Socio-economic profile of the Boorowa catchment, New South Wales

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Boorowa catchment profile

The catchment profile of the Boorowa area has been developed to provide New South Wales Department of Primary Industries (NSW DPI) and its partners an enhanced understanding and, therefore, a capacity to predict the likely responses of individuals and groups to strategies to address the degradation of natural resources, including the effects of salinity.

The town of Boorowa was established around the year 1830, and is situated three hours from Sydney and only one hour from Canberra on the major road – the Lachlan Valley Way. The Boorowa Shire Council (2005) describes the district “... as ‘God’s Country’ with its quiet lifestyle and picturesque countryside”. The contemporary social and physical landscape of the Boorowa area reflects a strong and prosperous agricultural heritage with it “... being one of the best fine wool sheep growing areas in Australia” – a sign at the entrance of town states ‘Home of Australia’s Best Merino Sheep’ (BSC 2005). Despite the obvious legacy of agriculture, it is uncertain if the Boorowa people and land-use remain as closely linked to the agricultural sector as previously – the core issue this catchment profile of Boorowa aims to explore.

The contemporary Boorowa landscape – the people and land-use – has a long and prosperous heritage centred upon fine wool production.

In particular, this catchment profile aims to address the following questions:

- What have been the major socio-economic and demographic changes since the 1980’s?
- How reliant are households on agricultural industries for their income?
- Does the Boorowa catchment reflect an ‘agricultural’ landscape (ie. primarily shaped by agricultural industries)?
- Are the trends in the Boorowa catchment consistent with other rural New South Wales (NSW) regions?
- What are the key factors (drivers) causing this change?
The Australian Bureau of Statistics (ABS), on behalf of the Australian government, periodically collects a wide range of data from each household – known as the Census of Population and Housing, with data compiled at several geographical scales. A useful scale for data analysis to inform natural resource management is at the Local Government Area (LGA). A range of ABS data that was collected in the Census of 1986, 1991, 1996 and 2001 has provided a useful foundation for this socio-economic profile of the Boorowa area.

Data from the ABS has been cross-referenced and enriched with information derived from 15 individual semi-structured interviews with a range of people within the Boorowa area, including landholders, business operators and agency staff [interviewees listed in Appendix 1]. This approach of combining statistical data with information derived from targeted interviews is viewed as a reliable method for generating a socio-economic profile. The socio-economic and demographic variables focused upon for this catchment profile include: changes in population size and composition; scale and composition of employment; composition of households; and the dependence on agriculture for employment. These variables were selected as they draw on available data and have been informative in previous studies (Curtis et al. 2003; Charalambou & Curtis 2003; Webb & Curtis 2002).

Overview of the Boorowa area

The geographic centre of the Boorowa LGA (LGA code: 11050) is located approximately 120 km north of the capital city of Canberra (population of 350,000) and approximately 120 km south of the regional centre of Orange (population 35,000) – within the south-west slopes of NSW. The Boorowa area is also contained within the priority region of ‘Lachlan-Murrumbidgee’, one of 22 regions identified in the National Action Plan for Salinity and Water Quality (NAP) (DAFF 2004), and broadly classified as part of Australia’s ‘wheat/sheep’ zone (ABARE 1999) [refer to Map 1, below].

It is estimated that the Boorowa LGA has a 65% coincidence with the Boorowa catchment or watershed (as defined by the Resource Information Unit – NSW Agriculture, January 2004). As such, the data available for the Boorowa LGA is felt to be useful in terms of informing NSW DPI and other stakeholders about the likely socio-economic capacity of the local community to respond the natural resource management (NRM) strategies.
The Boorowa LGA covers an area of 2,578 km$^2$, and includes the small towns (population less than 1,000) of Boorowa, Godfrey Creek, Frogmore, Phils Creek, Rugby and Rye Park, and has total population of 2,333 (ABS 2001) [refer to Map 2].
Population changes

The total resident population in the Boorowa LGA has declined by 8% during the 15-year period of 1986-2001 [refer to Table 1, below]. This decline in population contrasts with the median population figures for LGA’s in rural NSW, which saw an average increase of 4% in population over the same period (1986-2001, ABS 2001). Yet at a national level, the population increased at an annual rate of 1.1% during 1991-2001 (ABS 2005).

