



Australian Government
Bureau of Rural Sciences

Social impacts of drought: review of literature

**Report prepared for the Drought Review Branch
Australian Government Department of
Agriculture, Fisheries and Forestry**

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Key findings

Background	This report is one of four prepared by the Social Sciences Program, Bureau of Rural Sciences, to support investigations of the social impacts of drought as part of the National Review of Drought Policy. It reports the findings of a review of literature on the social impacts of drought, with a strong focus on Australian literature published since 1990.
Value systems	The review highlights discussion about the competing value systems that may be involved in developing drought policy.
Concepts and frameworks	The literature reveals a range of concepts and frameworks to help understand the impacts of drought and how rural people and communities respond to it. These include the impact categories used in formal Social Impact Assessment literature; and ideas of adaptation, vulnerability, resilience, complex adaptive systems, collaborative learning, and sense of community and sense of place.
Socio-demographic background for rural Australia	Rural Australia is experiencing a number of overarching socio-demographic trends on which the impacts of drought are overlaid. These include overall population loss, ageing population, and loss of young people to larger population centres. This is occurring at the same time as declining levels of employment in agriculture, the traditional mainstay of the economy of many rural areas.
Themes	The main literature findings are discussed under the five themes identified by the Expert Social Panel established as part of the National Review of Drought Policy. These themes are employment, education and training, people's health, family life, and community development and sustainability.
Employment	There is evidence that drought leads to loss of employment in agriculture, and flow-on effects to employment in rural communities and businesses in nearby towns. These impacts are likely to be most severe in rural areas and towns that are heavily dependent on agriculture and lack economic diversity.
Education and training	There is very little research directly examining the effects of drought on education and training. There is some evidence that increased workloads and increased debt among farming families leads to young people still in their school years working long hours both on- and off-farm, and sometimes schooling is affected. Low levels of formal qualifications, particularly among older farmers, may constrain their off-farm employment opportunities.
People's health	People in rural and regional Australia generally have poorer access to health care services and experience poorer health than the Australian population overall. The extent to which their health is directly affected by drought is difficult to assess, although rural

people themselves certainly report adverse affects on both their physical and mental health. A particular area of concern is the possible effect of drought on male suicide rates in rural Australia.

Family life

Drought may have a range of effects on family life, including its effects in weakening incentives for young people to stay on farms, or in rural areas overall, and making it more critical for family members to obtain off-farm work to supplement on-farm income. Drought is experienced differently by men and women and therefore has gender-related aspects.

Community development and sustainability

The agriculture sector remains important to many rural and regional towns, and their sustainability may be threatened by drought. Community and economic diversity is an important factor in increasing resilience. As underlying broad spatial patterns of social disadvantage already exist in Australia, drought may merely add to what is already chronic disadvantage in many rural areas. The situation of Indigenous Australians in remote Australia is particularly relevant here, as they are already among the most disadvantaged communities in Australia.

Support services

Many different support services are important to mitigate the impacts of drought. However, it is not just *what* services are provided that is important, but *how* they are provided. Rural people may be reluctant to use some services because of personal barriers and social stigmas associated with them, or because they do not see the services as being ones that are locally-tailored or locally-relevant.

Gaps and areas for improvement in support services

It has been suggested that relevant and successful services need to be embedded in local communities and run by trusted community members, not imposed from outside. Both the *demand* and *supply* side of service provision need to be considered in designing services and helping to ensure they continue. Some researchers advocate the need for rural service providers to be able to take on a flexible range of roles as circumstances require. They also stress the need to recognise the very different roles service professionals may be required to play in rural situations as opposed to urban ones, and to train rural service providers accordingly.

List of acronyms

AAA	<i>Agriculture—Advancing Australia</i> : an integrated rural policy package announced in September 1997 by the then Minister for Primary Industries and Energy, The Hon. John Anderson MP
AAC	Australian Agricultural Council: a Council made up of the Commonwealth and State Ministers responsible for agriculture. It is Australia’s oldest Ministerial Council having been established in 1934. In 1992 it was expanded to the Agricultural Council of Australia and New Zealand (ACANZ).
ABARE	Australian Bureau of Agricultural and Resource Economics
ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACANZ	Agricultural Council of Australia and New Zealand (see AAC above for definition and history).
ACC	Australian Agricultural Council
AIHW	Australian Institute of Health and Welfare
ALMWG	Agriculture and Land Management Working Group
ANTA	Australian National Training Authority
ARIA	Accessibility and Remoteness Index of Australia
ARMCANZ	Agricultural and Resource Management Council of Australia and New Zealand. In 1993, ACANZ (see above) was expanded to become ARMCANZ.
BRS	Bureau of Rural Sciences
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BTRE	Bureau of Transport and Regional Economics
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DBCDE	Australian Government Department of Broadband, Communications and the Digital Economy
DCITA	Australian Government Department of Communications, Information Technology and the Arts
DEC	Drought Exceptional Circumstances
DEEWR	Australian Government Department of Education, Employment and Workplace Relations
DEST	Australian Government Department of Education, Science and Training
DETYA	Australian Government Department of Education, Training and Youth Affairs
DHAC	Australian Government Department of Health and Aged Care
DoHA	Australian Government Department of Health and Ageing
DPIE	Australian Government Department of Primary Industries and Energy

EC	Exceptional Circumstances: EC events are rare and severe events that are outside those that a farmer could normally be expected to manage using responsible farm management strategies. To be classified as an EC event, the event: <ul style="list-style-type: none"> • must be rare, that is it must not have occurred more than once on average in every 20 to 25 years • must result in a rare and severe downturn in farm income over a prolonged period of time (e.g. greater than 12 months) • must be a discrete event that is not part of long-term structural adjustment processes or normal fluctuations in commodity prices (2008c)
EIA	Environmental Impact Assessment
ERCP	Exceptional Circumstances Relief Payment
HILDA	Household, Income and Labour Dynamics of Australia [Survey]
IA	Interim Assistance
MP	Member of Parliament
NBEET	National Board of Education, Employment and Training
NDP	National Drought Policy: agreed to by ACANZ, July 1992
NDRA	Natural Disaster Relief Arrangements
NFF	National Farmers' Federation
NRAC	National Rural Advisory Council
NDRA	Natural Disaster Relief Arrangements
PIMC	Primary Industries Ministerial Council: the successor to ARMCANZ
RAS	Rural Adjustment Scheme
SCARM	Standing Committee on Agriculture and Resource Management
SIA	Social Impact Assessment
SEIFA	Socio-Economic Index For Areas
SSCRRA	Senate Standing Committee on Rural and Regional Affairs
SSP	Social Sciences Program, Bureau of Rural Sciences

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Introduction and background

Approach and terms of reference for the study

In June 2008, the Social Sciences Program (SSP) of the Bureau of Rural Sciences (BRS) was asked by the Drought Review Branch of the Department of Agriculture, Fisheries and Forestry (DAFF) to examine the social impacts of drought on farm families and rural communities as part of its National Review of Drought Policy (Burke 2008a). Further details of the National Review are supplied in the next section of this report and in *Appendix 1*.

In particular, the SSP was asked to provide a literature review that includes a *Key findings* section that identifies major trends in the literature and draws out:

- key findings in relation to the social impact of drought on farm families and rural communities
- identifies gaps and areas for improvement in Australian, state and territory government social support services, mitigating the impact of drought for farm families and rural communities.

The literature review is to identify literature and findings (where they exist) in relation to each of the five themes identified in the Panel's issues paper [employment, education and training, people's health, family life, and community development and sustainability] (Expert Social Panel 2008). The full issues paper is provided as *Appendix 1* to this report.

The literature review is also to identify key statistics and research in relation to the social impacts of drought and the five key themes, and include a detailed bibliography.

In view of the short timelines (less than four weeks), the focus of this literature review has been on Australian literature published since 1990.

