

ECONOMIC OUTLOOK REPORT



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A PROJECT OF
THE MURRAYLANDS REGIONAL DEVELOPMENT BOARD INC

Murraylands Economic Outlook Report: Headline Analysis (Summary)

A report prepared for



Prepared by



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The Economic Impact of a 50 per cent Water Allocation for Irrigators in the Murraylands, 2005/06

Estimates of the regional economic impact of a 50 per cent water allocation for irrigated agriculture in the Murraylands in 2005/06 are provided in Table 1. These estimates were based on models prepared for PIRSA for a report titled: *The Economic Impact of Drought Conditions and Water Restrictions on River Murray Irrigation Industries and Regions* (EconSearch and SRHS 2004).

The estimated impacts represent the change from a 100 per cent water allocation year. It is important to note that actual usage is generally well below allocation, in some districts as low as 65 per cent.

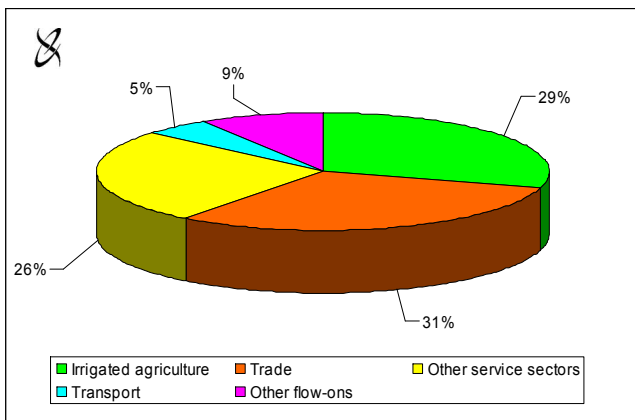
Table 1 Estimated net regional economic impact of a 50 per cent water allocation

| Sector | Employment fte | Contribution to GRP \$m |
|------------------------------|-------------------|----------------------------|
| Irrigated agriculture | -50 | -30.0 |
| Flow-on impacts | | |
| Trade | -52 | -1.7 |
| Other service sectors | -44 | -2.6 |
| Transport | -8 | -0.6 |
| Other flow-ons | -15 | -3.6 |
| Total flow-on impacts | -119 | -8.4 |
| Total | -169 | -38.4 |
| Proportion of regional total | -1.0% | -4.0% |

Source: EconSearch analysis

Employment is a measure of the number of working proprietors, managers, directors and other employees, in terms of the number of full-time equivalent (fte) jobs. It was estimated that almost 170 fte jobs would be lost from the Murraylands regional economy in response to a 50 per cent water allocation for irrigators in 2005/06, 50 jobs directly in the irrigated agriculture sectors and approximately 120 flow-on job losses in other sectors of the regional economy. The total employment impact represents approximately one per cent of the regional total in 2005/06.

Figure 1 Distribution of employment impacts for a 50 per cent water allocation



Source: EconSearch analysis

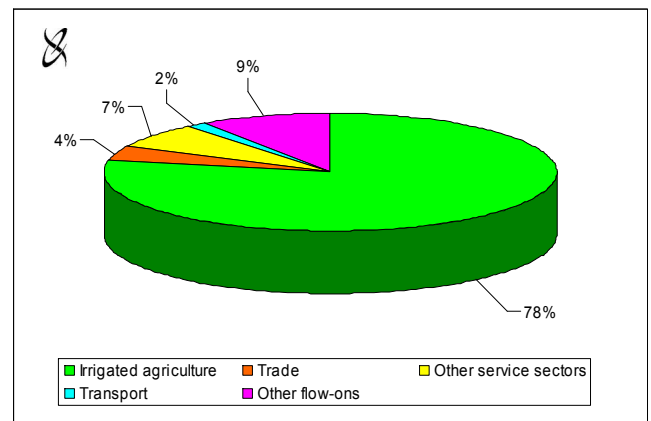
Job losses in the irrigated agriculture sectors would account for almost 30 per cent of the total employment impact (Figure 1). Flow-on job losses would account for approximately 70 per cent of the total employment impact and would be concentrated in the trade, transport and other service sectors.