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<tbody>
<tr>
<td>Boorowa</td>
<td>2520</td>
<td>2449 (-3%)</td>
<td>2376 (-3%)</td>
<td>2333 (-2%)</td>
</tr>
<tr>
<td>Median of all rural NSW</td>
<td>6241</td>
<td>6328 (+1.5%)</td>
<td>6523 (+3%)</td>
<td>6486 (-0.5%)</td>
</tr>
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Note: percentage change from previous census indicated in parenthesis

Table 1: Boorowa and all rural NSW LGA populations, 1986-2001

It is important to note that the considerable increase in population for many LGA’s along the coast of NSW is likely to mask an overall pattern of decline of population for inland rural NSW LGA’s. At the broad national level, in 2001 85% of Australia’s population resided within 50 km of the coast – largely south-east Queensland, New South Wales and Victoria (ABS 2001).

The population decline of 8% in the Boorowa area during recent decades is a critical demographic change, as population decline is strongly associated with a loss of health and welfare services (public and private), decline of community groups (loss of critical mass of volunteers, less membership renewal, less group vitality), and a decreasing demand for goods and other services, therefore reduced local economic activity (McManus & Pritchard 2000).

The population in the Boorowa area has declined by 8% per annum since the mid-1980’s, despite an increase in the NSW and national populations.

Across Australia, small towns (less than 1,000) have been more likely to decline in population than large towns (greater than 5,000) over recent decades (Tonts 2000). Given that the Boorowa LGA is comprised of only small towns, it is not surprising that it has seen a population decline in line with this national trend.

An important age cohort in a community is the ‘youth’ segment (15-24 years of age), as it generates a high demand for late-secondary and port-secondary education, and training services (Curtis et al. 2003). Also, the 15-24 year old
cohort may have a high proportion of ‘disposable’ income, low levels of debt, and less likely to have dependents compared to other age cohorts – overall, a decline in the youth population indicates an area’s inability to provide the desired education and employment opportunities relevant to this age group (Kirstein & Bandranaike 2004). Interviewees reported that there was a decline in the number of young people because of the lack of employment, both in town and on farms. They added that most young people leave Boorowa for Canberra to pursue employment, education and sporting interests – with some young people commuting back to Boorowa for weekends.

In the Boorowa LGA, there has been a significant decline in the size of 15-24 year old cohort, with a decline of 32% over the 1986-2001 period. This is a substantially higher rate of decline than that experienced by all LGA’s in rural NSW, with a decline of 18% during the same period [refer to Table 2, below].

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<tbody>
<tr>
<td>Boorowa</td>
<td>313</td>
<td>257</td>
<td>225</td>
<td>213</td>
</tr>
<tr>
<td>Median of all rural NSW</td>
<td>854</td>
<td>788</td>
<td>738</td>
<td>704</td>
</tr>
</tbody>
</table>

Note: percentage change from previous census indicated in parenthesis

Table 2: LGA population of 15-24 year old cohort, 1986-2001

There was a decline by 32% in the size of the 15-24 year old population during 1986-2001 within the Boorowa LGA, reducing demand for secondary education and training services.

There was a decline in the annual birth number and rate (proportion of total population) in the Boorowa LGA during 1999-2003, with 22 people born at a rate of 9% during 2003 (37 born at 14.8% in 1999; ABS 2003). Given the decline in birth numbers and the decline in the 15-24 year old age group, it is not surprising that the population of the Boorowa LGA is ‘ageing’ – with an increase in the population’s median age of 33 years to 40 years, during the period of 1986-2001 (an increase of 21%). This increase in median age is greater than the 12% increase in the median age for all LGA’s in rural NSW over the same period [refer to Table 3, below]. An increase in the median age of a local population has direct implications for the demand for health and welfare services, and home care services. Interviewees reported that the people moving to the Boorowa area tended to be older people without children.
Table 3: LGA population median age, 1986-2001

The median age of the Boorowa LGA population increased by 21% during the period of 1986-2001, with an average age of 40 years in 2001.