The SSP was also asked to:

- conduct a research workshop with experts in the social impacts of drought and drought policy from around Australia—results of the workshop have been reported and also used to inform this literature review and its conclusions
- provide an analysis of the social circumstances, perceptions, and behaviour of farmers (including issues of concern, risk management, perceptions of drought, management of challenges) from the June 2008 SSP *Climate risk and industry adaptation* survey of farmers (Hogan *et al.* 2008a)
- provide an analysis of the Quality of Life survey of farmers in drought areas (compared to the total Australian community) using the recognised Deakin Wellbeing Index (based on a national Newspoll survey conducted in mid July 2008 (Hogan *et al.* 2008b)
- provide an analysis of the social circumstances of rural people and communities (compared to urban communities) based on previously unanalysed dimensions from the Household Survey of Income and Labour Dynamics of Australia (HILDA) (Hogan *et al.* 2008c).

Where possible, findings from the research workshop and the reports of the other studies have been referred to in relevant sections of the following review.

Recent history of drought assistance in Australia

Before 1989

From 1971 to 1989, drought in Australia was regarded as a natural disaster, with assistance provided under the Natural Disaster Relief Arrangements (NDRA) (Drought Review Panel 2004). The NDRA was administered through Commonwealth Department of Finance and State or Territory Treasuries, with the states and territories having primary responsibility for disaster relief until such time as a spending threshold was reached which would trigger provision for Commonwealth assistance. The major emphasis of the assistance measures was to attempt to insulate farmers from the effects of drought through the provision of a range of business support measures (DAFF 2008a).

After 1 July 1989, drought was excluded from the NDRA when analysis suggested the assistance provided was poorly targeted, distorted farm input prices, and worked as a disincentive for farmers to plan and prepare for drought. This led to a separate National Drought Policy (NDP) being developed, based on recognising drought as a natural feature of the Australian climate. Under the NDP, Australian farmers were expected to assume greater responsibility for managing the risks arising from climate variability, with self-reliance and effective risk management forming central features. The objectives of the NDP that were agreed to by Commonwealth, State and Territory Ministers in 1992 (BRS n.d.), were to:

- encourage primary producers and other sections of rural Australia to adopt *self-reliant approaches* to *managing the risks* stemming from climatic variability
- maintain and protect Australia's agricultural and environmental resource base during periods of extreme climate stress
- ensure early recovery of agricultural and rural industries consistent with long-term sustainable levels.

Under the NDP, it was also agreed that in circumstances of severe and exceptional drought, the Commonwealth and States would consider the appropriate response providing that such measures did not compromise the core principles and objectives of the NDP (Agricultural Council of Australia and New Zealand 1992). Exceptional Circumstances (EC) policy was designed to operate in association with the Rural Adjustment Scheme (RAS) to provide farmers with business support in the form of interest rate subsidies to support the long-term viability of the farming operation (Drought Review Panel 2004). In 1994, the Australian Government introduced the Drought Relief Payment to provide income support to farmers experiencing a temporary loss of income. This assistance complemented the interest rate subsidies assistance.

Developing an Exceptional Circumstances framework

The Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ) established a national framework to determine drought as an exceptional circumstance in 1995 (Drought Review Panel 2004). The framework for a Drought Exceptional Circumstances (DEC) declaration was based upon assessing six core criteria:

- meteorological conditions
- agronomic and stock conditions
- water supplies
- environmental impacts
- farm income levels
- scale of the event.

The agreed framework stated that DEC would be declared when the combined impact of these core criteria on farmers constituted a rare and severe occurrence. It was also agreed that meteorological conditions would be the threshold or primary condition (Drought Review Panel 2004). Where it could be established that an exceptional meteorological event had occurred, the other criteria would then be considered (White and O'Meagher 1995). For this purpose, it must be established that the meteorological conditions constitute a one-in-twenty to one-in-twenty-five year event and are of a prolonged nature (i.e. greater than 12 months duration) (DAFF 2008c).

Agriculture—Advancing Australia (AAA)

The findings of a review of the NDP in 1995 led to a review of the RAS (1992) which was completed in May 1997 (Drought Review Panel 2004). In 1997, the Australian Government announced the wind-down of the RAS and released an integrated rural policy package called 'Agriculture—Advancing Australia' (AAA) (Botterill 2000).

The AAA package contained initiatives on farm business management, farm family support and community development. It reaffirmed the Government's recognition that there are rare and severe events, or exceptional circumstances, that affect the farming sector and which are outside the scope of farmers' normal risk management strategies. It also accepted that these events could extend beyond drought. Under the AAA package, the income support measure 'Exceptional Circumstances Relief Payment' (ERCP) replaced the Drought Relief Payment (Drought Review Panel 2004).

The original AAA package was enhanced and extended on two occasions—in 2000 and 2004 (Rodriguez *et al.* 2006). The last package, which expired in June 2008, focused on four key objectives:

- to help primary producers and industries profit from change
- to give farmers facing severe financial hardship access to income support and professional advice
- to provide farmers with incentives for ongoing structural change
- to encourage social and economic development in rural areas.

New criteria for Exceptional Circumstances

In March 1999, ARMCANZ agreed on new criteria for EC and these are the ones in use today.

An event is defined as an 'Exceptional Circumstance' when it is a *rare* and *severe* event that is outside those that a farmer could normally be expected to manage using responsible farm management strategies (DAFF 2008c). To be classified as an EC event, the event:

- must be *rare*, that is it must not have occurred more than once on average in every 20 to 25 years
- must result in a *rare* and *severe* downturn in farm income over a prolonged period of time (e.g. greater than 12 months)
- must be a discrete event that is not part of long-term structural adjustment processes or normal fluctuations in commodity prices (DAFF 2008c).

It was also agreed that there should no longer be separate Drought Exceptional Circumstances (DEC) and that drought was to be assessed as a possible exceptional event in the same way as any other possible exceptional event (Drought Review Panel 2004).

2000 review of Exceptional Circumstances policy

In February 2000 the then Australian Government Minister for Agriculture, Fisheries and Forestry, The Hon. Warren Truss MP, initiated a review of EC, seeking feedback on existing policy and

ways of improving it from State and Territory Ministers, the National Rural Advisory Council (NRAC) (the independent body that provides advice to the Commonwealth Government on EC applications), and peak farmer organisations (Drought Review Panel 2004). In August 2000, ARMCANZ agreed that the Standing Committee on Agriculture and Resource Management (SCARM) would review the EC policy in conjunction with the NRAC.

In response to the review, ARMCANZ decided that:

- some farmers outside a defined EC zone, but who are in reasonable proximity to it (that is, in a declared 'buffer' zone), and who can also demonstrate that they are affected by the same exceptional events, will be eligible to apply under the same terms and conditions as those within the defined zone
- in order to speed the flow of assistance to farmers in an EC area, the states would be encouraged to use predictive modelling to demonstrate likely (crop) losses in an EC area, rather than wait until actual yields were known at the end of the season.

Further Exceptional Circumstances policy reforms (2002–2005)

At the first meeting of the Primary Industries Ministerial Council (PIMC) (the successor to ARMCANZ) on 2 May 2002, the then Minister for Agriculture, Fisheries and Forestry, Minister Truss, offered a new EC reform package to the Council including a new streamlined application and assessment process, the ability to adjust EC boundaries to reflect changes in the EC event's coverage, and EC business support in the form of cash grants (Drought Review Panel 2004).

In September 2002, the Minister announced that the Australian Government would provide immediate access to drought assistance as soon as an application for EC declaration in an area was referred to the NRAC for assessment. While they await the outcome of their EC assessments these areas are called 'prima facie declared'.

Farmers in *prima facie* areas became eligible for income relief (also called 'interim assistance' - IA) for six months from the time of referral, even if NRAC later recommended against the application. If NRAC found the area to be undergoing an EC event, the income support would continue for two years from its starting date.

In 2003–04, agricultural regions continued to grapple with the impact of the 2002–2003 drought. While producers in some regions began to initiate recovery processes, others continued to be affected by drought conditions (DAFF 2008a).

In 2005, the Prime Minister announced a new Drought Package for farmers continuing to face the effects of drought (DAFF 2008a). The new package included:

- an increase in the Exceptional Circumstances Interest Rate Subsidies level from 50 per cent to 80 per cent for farm businesses in their second and subsequent years of an EC declaration
- a doubling of the off-farm assets threshold
- the introduction of a \$10 000 annual offset against the income support test to assist with the increased need for farming families to seek off-farm work
- an automatic, streamlined reassessment process for those EC declared areas nearing the end of their second year of assistance.