Contribution to gross regional product (GRP) is a measure of the net contribution of an activity to the regional economy. Contribution to GRP is measured as value of output less the cost of goods and services (including imports) used in producing the output. Using contribution to GRP as a measure of economic impact avoids the problem of double counting that may arise from using value of output for this purpose.

It was estimated that over \$38m (in 2006 dollars) in GRP would be lost from the Murraylands regional economy in response to a 50 per cent water allocation for irrigators in 2005/06, \$30m directly in the irrigated agriculture sectors and over \$8m in flow-on GRP in other sectors of the regional economy. The total GRP impact represents approximately four per cent of the regional total in 2005/06.

Reduced GRP in the irrigated agriculture sectors would account for almost 80 per cent of the total GRP impact (Figure 2). It is apparent that irrigators, faced with water restrictions of this magnitude, would experience a significant reduction in profits and disposable income in response to yield reductions and/or the purchase of temporary water. The impact of this reduction in disposable income is reflected in the flow-on job losses in other sectors of the regional economy (Figure 1).

Figure 2 Distribution of GRP impacts for a 50 per cent water allocation



Source: EconSearch analysis

The impact estimation process has taken account of some offsetting, positive effects which reduce the magnitude of the overall negative impact. These include the following:

- Water trading - extra cost to buyers but for sellers in the region it represents additional income.
- Water use efficiency - by necessity, reduced allocations require careful use of available water and the analysis has incorporated a modest increase in water use efficiency.
- Short-term response - it is assumed that allocations will improve next year and some irrigators will "hang on" until then. If the low allocations were repeated next year the impacts would be more severe.
- It was assumed that the impact of these changes in the relevant regional processing sectors would be minimal. Given the short time frame it is likely that these firms would be able to source product from outside the region at relatively low cost.

The Economic Impact of a 40 per cent Water Allocation for Irrigators in the Murraylands, 2005/06

Estimates of the regional economic impact of a 40 per cent water allocation for irrigated agriculture in the Murraylands in 2005/06 are provided in Table 2. The distribution of employment impacts and GRP impacts for a 40 per cent water allocation are similar to that for a 50 per cent allocation (Figures 1 and 2).

Table 2 Estimated net regional economic impact of a 40 per cent water allocation

| Sector | Employment | Contribution to GRP |
|------------------------------|-------------|---------------------|
| | fte | \$m |
| Irrigated agriculture | -67 | -40.4 |
| Flow-on impacts | | |
| <i>Trade</i> | -70 | -2.2 |
| <i>Other service sectors</i> | -60 | -3.5 |
| <i>Transport</i> | -11 | -0.8 |
| <i>Other flow-ons</i> | -21 | -4.9 |
| Total flow-on impacts | -161 | -11.4 |
| Total | -229 | -51.8 |
| Proportion of regional total | -1.4% | -5.4% |

Source: EconSearch analysis

It was estimated that almost 230 fte jobs would be lost from the Murraylands regional economy in response to a 40 per cent water allocation for irrigators in 2005/06, almost 70 jobs directly in the irrigated agriculture sectors and approximately 160 flow-on job losses in other sectors of the regional economy. The total employment impact represents one per cent of the regional total in 2005/06.

It was estimated that almost \$52m (in 2006 dollars) in GRP would be lost from the Murraylands regional economy in response to a 40 per cent water allocation for irrigators in 2005/06, over \$40m directly in the irrigated agriculture sectors and over \$11m in flow-on GRP in other sectors of the regional economy. The total GRP impact represents more than five per cent of the regional total in 2005/06.

The Economic Impact of a 10 per cent Increase in Irrigated Agriculture Production in the Murraylands, 2005/06

Estimates of the regional economic impact of a 10 per cent increase in River Murray based irrigated agriculture production in the Murraylands in 2005/06 are provided in Table 3. The catalyst for the increase in production was assumed to be the adoption of water efficiency measures on existing plantings and an expansion of plantings using the 'saved' water. The estimates of impact presented below do not take account of the capital expenditure incurred in the adoption of water efficiency measures nor the expansion of plantings.