While there is some evidence to suggest the name of Boorowa comes from the neighbouring Ngunawal people, it is widely accepted that the Boorowa area is part of the traditional country of the Wiradjuri people (Lloyd 1990). The population of indigenous people in the Boorowa LGA has increased significantly in percentage – by 600% during 1986-2001, yet the actual number remains small (n = 28 in 2001), representing just 1.2% of the total population [refer to Table 4, below]. Despite the increase in the indigenous population, it was recently reported that most landholders surveyed in the Lachlan catchment (including the Boorowa area) felt that their lack of awareness of Aboriginal cultural heritage was not an important issue for them (Byron et al. 2005).

Table 4: LGA indigenous population, 1986-2001

Males comprised 51% of the population in the Boorowa LGA in 2001, with the balance between males and females remaining stable since 1986 (ABS 2001).

Employment dynamics

In 2001, nearly 50% of the employed population in the Boorowa LGA was employed in the ‘agricultural, fishing and forestry’ sector and although there were fluctuations, the proportion had declined slightly since 1986 when just over 53% of employment was within this sector. Given the low level of fishing and forestry activity in the Boorowa LGA, it is reasonable to assume that most of the employment reported in the ‘agricultural, fishing and forestry’ sector is directly associated with agriculture.
Agriculture is a far more important source of employment in the Boorowa LGA than compared to all LGA’s in rural NSW, where about 23% of all employment in rural NSW is within the ‘agricultural, fishing and forestry’ sector (ABS 2001) [refer to Table 5, below].

Of the people employed in this sector in the Boorowa LGA, women comprise just over 25%. Also, the importance of agriculture to men’s employment is greater than for women’s employment, with agriculture representing 59% of the employment for men and 34% of the employment for women.

<table>
<thead>
<tr>
<th>Employment, 1986-1996</th>
<th>Boorowa LGA</th>
<th>Rural NSW LGA median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total male</td>
<td>644</td>
<td>1518</td>
</tr>
<tr>
<td>Total female</td>
<td>325</td>
<td>848</td>
</tr>
<tr>
<td>Total persons</td>
<td>969</td>
<td>2349</td>
</tr>
<tr>
<td>Agric, fish &amp; fsty – male</td>
<td>399</td>
<td>489</td>
</tr>
<tr>
<td>Agric, fish &amp; fsty – female</td>
<td>118</td>
<td>206</td>
</tr>
<tr>
<td>Agric, fish &amp; fsty – all persons</td>
<td>517</td>
<td>711</td>
</tr>
</tbody>
</table>

Table 5: Employment in Boorowa & rural NSW LGA’s

Nationally, just 4.9% of employment is within the ‘agricultural, fishing, forestry and mining’ sector, yet the importance increases to 12% for areas outside metropolitan Australia (ABS 2001).

Agriculture remains an important sector for employment in the Boorowa LGA, representing 59% of employment for men and 34% of employment for women in 2001.

Interestingly, despite the decline in population in the Boorowa LGA, the number of wage and salary earners (ie. employees) has increased in recent years from 731 to 777 during the period of 1999-2002. The difference in these figures supports the view that more people have obtained paid employment (eg. farmers obtaining off-farm employment) during this period, while the majority of people leaving the Boorowa LGA may have been young families (including non-wage earners), school leavers (non-wage earners) and/or those self-employed (eg. retiring farmers).
People leaving the Boorowa LGA appear to be mainly families with school-aged children, school leavers and/or self-employed people, as despite a decline in overall population there was an increase in the number of wage and salary earners during the period of 1999-2002.

Wages and Salaries

The increase in the number of wage and salary earners is matched by a consistent increase in the total wage and salary income for this population from $18.1 million (average $24,787) to $21.9 million (average $28,222) during the period of 1999-2002 (ABS 2003).