Changes in 2006–2008

In 2006, due to the drought persisting, the Australian Government further increased the number of EC-declared areas across Australia, extending the expiry dates for existing EC declarations and reintroducing some lapsed areas (DAFF 2008a). In October 2006, the then Prime Minister and the Minister for Agriculture, Fisheries and Forestry jointly announced a significant policy change to EC arrangements that extended income support payments and interest rate subsidies to all eligible

producers. Previously, there had been some differentiation between producers such as irrigators, dry land farmers and dairy farmers in certain EC declared areas.

In addition, in November 2006, drought relief in the form of income support and interest rate subsidies was extended to include small business operators who derived at least 70 per cent of their turnover directly from agriculture. This could include agriculture-dependent small businesses such as contract harvesters, fencing contractors, seed, feed and fertiliser suppliers, livestock transporters, shearing contractors and suppliers of farm machinery and equipment.

Overall, Australian Government expenditure on drought assistance in the five years to June 2006 was more than \$1.2 billion.

In early 2007, the Australian Government announced a number of new areas had been EC-declared, with yet others undergoing assessment.

Appendix 2 of this report shows areas subject to EC and IA boundaries as of July 2008.

The current National Review of Drought Policy (March 2008 to present)

At a special Ministerial Forum held by the Primary Industries Ministerial Council (PIMC) in Cairns on 28–29 February 2008, Ministers agreed that current approaches to drought and EC were no longer the most appropriate in the context of a changing climate (PIMC 2008). The Ministers also agreed that drought policy must be improved to create an environment of self-reliance and preparedness, and encourage the adoption of appropriate climate change management practices.

The Ministers noted that 69 per cent of Australia was still declared to be in EC, and agreed to meet again in April to discuss a range of initiatives to be conducted through the PIMC work agenda over the following eighteen months, including:

- relevant social dimensions and policy responses to drought and exceptional circumstances
- the provision of accessible social welfare support, including eligibility criteria
- the effectiveness of business support payments
- the effectiveness of financial risk management strategies, including Farm Management Deposits
- the effectiveness of preparedness policies
- cost–benefit analysis of state and federal drought assistance.

The meeting also agreed that the framework for improving drought policy must include a strategy for managing any transition to new arrangements, and that rules for those producers currently receiving assistance would not be changed (PIMC 2008).

In June 2008, the Minister for Agriculture, Fisheries and Forestry, The Hon. Tony Burke MP, announced that there would be a comprehensive national review of drought policy (Burke 2008b). The review would involve three separate assessments designed to support development of policies to help better prepare farmers and rural communities for a changing climate, including:

1. an *economic assessment* of drought support measures by the Productivity Commission
2. an assessment by an expert panel of the *social impacts* of drought on farm families and rural communities
3. a *climatic assessment* by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau of Meteorology of the likely future climate patterns and the current Exceptional Circumstances standard of a one in 20– to a one in 25–year event.

The joint report on the climatic assessment of EC by CSIRO and the Bureau of Meteorology was completed in July 2008. The Expert Social Panel is due to report on its findings on 30 September 2008. The findings of these reports will be considered in the final report to be produced by the Productivity Commission.

Table 1 briefly summarises the history of drought policy in Australia since 1989.

Table 1: History of Australian drought policy from 1989

April 1989	Commonwealth Minister for Finance, The Hon. Peter Walsh MP, announces drought no longer to be covered by the Natural Disaster Relief Arrangements (NDRA) (Botterill 2003a)
May 1989	Commonwealth Minister for Primary Industries and Energy, The Hon. John Kerin MP, appoints an independent Drought Policy Review Task Force (Botterill 2003a)
August 1991	Australian Agricultural Council (ACC) sets up a working group to develop a National Drought Policy (NDP) (Botterill 2003a)
November 1991	Senate Standing Committee on Rural and Regional Affairs (SSCRRA) (1992) asked to report on findings of the Drought Policy Review Task Force
February 1992	ACC agrees on principles of the NDP and that the Rural Adjustment Scheme will be the principal source of Commonwealth drought assistance (Drought Review Panel 2004) ACC recognition of drought as a natural feature of the climate (Botterill 2003a)
1992	SSCRRA (1992) agrees with findings of Drought Policy Review Task Force and considers there are limits to the self-reliance ability of farmers to cope with severe drought
July 1992	Agricultural Council of Australia and New Zealand (formerly ACC) (1992) reaches agreement on National Drought Policy (NDP). Funding for NDP to be administered through the Rural Adjustment Scheme
September 1994	Prime Minister Keating announces introduction of the Drought Relief payment (Drought Review Panel 2004)
October 1994	Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ) agrees to core criteria for drought exceptional circumstances (White and O'Meagher 1995)
December 1994	Announcement of \$112 million package of long term measures designed to assist farmers with drought preparation (Botterill 2000)
1995	ARMCANZ initiates a review of the NDP
September 1996	Minister for Primary Industries and Energy, The Hon. John Anderson MP, announces review of the 1992 Rural Adjustment Scheme (RAS 92) (Botterill 2000)
September 1997	Announcement of the <i>Agriculture – Advancing Australia</i> (AAA) to replace RAS 92. New package designed to boost the competitiveness, sustainability and profitability of the farming and the rural sector (Truss 2000)
March 1999	ARMCANZ agrees to new criteria for EC (DAFF 2008a)
February 2000	Minister for Agriculture, Fisheries and Forestry, The Hon. Warren Truss MP, initiates a review of EC [conducted by the National Rural Advisory Council (NRAC) in conjunction with the Standing Committee on Agriculture and Resource Management (SCARM)]
May 2002	Minister Truss offers new EC reform package to the Primary Industries Ministerial Council (the successor to ARMCANZ) including new, streamlined application and assessment process, the ability to adjust EC boundaries to reflect changes in the EC event's coverage, and EC business support in the form of cash grants (Drought Review Panel 2004)
April 2004	Rural industries and governments agreed to work together to reform Australia's national drought policy at a National Drought Roundtable held in Canberra
June 2008	Details of National Review of Drought Policy announced by the Minister for Agriculture, Fisheries and Forestry, The Hon. Tony Burke MP (Burke 2008b)

Concepts and frameworks

Current literature on drought policy and social impacts of drought in rural Australia applies a range of ideas and frameworks in order to better understand the policy approaches adopted by governments and their outcomes, and how drought affects individuals, families and communities. This section briefly summarises some relevant concepts and frameworks as background to discussion of the themes identified by the Panel.

Policy approaches and critiques

The literature on the public policy-making process often frames this process as being one of managing or ‘balancing’ conflicting objectives and values held by different interest groups or stakeholders. Lindblom (1959) describes this process as the ‘science of muddling through’, pointing out that social scientists, politicians and public administrators do not know enough about the social world to accurately predict the outcomes of their interventions and, therefore, it is wise for them to proceed towards a particular policy objective through successive incremental changes. This is an *adaptive management* process in which lessons learnt from making previous changes are incorporated progressively into future decisions.

The policy process is complicated by the fact that not only do policy makers have to attempt to juggle or ‘trade-off’ the competing interests and values held by different community stakeholders about particular policy objectives (like mitigating the impacts of drought, for example), but also they must often simultaneously pursue potentially conflicting policy objectives held by different agencies or institutions. Policy makers may manage these kinds of conflicts by using strategies like:

- cycling—policy makers focus on each value sequentially, emphasising one value until the consequences for other values become too severe to be acceptable. In this kind of strategy, values are segregated over time
- firewalls—policy makers establish and maintain multiple institutions committed to championing different values, and keep these values segregated institutionally
- casuistry—general decisions about value conflicts are avoided and judgements are made on a case-by-case basis, relying on analogies between cases.

(Thacher and Rein 2004)

Stewart (2006) adds a further three policy strategies:

- hybridisation—values are not necessarily separated or reconciled, and two or more policies co-exist with different value bases. This often occurs when a new government inherits the policy choices made by its predecessors and then adds new policy ‘layers’ of its own
- incrementalism—this is closely allied to Lindblom’s ‘muddling through’ strategy and represents stepped change that may signal policy makers’ long-term intentions but avoids radical or sudden policy shifts
- bias—this strategy refers to a process by which alternative policy approaches are excluded by particular paradigms, language, or ‘rules of the game’ being adopted that render others invalid.

