 by Author(s). All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.



Socio-economic evaluation of NSW Water Sharing Plans

A case study of the Murrumbidgee Valley

Graham Carter Senior Analyst Dr Maksudul Bari Principal Economist Christine M Hill Principal Economist

NSW Water Sharing Plans

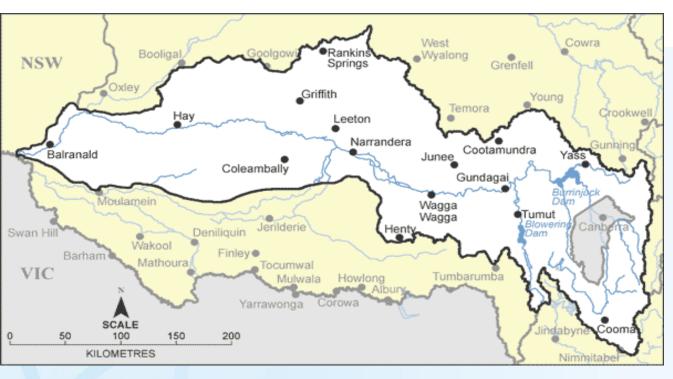
- Legal documents
- NSW water reforms
- Sharing resources between irrigators, environment, water users
- Implemented across all water sources coast and inland; regulated, unregulated and alluvial, and groundwater.
- WSPs to be reviewed every 5 years.
- Require socio-economic assessment

Socio economic input to WSP reviews Irrigator survey project

- To monitor social and economic changes in WSP areas at farm and regional levels.
- Details of project: Bari M et al, (2008) Monitoring Economic and Social Changes within NSW Water Sharing Plan Areas: A Participatory Approach AARES Conference
- 4 surveys undertaken between 2006 and 2013. 2013 survey was whole state.
- Provided extensive enterprise level socio economic data
- Investigating hypothesis: maintenance of status quo
 - no negative change.

Murrumbidgee Valley case study





- Murrumbidgee
 River starts in
 the east High
 Country in
 NSW
- Joins the Murray River in the west
- Murrumbidgee River provides extensive irrigation for food and produce
- GVAP \$2.1B GVIAP \$676 m (ABS 2011)

Murrumbidgee Valley case study





- Multivariate data analysis
- Factors included:
 - water source
 - farm size
 - entitlement size
 - farm type
 - employment
 - farm income
- Attitudinal questions:
 - temporary trading
 - permanent trading
 - knowledge of WSP
 - WSP good for farm business
 - water for environment

Murrumbidgee Valley survey results Economic indicators

Licence holder "....farm income as a percentage of total income" (Mean)

Water sources	Survey Year			Statistical
	2006	2009/10	2013	test P<0.05
Ground water		64 %	54%	NS
Regulated river	70 %	65%	62%	NS
Unregulated river		47%	63%	NS

- No significant difference between years within each water source Licence holder reported income from on farm activities 47 -70 %

Murrumbidgee Valley survey results

Economic indicators

Active water users "....farm income as a percentage of total income" (Mean)

Туре	Survey year			Statistical test
	2006	2009/10	2013	P<0.05
Ground water		66%	61%	NS
Regulated river	77%	72%	74%	NS
Unregulated river		58%	76%	Sig

No significant negative change. Significant positive change for unregulated river water users

Murrumbidgee Valley Survey results Social indicators

Perception water sharing plan "good for farm business" Regulated river water users

(1 = strongly disagree 3 = neither 5 = strongly agree)

	Туре	Survey year			Statistical test
		2006	2009/10	2013	p<0.05
	On farm	2.8	2.7	2.7	NS
	No on farm use	3.3	2.9	3.0	NS
	On farm use %	83%	71%	70%	
	Sample size (n)	153	213	131	

Murrumbidgee Valley Survey results

- Across water sources no negative change in the % of farm Income, and % income from irrigation
- Responses varied with on farm water use larger entitlement holders had differing responses and attitudes than smaller licence holders
- Intention to trade positive increase reported from regulated river and unregulated river water licence holders
- No change in knowledge of WSP remained low (Reporting Scale 0-10, Reg score 5.2, Unreg 3.7 GW 4.5)

Policy implications; Murrumbidgee Valley and WSP reviews

Policy implications

- Challenges homogeneity assumptions WSPs affect licence holders. "Active water users" are only a subset
- Income indicators report little change
- Knowledge of WSP "average or below" and not improving
- Take home message:

Disconnect between plans' outcomes and stakeholder understanding.

Further Information – published data reports

Monitoring economic and social changes in NSW water sharing plan areas: Irrigators' survey 2005-06, NSW Department of Water and Energy, Sydney, 2007

Monitoring economic and social changes in NSW water sharing plan areas: Irrigators survey 2009 – Covering plans commenced since 2004 and currently under development. NSW Office of Water, Sydney, 2010

Monitoring economic and social changes in NSW water sharing plan areas: A comparison of irrigators' survey 2006 and 2010 – covering plans commenced in 2004. NSW Office of Water, Sydney, 2011

Monitoring economic and social change in NSW water sharing plan areas: Irrigators' Survey 2009/2010 and 2013 - A state wide comparison. NSW Department of Trade and Investment Regional Infrastructure and Services, 2015.



Socio-economic evaluation of NSW Water Sharing Plans

A case study of the Murrumbidgee Valley

Graham Carter Senior Analyst
Dr Maksudul Bari Principal Economist
Christine M Hill Principal Economist