Table 3 Estimated net regional economic impact of a 10 per cent increase in irrigated agriculture production

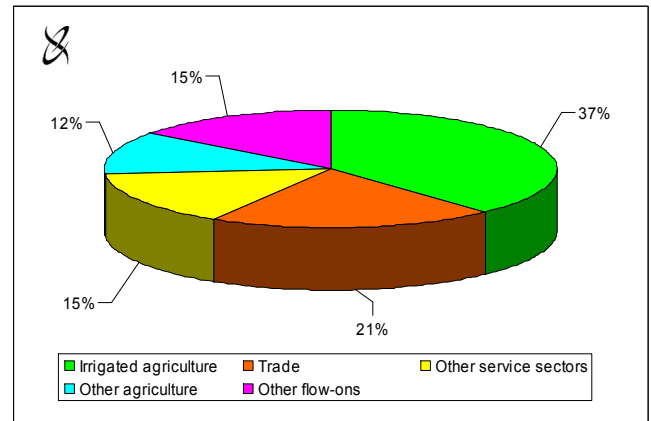
| Sector | Employment | Contribution to GRP |
|------------------------------|------------|---------------------|
| | fte | \$m |
| Irrigated agriculture | 39 | 9.2 |
| Flow-on impacts | | |
| Trade | 21 | 0.7 |
| Other service sectors | 15 | 1.0 |
| Other agriculture | 12 | 0.5 |
| Other flow-ons | 15 | 1.9 |
| Total flow-on impacts | 63 | 4.2 |
| Total | 102 | 13.4 |
| Proportion of regional total | 0.6% | 1.4% |

Source: EconSearch analysis

It was estimated that over 100 fte jobs would be generated in the Murraylands regional economy in response to a 10 per cent increase in River Murray based irrigated agriculture production in 2005/06, almost 40 jobs directly in the irrigated agriculture sectors and over 60 flow-on jobs in other sectors of the regional economy. The total employment impact represents less than one per cent of the regional total in 2005/06.

Jobs generated in the irrigated agriculture sectors would account for almost 40 per cent of the total employment impact (Figure 3). Flow-on jobs would account for approximately 60 per cent of the total employment impact and would be concentrated in the trade, other agriculture (including contractors and others services to agriculture) and other service sectors.

Figure 3 Distribution of employment impacts for a 10 per cent increase in irrigated agriculture production

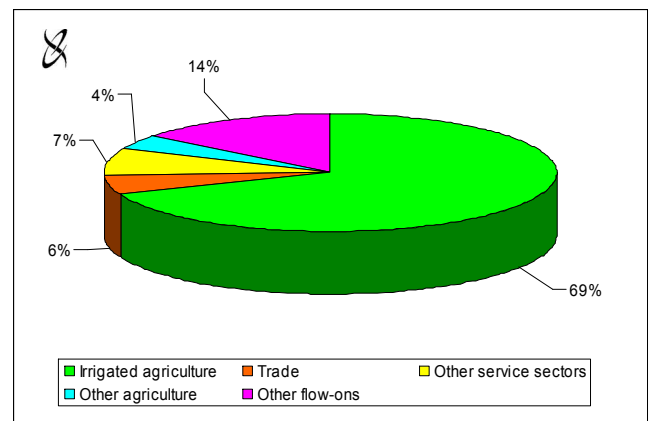


Source: EconSearch analysis

It was estimated that over \$13m (in 2006 dollars) in GRP would be generated in the Murraylands regional economy in response to a 10 per cent increase in River Murray based irrigated agriculture production in 2005/06, over \$9m directly in the irrigated agriculture sectors and approximately \$4m in flow-on GRP in other sectors of the regional economy. The total GRP impact represents over one per cent of the regional total in 2005/06.

GRP generated in the irrigated agriculture sectors would account for almost 70 per cent of the total impact (Figure 4). Flow-on impacts would occur mainly in the trade, other agriculture and other service sectors.

Figure 4 Distribution of GRP impacts for a 10 per cent increase in irrigated agriculture production



Source: EconSearch analysis



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