Botterill (2000, 2003b, 2004) has examined the broad issues of agricultural policy making, as well as the more specific aspect of Australian drought policy and its results. A range of aspects of drought, including policy dimensions, are also considered by chapter authors in her co-edited book *Beyond drought: people, policy and perspectives* (Botterill and Fisher 2003).

In a 2001 paper discussing the Commonwealth Government’s Re-establishment Grant, designed as a structural adjustment measure to encourage marginal farmers to leave farming, Botterill (2001)

points out that this grant program has had limited uptake and limited success in achieving its objectives. She attributes this to policy makers holding erroneous assumptions about farmers' behaviour and failing to take into account a sufficiently broad range of values when formulating policy. In a wider review of policy approaches to farm exit, Botterill (2000) draws similar conclusions about the success of these exit measures overall, and provides two main recommendations:

- there is a need for 'watchdogs' to look out for values that have been neglected during policy development—these watchdogs can be either within or outside government
- policy makers need to be aware both of the values of the group to which policy is directed (in this case farmers), and the values they themselves bring to the policy process.

Botterill suggests that, in their responses to exit and re-establishment grants, many Australian farmers appear to be strongly influenced by agrarian values which attribute intrinsic value to farming as a way of life that is fundamentally wholesome, morally upright and superior to urban living. However, policy makers may be operating on the basis of an economic model which assumes that if farmers and their families are not making an adequate living from farming, their rational, 'businesslike' course of action is to pursue alternative livelihoods. In many western nations, including Australia, policy makers may be attempting to support and encourage a trend away from the 'agrarian' model of farming as a way of life, to a 'farm business' model in which farming is merely a way of making a living (Botterill 2004). Not all farmers are currently willing to accept the business model of farming. Some studies have suggested that when marginal farmers eventually decide to leave farming, despite their attachment to their properties and to farming as a way of life, many do in fact find that their situation improves. Webb *et al.* (2002), in their study of New South Wales' Western Division grazing families, found that approximately 90 per cent of their respondents who had left their properties felt that their situation had improved as a result of their decision to leave.

Related to the positions people take on farming as a way of life versus seeing it as a business, are attitudes towards government intervention in farming (see Figure 1). Those people who support an agrarian model of farming are more likely to also advocate a welfare approach that focuses on the needs of the farm family and offers income support when needed. *Vice versa*, advocates of the farm business model are more likely to support a free market approach that relies principally on the market to determine outcomes and argues for minimal government intervention. The free market model may be consistent to some degree with policy measures designed to encourage 'less efficient' or marginal farmers to exit farming, and re-allocation of resources to 'more efficient' farmers (Botterill 2004), even though these measures are clearly a form of government intervention in markets. The major policy positions are shown in Figure 1.

When Australian drought policy as applied to farming and to agriculture is specifically considered, a similar mix of competing and conflicting values can be seen to be operating. Governments of varied political persuasions have supported the ideas both of rural adjustment and of providing support to farmers facing 'exceptional circumstances'. Botterill (2003b) considers that, despite a fairly consistent government neo-liberal economic orientation over recent decades, political pressures and emotive media coverage during drought events often leads to more hard-line economic positions being softened and a resort to agrarian language and imagery. In drought situations, climatic, hydrological and biophysical evidence can be overshadowed by the political persuasiveness and immediacy of personal stories of hardship and suffering (Wahlquist 2003).

In summarising contributions to the book *Beyond drought: people, policy and perspectives* Botterill (2003) concludes that the authors concur on three major points:

- the Australian climate is inherently uncertain and drought is not an aberration or exception
- drought is complex in its social, economic and environmental impacts
- there is no single 'correct' course of action in terms of effective drought policy.

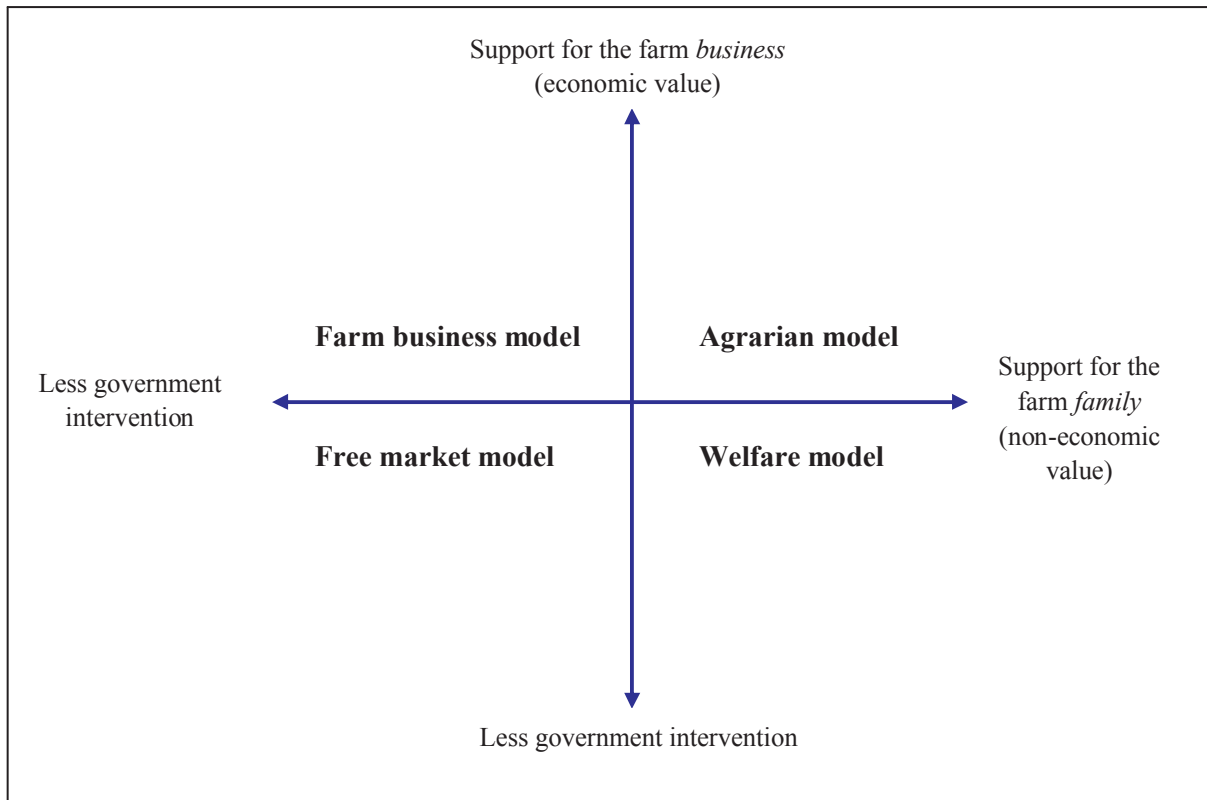


Figure 1: Major positions on Australian drought policy (Botterill 2004)

Government policy can be evaluated against a range of outcome measures, not only in terms of how well it has been received or adopted by its intended audience. One area of concern about drought assistance has been in relation to its environmental outcomes. Some farm assistance from government may produce adverse environmental consequences by allowing farmers to continue to farm marginal land, and possibly contribute to environmental degradation and loss of landscape amenity, when otherwise they might be forced to exit farming for financial reasons. Watson (2000) has suggested that concerns about environmental issues affecting agricultural land may be the ones that strike the most receptive chord with the non-farming community, reflecting the rise of environmentalism as a political force in Australia.

Some authors identify a change in government approaches to drought policy in Australia, dating from around 1990 when the emphasis shifted from viewing drought as a ‘natural disaster’ to one of seeing it as a ‘manageable risk’ (Higgins 2001, Higgins and Lockie 2001). From this point on, farmers were cast in the role of risk managers who could and should plan for recurring drought events rather than as unfortunate victims of unforeseeable catastrophes (Steffen *et al.* 2006).

