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**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,  
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Department of  
Primary Industries

# Socio-economic evaluation of NSW Water Sharing Plans

A case study of the Murrumbidgee Valley

**Graham Carter** Senior Analyst  
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# 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 test P<0.05
	2006	2009/10	2013	
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)

Type	Survey year			Statistical test P<0.05
	2006	2009/10	2013	
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)

Type	Survey year			Statistical test p<0.05
	2006	2009/10	2013	
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.



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