However, the proportion of total personal income comprised of wages and salaries has declined from 59.8% (in 1999) to 47.6% (in 2001), with the most notable increase in the proportion earned via self-employment from 4.1% (in 1999) to 19.1% (in 2001) (ABS 2003). Also, the total personal income from all sources has increased considerably, from $31.4 to $44 million (during the period of 1999-2001), with government income support payments (eg. age pension, disability support pension) comprising a decreasing proportion from 17.9% to 14% (during the period of 1999-2001) and a decline in the number of people receiving income support from government (611 people in 2003).

Recent figures indicate that in 2003, the registered unemployment rate in the Boorowa LGA was just 3.7% (n = 48), which is below the current national registered unemployment rate of 5.1% (ABS 2005).

The ABS has developed an Index of Relative Socio-Economic Disadvantage (2001) – an index calculated using variable such low incomes, low educational attainment, high unemployment and people employed in low skilled occupations – all factors likely to reflect a community’s inability to cope with changing circumstance. According to the ABS index, the population in the Boorowa LGA is less disadvantaged than the average non-metropolitan area across Australia.
Households, families and services

Domestic Households

Although there are fluctuations in the data, the total number of ‘one family households’ decreased by just over 10% during the period of 1986-2001, although there was an increase of 68% in the number of ‘one parent families’ and an increase of 69% in ‘lone person households’ in the Boorowa LGA [refer to Table 6, below]. Across all LGA’s in rural NSW, the total number of ‘one family households’ increased by 7% during the period of 1986-2001, yet reflected the situation in Boorowa LGA with an increase of 44% in ‘one parent families’ and an increase of 55% in ‘lone person households’ (ABS 2001). An increase in ‘lone person households’ in the Boorowa LGA is consistent with an ageing population.

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<tbody>
<tr>
<td>One Family Household: Couple Family With Children</td>
<td>1354</td>
<td>1371</td>
<td>1182</td>
<td>1191</td>
</tr>
<tr>
<td>One Family Household: Couple Family Without Children</td>
<td>588</td>
<td>443</td>
<td>504</td>
<td>526</td>
</tr>
<tr>
<td>One Family Household: One Parent Family</td>
<td>99</td>
<td>213</td>
<td>185</td>
<td>168</td>
</tr>
<tr>
<td>One Family Household: Other Family (eg. extended family)</td>
<td>99</td>
<td>26</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>One Family Household: Total</td>
<td>2140</td>
<td>2053</td>
<td>1886</td>
<td>1908</td>
</tr>
<tr>
<td>Multi-family Household</td>
<td>96</td>
<td>30</td>
<td>55</td>
<td>14</td>
</tr>
<tr>
<td>Lone Person Household</td>
<td>182</td>
<td>249</td>
<td>265</td>
<td>263</td>
</tr>
<tr>
<td>Group Household</td>
<td>38</td>
<td>28</td>
<td>28</td>
<td>21</td>
</tr>
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There was an increase of 68% in the number of ‘one parent families’ and an increase of 69% in ‘lone person households’ in the Boorowa LGA during the period of 1986-2001.

By national standards, rental costs, house and land prices in the Boorowa area are relatively affordable – about 72% of all occupied private dwellings were either fully owned or being purchased in 2001; higher than the national figure of 66%. However, some interviewees reported that house prices had increased markedly in recent years, as illustrated by the comment “… until a few years ago you could get a nice house for $50,000; now it is more like $100,000 … making it harder for young people to get a start here”.

9
**Education and Health Services**

The town of Boorowa has several child-care facilities, a pre-school, 2 primary schools (one private, one public) and a local high school. However, with the decline in the number of young families and youth, several interviewees doubted the viability of educational opportunities in Boorowa. For example, a local school teacher reported that the Boorowa high school had 240 pupils about 20 years ago, but now the number fluctuates between 120-140 students and is expected to decline further with fewer enrolments than previously.

Boorowa also has a medical centre, local hospital and a Community Health Centre, which provides a range of services to residents of the district. Boorowa is the location of the main office for the Boorowa Shire Council.

**Importance of agriculture**

There are a number of agricultural industries in the Boorowa district, including merino sheep for fine wool production, specialised horse breeding and training farms, and cattle studs. The temperate climate, rich soils and reliable rainfall also make the region suitable for grains, such as wheat and canola (BSC 2005). Several interviewees mentioned that Boorowa’s economy was still primarily reliant on the viability of the local farms, as illustrated by the comment “… we have to take a long-term view; we expect there will be peaks and troughs … good times and bad times”.