Social science concepts and frameworks

Social Impact Assessment (SIA)

Social science literature examining the social impacts of drought uses a variety of organising frameworks and concepts. Perhaps the most obvious link is to Social Impact Assessment (SIA) and general classifications of impacts used in SIA literature. In this light, drought is seen as an ‘intervention’ that is in some ways analogous to the planned developments or projects that are more often the subject of formal SIA. Drought’s social impacts can then be considered using the same kinds of classifications that SIA practitioners use. Vanclay (2002) argues that the following higher-level classification of social impacts is appropriate for SIA:

- people’s way of life—how they live, work, play, and interact
- their culture—their shared beliefs, customs, values and language
- their community—its cohesion, stability, character, services and facilities
- their political systems—the extent to which they are able to participate in decisions that affect their lives
- their environment—including the quality of their air, water and food; the hazards and risks they face; their physical safety; their access to and control over resources
- their health and wellbeing—which covers physical, mental and social wellbeing, not only the absence of disease or infirmity
- their personal and property rights—especially where these may be under threat or particular groups are disadvantaged
- their fears and aspirations—their perceptions about their safety, fears about the future, aspirations for themselves and their children.

Classifications like these have been further developed to help provide a better conceptual basis for both social and environmental impact assessment (EIA), and to help integrate these different kinds of assessments (Slootweg *et al.* 2001). The major points made are that in an important sense, all impacts are human impacts, but the pathways through which these impacts arise can be complex and include both social and biophysical processes and settings. Biophysical impacts are filtered or mediated through ecosystem and landscape processes, while social impacts are mediated through social and cultural processes.

Adaptation

The idea of ‘adaptation’ or ‘adaptive capacity’ is often invoked in discussing the effects of social or biophysical changes, and may inspire researchers to develop indicators and measures of how severe impacts are likely to be on particular groups or individuals (PMSEIC Independent Working Group 2007). Adaptation is also a key element of the ‘muddling through’ approach to public policy described by Lindblom (1959) and is further refined in work that applies the adaptive management cycle to change processes (Feldman 2008).

An example of this kind of approach is an investigation of how Australian Bureau of Statistics’ (ABS) data could be used to map the adaptive capacity of Australian land managers for natural resource management purposes (Nelson *et al.* 2007). The authors use a rural livelihoods framework based on five types of ‘capital’—human, social, natural, physical and financial—that they consider contribute to adaptive capacity (Box 1). They then identify available socio-economic statistics that could be used to develop indicators of the five kinds of capital. The resulting measures could then potentially be aggregated into a single ‘adaptive capacity index’. This could have predictive value in anticipating the social impacts of drought and identifying those land managers who are most likely to be able to cope.

Ash and his co-authors (2008) also frame the challenges of drought and climate change as being ones of adaptation. They suggest that changes to agricultural practices can be incremental or transformative, but that climate change impacts are likely to be so severe that they will require transformations across a number of different social and geographical scales, involving farmers, researchers, industry and government.

A companion booklet to the 2008 *Country Matters* atlas (BRS 2008d) uses the term ‘social fabric’ as analogous to the idea of social capital, and considers that social fabric is essential to building community adaptive capacity. It suggests that the following factors are indicators of social fabric (and hence of adaptive capacity):

- community participation

- population
- access to information technology
- participation in the labour market
- distance and access to services
- recent arrivals to Australia.

Box 1: The five ‘capitals’

Human capital:	the skills, health and education of individuals that contribute to productivity of labour and ability to manage resources
Social capital:	reciprocal claims on other people resulting from social relationships, social bonds facilitating cooperative action, links and networks through which ideas and resources can be accessed
Natural capital:	the productivity of land and other resources that sustain livelihoods, and actions taken to sustain productivity
Physical capital:	capital items produced from other kinds of capital through economic activity – can include infrastructure, equipment and genetic improvements in crops and livestock
Financial capital:	the amount, variation and diversity of income sources as well as other financial resources (credit and savings), that contribute to financial wealth

Source: Nelson *et al.* (2007)

Vulnerability

The ‘flip-side’ of adaptive capacity is ‘vulnerability’. Those people who have least capacity to adapt are likely to be most vulnerable to change. The idea of vulnerability has been applied to structural adjustment issues affecting Australian broad-acre agriculture as a result of factors like climate change, declining terms of trade, and technological innovations related to productivity (Nelson *et al.* 2005). To measure vulnerability, the authors construct an index based on the five capitals mentioned above, using data from ABARE farm surveys. After applying this index nationwide, they conclude that many Australian farm households dependent on broad-acre agriculture lack elements of the five capitals that are necessary for them to readily adapt to structural adjustment pressures. This applies particularly to inland areas of South Australia, New South Wales and Queensland that rely on the sheep industry for their livelihoods.

Resilience and complex adaptive systems

Another idea currently being used in discussing issues like drought and climate change, and people’s ability to deal with them, is the concept of ‘resilience’, particularly as applied to ‘linked socio-ecological systems’ (Walker and Salt 2006). The champions of resilience argue that it has three defining characteristics:

- the amount of change the system can undergo and still retain the same controls on function and structure
- the degree to which the system is capable of self-organising
- the ability of the system to build and increase the capacity to learn and adapt.

Defined in this way, resilience is mainly a property of systems not individuals, and enhancing resilience in natural resource management contexts relies on encouraging diversity in aspects like

stakeholder involvement, using different kinds of knowledge, and encouraging adaptive management processes in which learning and novelty are emphasised. Resilience then becomes an idea strongly linked to broader ideas of complex adaptive systems and collaborative learning (Stafford Smith 2003).

Stehlik (2003) modifies a previous ‘social construction of drought’ model (Stehlik *et al.* 1999) to suggest a schematic model of resilience to drought that incorporates factors related to professional and family support, the nature of people’s networks, the policy that affects them, the way the media depicts drought, and the way drought is discussed by the various players. All these factors may affect social cohesion, resilience and ability to survive drought, as well as shaping people’s lived experience of drought.

Bowes *et al.* (Bowes and Hayes 2004), in an edited book on children, families and communities, discuss how the resilience concept can be applied to the risks that individuals and groups face, and how resilience relates to broader ideas of protective factors. They consider it is useful to ask how a balance can be achieved in matching the challenges people experience in life with the resources that enable them to deal with these challenges—but in a way that has benefits rather than negative consequences. This seems a very relevant framing for questions about drought policy.

A recent report focusing on responses to changes in access to water adopts a community-based ‘social resilience’ approach (Maguire and Cartwright 2008). The authors discuss the relationships between the terms ‘resilience’, ‘vulnerability’ and ‘adaptive capacity’; and the ways in which a resilience approach can inform social assessment. They conclude that a resilience approach can offer advantages over other approaches in that it tends to focus on a community’s resources and adaptive capacities rather than on its vulnerabilities or weaknesses, and it encourages recognition of the complex relations between the various concepts being applied to assess responses to change.

Collaborative learning

Collaborative learning approaches focus on the processes and conditions that make it possible for groups of people to detect changes resulting from their actions and correctly attribute the causes, and then make appropriate adjustments to their behaviour, not only as individuals but as collectives. Learning then has a systemic aspect and collective learning processes at different scales can become part of complex adaptive systems. Stafford Smith (2003) points out that drought needs to be addressed not only at local and regional scales, but also at state and national scales. The last two scales apply particularly when policy adjustments are needed – the policy system must learn from changes in the socio-ecological system as well as farmers and regional communities. Successful collaborative learning is critically dependent on the various players receiving reliable, ongoing feedback about the results of their actions; hence, scientific evidence of the right kind and at the right scale plays a vital role in making the system adaptive.

Sense of community and sense of place

Pretty *et al.* (2006) examine ‘psychological sense of community’ and its relevance to wellbeing and everyday life. While they do not focus on rural Australia or on drought *per se*, they conclude that sense of community can provide an organising principle for research and practice in areas like community development, social capital, service provision, self-help groups, and mental health interventions. They consider that sense of community can be assessed by combining measures of:

- *membership*—feelings of emotional safety with a sense of belonging and identification
- *influence*—the ability both to exert influence on the community and also to have the community exert influence on oneself
- *integration and fulfilment of needs*—the feeling that physical and psychological needs are met and reinforce behaviour acceptable to the community
- *shared emotional connection*—positive feelings related to community membership.

Findings by themes

This chapter focuses on discussing the literature under the themes identified by the Expert Social Panel. These themes are:

- employment
- education and training
- people's health – for the purposes of this review this theme has been divided into two sections, one on physical health and one on mental health,
- family life
- community development and sustainability.

Each thematic section also endeavours to identify any major gaps in the literature relating to the theme.

The next section presents a brief overview of general population trends for Australia as background to rural Australia, before turning to the discussion of each theme.

General demographic information for rural Australia

The *2008 Social Atlas of Rural and Regional Australia* (the Atlas) (BRS 2008e) draws on information from the Australian Bureau of Statistics (ABS) 2006 Census of Population and Housing Census, comparing trends with the 1996 and 2001 Census data across a range of social issues that are of relevance to this report. Although the focus of the atlas is generally upon the broader social issues and trends occurring in rural and regional Australia, and does not specifically focus upon the social impacts of drought, it provides background information that helps to contextualise these impacts.

The atlas provides valuable information on rural and regional Australia in relation to a number of topics including:

- population trends
- labour force
- education and training
- families and households.

Several companion booklets, including one with a specific focus upon the impact of drought on rural communities, further support the social analysis of the impacts of drought on the agricultural sector and rural communities (BRS 2008a). The other booklets cover issues of employment, education and social fabric in relation to rural and regional Australia (BRS 2008b, 2008c, 2008d).

Defining the broad demographic regions: Major urban centres, regional and rural Australia

There are many different demographic classification systems used to describe major cities, regional, rural and remote Australia (AIHW 2004, BRS 2008e). This literature review generally adopts the classifications used in the *2008 Social Atlas*, as described in Table 2.

Table 2: Classification system used to describe Australian population centres

Terminology	Population
Major urban centre	100 000 people and over (including capital cities)
Regional centre	1000 to 100 000 people
Small town	200 to 1000 people
Rural area	Less than 200 people

Source: 2008 Social Atlas (BRS 2008e)

The Australian population

Based on 2006 Census data, the total population of Australia was 19 855 288 persons. The population was distributed across Australia in the following ways (Figure 2) (BRS 2008e):

- over half (55 per cent) of the Australian population lived in major urban centres and cities with populations greater than one million people
- seven per cent of the population lived in other large urban centres with populations between 25 000 and one million and a further 5 per cent lived in urban centres with populations between 100 000 and 250 000
- just under quarter of the population lived in regional centres of up to 100 000 (22 per cent), while two per cent lived in small towns and nine per cent lived in rural areas.

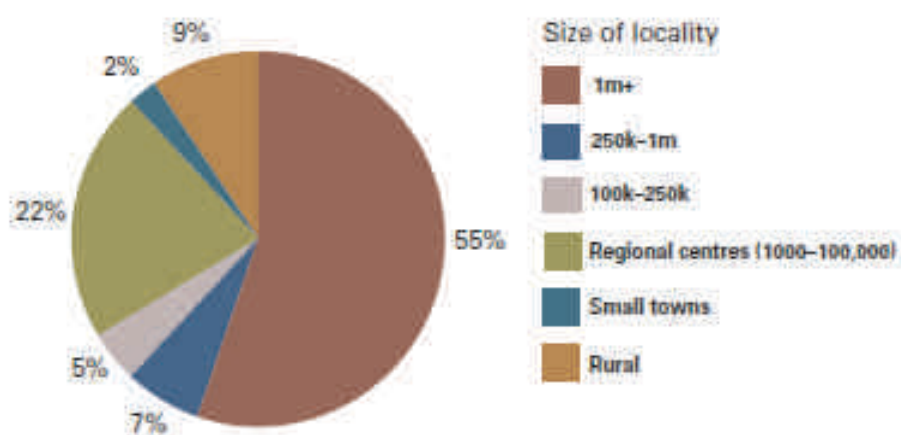


Figure 2: Composition of population in urban and rural Australia, 2006

Source: 2008 Social Atlas (BRS 2008e)

The population increased by 6.8 per cent in the five years to 2006 (BRS 2008e). The rate of increase was unevenly distributed around Australia, with major urban areas and regional centres experiencing the strongest increases between 2001 and 2006 (8.2 per cent and 5.7 per cent, respectively) (Figure 3). The populations of small towns also increased (3.1 per cent); however rural areas experienced a population decrease of 0.9 per cent.

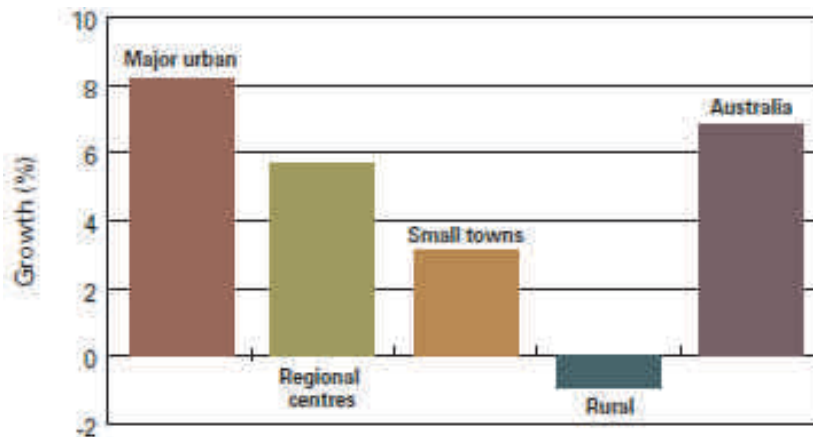


Figure 3: Average annual population growth, 2001-2006

Source: 2008 Social Atlas (BRS 2008e)

The Australian population is increasing in average age, with the number of people in older age groups increasing much faster than the number in younger age groups (BRS 2008e). This trend was expressed most strongly in small towns and rural areas because young people and young families in particular, were moving to larger urban areas and cities for lifestyle reasons, including better access to education and employment opportunities.

Employment

Over the decade from 1996 to 2006, total employment in Australia increased by an average of 2.3 per cent each year (BRS 2008c). Although small towns experienced good employment *growth* (increasing by 2.5 per cent per year), this was from a much *smaller employment base*, with unemployment rates in small towns generally being the highest in Australia. The recent growth in employment in small towns may be partly attributed to the departure of younger people, leaving the remaining population to fill the gaps. Rates of employment growth were much slower in rural areas (0.3 per cent per year) and regional centres (1.7 per cent per year) than in the rest of Australia (BRS 2008c).

Labour force participation

In 2006 the average level of labour force participation in rural areas was very high at 67.5 per cent, which was higher than the Australian average of 64.5 per cent (BRS 2008c). This means that there were fewer opportunities in rural areas for the rate to increase, which was accentuated by an ageing population and because fewer people were choosing to move to these areas to live. However, the labour market and employment conditions were highly variable across country areas. For example, in 2006 the labour force participation level of small towns was 58.4 per cent, which was lower than that of regional centres and major urban centres (BRS 2008c).

Remote areas demonstrated an even greater variability, with some of the highest and lowest levels of participation across the nation occurring in some remote areas (BRS 2008c).

Explaining labour force participation patterns in rural areas

Although there is a range of factors influencing the patterns of labour force participation in country areas, the *Social Atlas 2008* points to two central demographic factors:

- overall population decline in rural areas

- ageing of the population, with a corresponding increase in the age of the working population (BRS 2008e).

Young people (15–24 years) have been moving away from rural areas for several decades (BRS 2008a). Across rural areas in Australia between 2001 and 2006 the number of young people decreased by 2.5 per cent, but increased by 4.2 per cent in small towns and by 5.5 per cent in regional centres. On the other hand, the labour force participation level in the mature-age population (those aged 45–64 years) of rural areas is ten per cent higher than the Australian average (61.1 per cent in rural areas, compared with 50.7 per cent nationally) (BRS 2008c). Further, most mature-age people in rural areas continue to work well into their 60s. Together, these factors indicate that the working population of rural areas is ageing.

A corollary of the high participation rates is a low unemployment rate. Due to the improvements in the labour market across Australia, in 2006 the national unemployment rate was 5.2 per cent, down from 7.3 per cent in 2001 and 9.2 per cent in 1996 (BRS 2008c). Unemployment rates were lower in rural areas (4.1 per cent) than in small towns and regional centres (6.2 per cent and 6.1 per cent, respectively). This means that many industries are now under-supplied with both unskilled and skilled workers.