In 2001, the total value of agricultural production in the Boorowa LGA was $39.4 million, with wool comprising just over 50% of this value ($20 million), meat and other livestock disposals about 28% ($11.1 million) and crops about 21% ($8.8 million) from 200-400 commercial farming properties (ABS 2003). Given the importance of wool production to Boorowa’s overall agricultural value, the profitability of wool enterprises will have a strong correlation with farm incomes.

Wool production has been the main agricultural enterprise in the Boorowa area since the late-1800’s, with farming properties typically cleared of most of the native woody vegetation to increase livestock carrying capacity. The average carrying capacity for the district was estimated at less than 6 DSE \(^1\) per hectare in the late-1990’s, with the most viable 20% of businesses having a gross

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\(^1\) DSE equates to Dry Sheep Equivalent, defined as the carrying capacity of an area to maintain the constant weight of a 50-kilogram wether sheep.
margin of $126/ha (Newman & Chapman 2001). In 1996, just 20-30% of farm families had a disposable income above $20,000 – the benchmark identified by the Farm Managers 500 group as the minimum threshold for financial sustainability (Barr et al. 2000). While all interviewees acknowledged the difficulties farmers are currently facing, many saw this as a relatively temporary hardship with better times ahead. One interviewee mentioned “… diversity is a key strategy. Those who diversify will survive in the long-term … people need to act opportunistically and find niche markets”.

In their recent survey of landholders in the ‘Lachlan slopes’ (a sub-region of the Lachlan catchment that includes the Boorowa LGA), Byron et al. (2005: 45) found that over the period of 1986-2001, there was an increase in the number of rural properties (mainly due to sub-division of large properties), fewer landholders identifying themselves as farmers, and a decrease in the size of rural properties – it is estimated that the current median property size in the ‘Lachlan slopes’ area is 114 hectares. Byron et al. (2005: 45) also found that only 46% of landholders in the ‘Lachlan slopes’ were farmers, with 23% being professional people, 6% employed in trades, and a further 12% of landholders were primarily employed in clerical, administration, retail or home duties. In addition, 13% of the survey respondents indicated they were retired, yet owned properties with a median size of 350 hectares (Byron et al. 2005: 31).

The exit rate from commercial farming in the Boorowa LGA was estimated to be 5-6% per annum during the period of 1986-1996 (Barr et al. 2000), considerably higher than the national rate of 1-2%, with 133,000 farming businesses recorded across Australia in 2003 (ABS 2003).

Recent research indicates that in the ‘Lachlan slopes’ (a sub-region of the Lachlan catchment that includes the Boorowa LGA), there has been an increase in the number of rural properties, a decrease in the size of rural properties, fewer landholders identifying themselves as farmers, and a high exit rate from farming – indicating that ownership of rural land is uncoupling from agriculture.

Nationally, the average land price in the ‘wheat/sheep’ zone has remained steady over the last 25 years, with prices staying within the range of $100-200 per hectare (adjusted to 2003-04 dollars) (ABARE 2005). Rural land in the south-east of the Boorowa LGA (within 1.5 hours drive of Canberra) has increased in range to $2,500-5,000 per hectare ($1-2,000 per acre) in recent years, well beyond the agronomic value of rural land in the district, which is estimated to be in the range of $750-1,000 per hectare ($300-400 per acre).
appears that non-farmers are willing to pay 3 to 5 times the agronomic value of land south-east of Boorowa. The divergence in rural land value and the profitability of the major rural enterprise – wool production, which occupies the majority of rural land – further indicates the uncoupling of land value from its perceived agronomic value. That is, the value of rural land in parts of the Boorowa district is increasingly influenced by non-agricultural interests, as indicated by an increase in rural properties, reduction in median property size, and a reduction in proportion of landholders who are farmers.