It is estimated that over the next 40 years the proportion of Australia's population over the age of 65 will double to around 25 per cent (DEEWR 2008e). Over the same period, the proportion of the population participating in the workforce is expected to decline from 65 per cent to an estimated 57 per cent in 2046. With an ageing population, the Government's policy priority is to increase the proportion of working age people in the workforce. Through an initiative of the 2008 Federal Budget, 'Workforce participation' (Outcome 8 of DEEWR's budget portfolio), the Government has made a commitment to increasing workforce participation by bringing into the labour force people who are not working but who have the capacity to work, and maximising the participation of those who are already working (DEEWR 2008e). The Government's strategy to increase workforce participation includes investment in training and skills for both job seekers and those who are already working, and making employment services more responsive to individual needs (DEEWR 2008e).

Diversity of industries in rural Australia

Diversification of industries increases the social and employment resilience of communities, providing a buffer against the impacts of shocks to the community associated with any particular industry (BRS 2008c).

Figure 4 shows employment in each industry in small towns and rural areas across Australia in 2006, indicating much lower levels of employment in small towns and the dominance of agriculture in rural areas. It also highlights that any shocks experienced by the agricultural industry are likely to have a significant impact on rural communities.

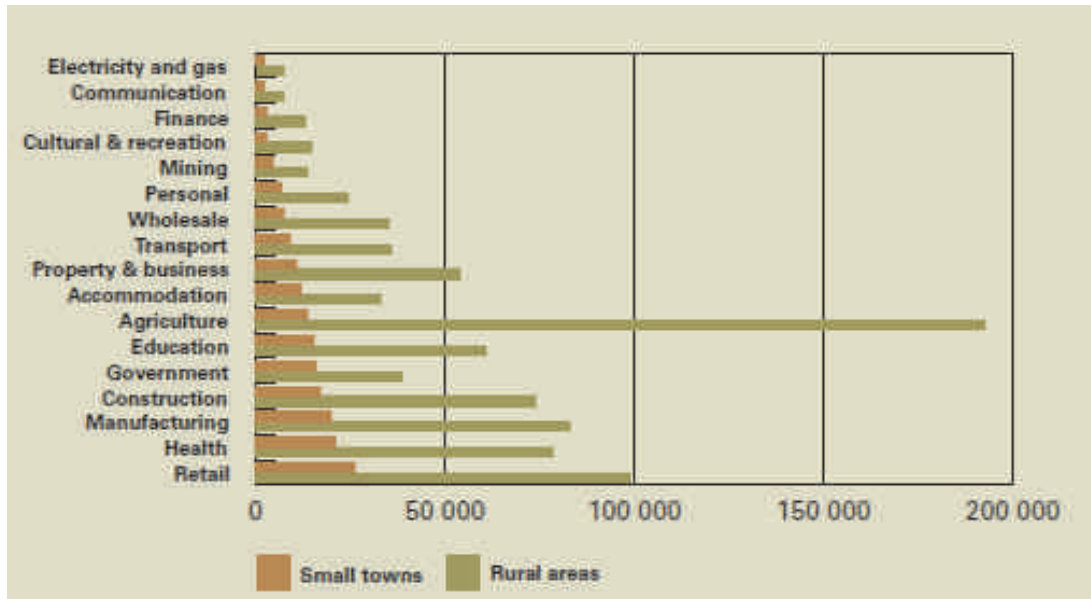


Figure 4: Number of people employed in industries, small towns and rural areas, 2006

Source: *2008 Social Atlas of Rural and Regional Australia – Employment (BRS 2008c)*

The economies of small rural towns are highly dependent on farm expenditure (ABARE 2000). Farm expenditure can represent more than a third of economic activity in small towns, highlighting the importance of farming to employment in these towns.

Employment in the agricultural industry

In 2006, the agricultural industry made up 3.1 per cent of the total employment in Australia, down from 3.9 per cent in 2001 and 4.4 per cent in 1996 (BRS 2008c). This represents a decrease in the actual number of people employed in agriculture from 321 400 people in 2001 to 284 300 people in 2006. The pattern of decrease was consistent across the country with an average decrease of 2.3 per cent. As indicated in Figure 4, employment in rural areas in 2006 was dominated by the agricultural industry. Most of the employment in the industry was located in rural areas (67.7 per cent), with 18.4 per cent in regional centres, and only 4.9 per cent in small towns (see Figure 5). In the last Census, 176 900 people who were over 15 reported that they were farmers or farm managers (BRS 2008c).

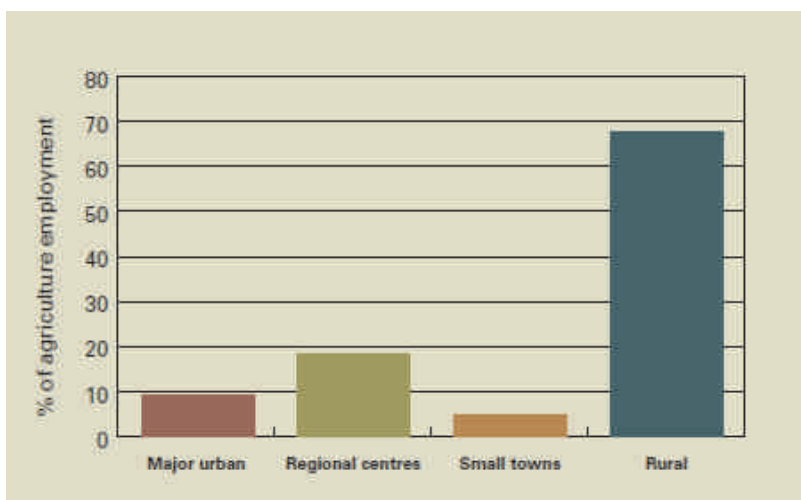


Figure 5: Employment in agriculture in urban and rural regions, 2006

Source: 2008 Social Atlas of Rural and Regional Australia - Employment (BRS 2008c)

Factors influencing employment in the agricultural industry

In addition to the demographic shifts described above, the agricultural industry has been buffeted by a number of forces over the decade from 1996 to 2006, with the proportion of people employed in agriculture in rural areas decreasing substantially over the period from 26.4 per cent to 21.3 per cent (BRS 2008c). These forces include trade reform, world market prices, the impacts of drought and changes in availability of and access to water. These forces interact in complex ways, significantly altering the level and nature of employment in the agricultural industry, bringing significant changes to the day-to-day lives of people in small towns and rural communities (BRS 2008c).

In addition to these forces, there has been a longer-term trend in recent decades for farms to become larger, more mechanised, and more reliant upon specialised contractors instead of local labour (BRS 2008c). This has led to a decrease in the need for workers from small country towns and neighbouring regions to supply the agricultural industry. This downturn in opportunities for employment in the agricultural industry has exacerbated unemployment in small towns and communities that are already characterised by a lack of diversity in the type of work available.

The impact of drought on employment in the agricultural industry

Few reports deal with the impact of the drought on employment, representing a significant gap in the research on the social impacts of drought on rural communities. The lack of research targeting the impact of the drought on employment in the agricultural industry, and flow-on effects to the local community, is probably due to the difficulty in determining the degree to which drought, amongst other risk factors, has contributed to the general decline in employment. Despite this difficulty, a number of reports have identified drought as a factor in employment decline (Alston and Kent 2004, Australian Government 2008b, BRS 2008a, NFF 2008a). For example, in the 2008 Social Atlas booklet on *The impacts of drought* on rural and regional communities, it was considered that drought has contributed to the decrease in the number of those employed in agriculture in the Queensland Central Coast and in the Riverina, which have decreased by 20.6 per cent and 8.8 per cent respectively over the five-year period to 2006 (BRS 2008a).

Overview of the impact of drought on employment in the agricultural sector

A report by the Australian Government (2008b) *Employment outlook for Agriculture, Forestry and Fishing, July 2008*, notes that ‘the continuing drought in most regions of Australia has resulted in substantially lower employment in the industry’ (p.2). In particular, the report cites the employment fall of 2003 as the largest annual fall in the last 15 years, from which there has been no significant recovery. Horticulture and Fruit Growing experienced the largest decline in employment in the five years to February 2008 (down by 20 700), followed by Grain, Sheep and Beef Cattle Farming (down by 18 000). For some farmers, solutions to the downturn attributed to the drought have been to sell stock and leave the industry, or to not replace staff that leave. The report also predicts that employment prospects will improve over the next five years, with the strongest growth projected for Services to Agriculture (1.8 per cent per annum) and in Dairy Cattle Farming and Grain, Sheep and Beef Cattle Farming (both up by 1.5 per cent per annum). With such growth, the National Farmers’ Federation (NFF) is predicting an unprecedented skills and labour shortage (NFF 2008b).