**Sheep and wool**

Across Australia, sheep and lamb numbers fell by 7% to 99.3 million, in the year ending June 2003 – the smallest estimated flock for Australia since 1947 (95.5 million). A major fall in sheep and lamb numbers was reported in NSW for the same period, which fell by 12% to 33.7 million (representing a reduction of 4.8 million sheep and lambs).

Following the recent decline in sheep numbers, the trade volume in wool has also declined – with 116,000 tonnes offered for sale in the March quarter of 2005 (ABS 2005) [refer to Figure 1, below].


Compounding the challenges for wool production – half the current agricultural production in the Boorowa LGA – is that recent forecasts are for the price of wool to remain subdued for the next five years (ABARE 2005).

**Salinity in the Boorowa catchment**

An objective of this Boorowa catchment profile is to inform NSW DPI of the socio-economic context in which current land-use occurs, to assist in the development of effective salinity mitigation strategies. The Murray-Darling Basin
Commission (MDBC) reports that recent research indicates that salinity is an increasingly serious problem throughout the Murray-Darling Basin, with salinity levels in the Murray River rising at a rate of 1.5 to 5.0 EC² units per year. The MDBC stated that the “... implications of the current salinity situation for the Murray-Darling Basin are extremely serious … (people) have yet to get to grips with the underlying causes” (MDBC 2005). Recent estimates indicate that there are 174,000 hectares affected by salinity in NSW, with a further 5 million hectares at risk (MDBC 2005). In the Boorowa district, it is estimated that salt yields are occurring at 4-6 tonnes/km²/annum, with the Lachlan River (a boundary of the Boorowa LGA) increasing in salt concentration. Sharing the concern of the MDBC is the Lachlan Catchment Management Authority (CMA), whose region includes the Boorowa district in the south-east and has identified salinity mitigation as an issue on which to focus. As mentioned previously, the Boorowa catchment is within the Lachlan-Murrumbidgee region, a region where salinity has been identified as of concern in the NAP [refer to NAP, p.2].

However, the level of concern about increasing salinity as expressed by NRM agencies (eg. MDBC, Lachlan CMA) does not appear to be shared by rural landholders (Watson et al. 2003). Byron et al. (2005, p.iv) recently concluded that “Despite being identified as priority issues in the Lachlan Catchment Blueprint dryland salinity, removal of native vegetation, (and) water quality... were not rated as important issues by most landholders”. Landholders appeared more concerned about the decline of services and employment opportunities (Byron et al. 2005). While all interviewees acknowledged the presence of dryland salinity in the Boorowa area, few felt it was a critical issue and some believed it was being over-emphasised by agencies. One interviewee commented “… the feeling around here is that most landholders won’t go broke because of salinity”. Another mentioned “… most landholders have undertaken works such as tree planting to deal with it (salinity). People have a good understanding of salinity .... salinity is a minor worry, bigger concerns are the drought and fluctuating commodity prices”.

Furthermore, there is doubt about the viability of current options to address salinity, as “… viable treatments for salinity prevention are only available for a small proportion of the agricultural land where they are needed” (Pannell 2000, p.3). Also, others have concluded that “… changes on agricultural land are very unlikely to occur on the scale required to prevent the spread of salinity” (Bathgate 2001, p.20).

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² EC equates to Electrical Conductivity, the unit for measuring the salt concentration in water.
The concern expressed by NRM agencies that increasing salinity is a critical threat to landscape health does not appear to be shared by landholders and others in the local community.

The dichotomy between the goals of NRM agencies and the aspirations of landholders and others in the local community presents an acute challenge for integrated NRM. NRM issues viewed as critically important by government agencies are not necessarily shared by landholders, thereby challenging the capacity of NRM agencies to foment active community-government partnerships to improve NRM (Vanclay & Lawrence 1995: Cary et al. 2002).

NRM issues may need to be explicitly linked in terms of impacts on aspects of importance to landholders in the Boorowa catchment, such as NRM issues being framed in terms of affecting employment opportunities (eg. salinity causing a decline in farm productivity) and their quality of life (reduced water quality, decline in native vegetation, less of the landscape supporting broadacre livestock enterprises) (Curtis et al. 2000). To date, NRM projects appear to have had limited success in terms of changing the physical landscape around Boorowa, as reflected by the comment of Freudenberger et al. (2004, p.2):

The Saltshaker Project is an important milestone in a long journey of landscape evolution. The Project has significantly contributed to nudging the Boorowa catchment along a new pathway of sustainability. The Boorowa landscape has been on a long degradation pathway that has resisted efforts to improve its ecosystems. It will take multiple nudges to head the Catchment down an alternative pathway of healthy soils, freshwater, productive farms, diverse wildlife and vibrant human communities.

Catalysts of change in Boorowa

Declining terms of trade in agriculture

There continues to be a pronounced decline in the ‘terms of trade’ (profitability) in agriculture for farmers, particularly those involved in wool production (Fisher 2005). Since the early-1970’s, the terms of trade for wool production has generally declined. As wool production has had a major influence over the development of, and land-use within, the Boorowa district, the decline in viability of wool production has had a major impact on families’ prosperity and rural land-use (Gray & Lawrence 2001). A subsequent impact of this is there appears to be less succession of farming properties within families, and the
average age of farmers is increasing. One interviewee explained he “… would like (his) children to stay and continue the family tradition of farming, but it needs to be easier … they need to be able to earn an income”.

Severe drought

The drought that affected inland NSW up to mid-2005 has had a marked impact on the level of agricultural production. The current drought has been described in the media as the “… worst drought in a hundred years” (The Australian, October 2004). Prolonged periods of below-average rainfall in the Boorowa district has forced farmers to reduce stock numbers and the scale of cropping which, in turn, impacts on production levels and farm incomes. Prolonged periods of below-average rainfall (drought) also occurred during 1994 and 1982 – affecting many of the current farmers. One interviewee mentioned “… we have had good times and bad times; now is an extra bad time”.

All interviewees mentioned the current drought as having a major impact on the Boorowa economy, with the impact compounded by poor prices for wool and the ageing population. One interviewee explained that “… people don’t spend in a drought and this affects all of the local businesses”, with a marked decline in rural incomes. Although some others mentioned that there was a minimal impact on their businesses.

Land prices unrelated to farm incomes

The value of rural land in the south-east of the Boorowa district has risen 3 to 5 times its perceived agronomic value – with land purchased by people who want small rural properties (4-80 ha) and don’t identify themselves as farmers. The presence of Canberra, a major population and employment centre only 1.5 hours drive from Boorowa, is believed to be placing upward pressure on the value of small rural properties. Although newcomers to the Boorowa district may not be dependent on agriculture for their livelihoods and nor identify themselves as farmers, it appears they value highly the ‘agricultural’ landscape and cohesive rural community. For such people, their livelihoods are not dependent on agriculture, but their ‘quality of life’ is. One interviewee said “… the quality of life is good here … this is paradise. Boorowa has been a tight-knit community where it can take you an hour to walk down the main street … (but) now I can walk down the main street and see faces I’ve never seen before”. Some even mentioned there had been a mini-real estate ‘boom’ in recent years, with a number of residential housing estates constructed and sold.
Tourism is also believed to be contributing to Boorowa’s economy, albeit in a small way. One interviewee reported that the annual wool festival attracts about 10,000 people to the town, and there is a “… steady stream of people travelling through on the Lachlan Valley Way”.

New landholders moving into the Boorowa district appear to have less dependence on agriculture, yet are willing to pay high land prices for the district’s ‘agricultural landscape and sense of community.

At a superficial level, the ‘agriculture’ landscape (ie. the appearance of viable agricultural enterprises) can mask the profound socio-economic and demographic change occurring within the Boorowa district. The social values that underpin traditional commercial farming appear to becoming less prevalent, with the consequence that the threat of lost farm production due to salinity unlikely to be of serious concern to new landholders. This shift in values may also offer opportunities for salinity mitigation, as non-farming landholders may be less likely to face the economic pressure to carry high livestock numbers and so could afford greater pasture cover or perennial vegetation (eg. non-commercial trees and shrubs). Incentives to change landholders’ behaviour are more effective when these match the values held by landholders (Cary et al. 2002). Therefore, improved agronomic technologies and farm-based incentives are unlikely to be an effective stimulus for behavioural change in the increasing number of landholders in the Boorowa catchment who aren’t farmers.

However, there needs to be caution when interpreting peoples’ attitudes and values as a means of understanding their behaviour, as a complex range of factors can constrain a shift in behaviour (Vanclay & Lawrence 1995; Cary et al. 2002). For example, a positive land stewardship ethic may not be evident if a landholder is constrained by the high cost of changing farm management. In the case of the Boorowa district, the declining profitability of wool production in combination with the recent exceptionally dry climate are likely to have constrained changes towards recommended NRM.

Conclusion: Change in Boorowa

This profile of the Boorowa district in NSW reveals a district undergoing considerable socio-economic and demographic change – a community at the nexus of some of the powerful forces reshaping rural and regional Australia.
In summary, this profile of the Boorowa district indicates the:

- population is decreasing and ageing – with those leaving mainly young families, youth post-secondary school and self-employed people;
- community and Boorowa’s economy is still highly reliant directly on agriculture, with the prosperity of farming affecting a number of businesses in the short-term (eg. farm supplies) and long-term (eg. schools dependent on children from farming families);
- increase in the number of rural properties, decrease in the size of some rural properties, fewer landholders identifying themselves as farmers (mainly south-east of Boorowa), and a high exit rate from farming – suggesting that ownership of rural land is uncoupling from agriculture;
- Boorowa catchment still reflects an ‘agricultural’ landscape, with the majority of rural land still occupied by commercial farms and recently arrived non-farming landholders continuing to value the district’s farming landscape;
- concern expressed by NRM agencies that increasing salinity is a critical threat to landscape health does not appear to be widely shared by landholders and others in the local community;
- socio-economic and demographic changes occurring are typical of inland NSW, with the change in some aspects more pronounced due to Boorowa’s reliance on wool production and proximity to a major city (ie. Canberra) – bringing challenges and opportunities; and
- key factors driving this change appear to be: the prolonged decline in the terms of trade for farming; extended period of below-average rainfall (drought); and the arrival of non-farming landholders.

The next report in the research project – ‘Social impacts of changing land-use to manage dryland salinity in the Boorowa catchment’, will be a socio-economic profile of the catchment’s landholders.
References


Boorowa Shire Council (BSC) (2005) Profile of the Boorowa Shire. BSC: Boorowa, NSW.


Watson, W., Evans, R., Powell, J. and Oliver, M. (2003) Lachlan catchment report. Integrated Catchment Assessment and Management Centre – the Australian National University: Canberra, ACT.

Appendix 1: List of interviewees for socio-economic profile
(all interviews conducted during May 2005)

Catlin, Julia. Gregory and McCarthy Accounting and Professional Services, Boorowa, NSW.

Corcoran, Sue. Manager – Boorowa Pharmacy, and family farm, Boorowa, NSW.

Corkhill, Tom. Manager – Boorowa Pastoral Supplies, professional agronomist, and part-owner of 3,500 acre family farm, Boorowa, NSW.

Cross, Richard. Owner – Boorowa Smash Repairs, Boorowa, NSW.

Dyers, Gary. Manager – Returned Servicemen’s Club, Boorowa, NSW.

Emery, Margaret. Owner – Old School Bed & Breakfast, Rye Park via Boorowa, NSW.

Evans, David. Owner – Galeria del Centro (antiques and gallery), Boorowa, NSW.

Hilhorst, David. Catchment Management Officer – Lachlan Catchment Management Authority, Boorowa, NSW.

Johnson, Deidre. Secretary – Boorowa Shire Council, Boorowa, NSW.

Leihn, Leanne. Director – Community Technology Centre, Boorowa, NSW.

McKeon, John. Science teacher – Boorowa High School, Boorowa, NSW.

Niddrie, Paul. Owner – The Town Clock Coffee Shop, Boorowa, NSW.

Pryor, Greg. Manager – Bendigo Community Bank, Boorowa, NSW.

Reid, Chris. Agent – Elders Real Estate, Cowra, NSW.

Ryan, Jack. Agent – Elders Real Estate, Young, NSW.