Labour and skills shortage in the agricultural sector

The NFF report, *2008 Labour Shortage Action Plan*, released in March, also noted the widespread decline in employment in agriculture between the onset of the drought in 2002 and February 2008, estimating a loss of 80 000 to 100 000 jobs over the period (NFF 2008a). According to the report, job losses have continued, with 14 000 jobs lost between February 2007 and February 2008. The report describes this fall as being the sharpest in the sector since the ‘one in one hundred year’ drought of 2002–03. Many of those affected by job losses were said to have permanently left the industry with some leaving the community altogether. The NFF is concerned that as the drought subsides, if there is a linear return to the production levels experienced prior to the 2002-03 drought, that an additional 20 000 to 24 000 skilled workers will be needed per year over the next five years. This would equate with an increase of 33 per cent on current levels of employment.

The NFF highlights the unprecedented imminent career and employment opportunities that the coalescing of these factors will deliver, envisaging that there will be a ‘huge number of occupations, on lucrative terms and in flexible and enjoyable working conditions’ (NFF 2008a). The report makes strong recommendations for the early promotion and development of the range of skills required by the agricultural sector in anticipation of increasing demands for labour. However, the NFF also notes that with the labour force participation rate in rural areas already at very high levels, increasing employment in the agricultural sector will require an influx of workers from the broader Australian population.

Flow-on effects of the decline in employment in agriculture

A report on the social impacts of drought by Alston and Kent (2004) indicates that the impacts of declining employment in the agricultural sector flow-on to associated businesses and services in small towns and communities. According to one interviewee, the Mayor of Bourke, contracting agricultural production in the region had a significant impact on seasonal employment, leading to a loss of around 400–500 jobs. Flow-on effects on the local community were described as diffuse and substantial: fewer people needed short term accommodation, there was less spending in the community generally, and fewer people used other services. One business person reported a 60 per cent downturn in the number of visitors to the community, due to lack of seasonal work:

It’s impacting more on the local economy than it is on any one business. It’s the cotton growers and horticulturalists that are really suffering and the massive numbers of people that they employ. Whether they are full-time, part-time or seasonal, numbers have been slashed. So they are not earning the money and spending the money, so the town’s quiet, and the local economy is suffering. (Alston and Kent 2004, 59)

In general, the downturn in business activity attributed to the drought was said to have resulted in a number of changes to staffing levels. These changes included staff redundancies, moving staff from

full-time to casual, as well as eliminating casual work and modifying staff hours. Declining employment in rural areas was also said to be a factor in loss of a sense of local community, with valued friends leaving the area to find work elsewhere.

Those interviewed were concerned not only about the welfare of staff, but also about the availability of trained staff once the drought broke (Alston and Kent 2004). The skills deficit arising from these changes in employment was a major issue for employers in the area. This concern about the ability to replace skilled staff is not limited to those in the agricultural sector. A report by the Bureau of Transport and Regional Economics (BTRE 2006) reviews the consequences for rural communities of skills shortages in a range of other sectors of rural and regional Australia.

Gaps in research on employment

The BTRE (2006) report notes that discussions about the regional impact of skills shortages are made more difficult by the fact that available data on the location and extent of skill shortages is 'patchy at best' (p.2). In particular, there are few detailed reports on the geographic distribution of skill shortages. Although the impact of skill shortages on the economy is not well-defined in the research, it is agreed that skills shortages will have consequences for productivity. What is even less clear, are the broader implications of the impact of general skills shortages (particularly in health, education, transport and communication services) on the resilience and wellbeing of rural communities.

In relation to drought's impacts on employment, a number of reports have provided both statistical and verbal evidence of drought's impacts on employment opportunities in country towns (Alston and Kent 2004, Australian Government 2008b, BRS 2008a, NFF 2008a). However, little attention has been paid to how these drought impacts flow on to the local community.

Education and training

Education and training are essential to the social and economic wellbeing, resilience and adaptive capacities of communities (ANTA 2003, 2004). Increasing participation in educational and training is seen to have three distinct benefits (ANTA 2003, BRS 2008e, DEEWR 2008d):

1. *for people*, it maintains and fosters increased workforce opportunities which is a key factor in social inclusion and quality of life (DEEWR 2008d). It is particularly important in addressing subgroups who are disadvantaged because of gender, socioeconomic background, age, disability, race, religion or geographic isolation (BRS 2008b, DEEWR 2008d, DEST 2004)
2. *for industry*, it ensures that there is an ongoing supply of adequately skilled and productive labour, making businesses more competitive in a global market (ANTA 2004, BRS 2008b, BTRE 2006, DEEWR 2008d)
3. *for regions and nations*, it is a key factor in building inclusive, prosperous and sustainable communities (ANTA 2003, BRS 2008b, DEEWR 2008d, DEST 2004).

Education and training's role in addressing social exclusion and disadvantage

Levels of education and training are frequently used as indicators of human wellbeing, especially in relation to living standards, quality of life, social inclusion and social inequity or disadvantage (BRS 2008b, DEST 2004, DETYA 1999). In the literature on these issues, providing greater participation in education and training is seen as a core strategy to enhance quality of life, wellbeing and resilience of individuals and communities (BRS 2008b, DEEWR 2008d). Over the recent decade there has been increasing global interest in these issues (Australian Government 2008a, Diniz 2006, Government of Ireland 2007, Western *et al.* 2007, Wilson 2006). In May 2008, the Commonwealth Government announced the establishment of a new *Social Inclusion Unit* within the Prime Minister and Cabinet (Australian Government 2008a).

Education and training's role in productivity and prosperity

Education and training plays a pivotal role in the prosperity of a society (BRS 2008b). In a world characterised by globalisation and technological change, ongoing education and training is needed to ensure the workforce is able to meet the challenges of industry changes, to ensure international competitiveness, economic productivity and growth (ANTA 2003, DEEWR 2008d, 2008e).

Education and training are a key to a flexible and skilled workforce with the capacity to respond to industry diversification and restructuring. In particular, individuals, industries and communities will need to develop the skills required to support the transition to economies increasingly based on information technologies.

A review of higher education

The Commonwealth Government has launched a Review of Higher Education (the review) in recognition of the need for longer term, system wide reform to enable higher education to make a major contribution to economic productivity and prosperity (DEEWR 2008c). The review will examine and report on the future direction of the higher education sector, its fitness for purpose in meeting the needs of the Australian community and economy and the options for ongoing reform. A key objective of the review is to widen access to higher education and to improve student support programs so as to promote social inclusion and individual opportunity. The review is also intended to help develop a long-term vision for higher education into the next decade and beyond (DEEWR 2008c).

A snapshot of post-secondary qualification levels in Australia, 2006

In Australia, the number of people aged between 15 and 64 years who attained post-secondary qualifications increased substantially over the decade to 2006 (BRS 2008b). Over this period, just over 2.5 million more people attained a post-secondary qualification, an increase from 41.9 per cent of the population in 1996 to 52.5 per cent in 2006. Figure 6 shows that the level of post-secondary educational qualifications among people in rural areas (49 per cent) was only slightly lower than for major urban centres (54.7 per cent) (BRS 2008b). People in small towns had the lowest levels of post-secondary educational qualifications (44 per cent).

Figure 7 shows that the rate at which educational attainments improved in the decade to 2006 was much lower for people living in rural areas (1.9 per cent increase per year) than in all other areas, being less than half of the national average (4.3 per cent per year). Small towns achieved the highest educational attainment improvement rates (7.4 per cent), which was over twice that of regional centres (BRS 2008b).

Post-secondary qualification levels are unevenly distributed, with some areas characterised by much higher qualification levels than others (BRS 2008b). Reasons for high levels of post-secondary qualifications include:

- social norms reflecting a high acceptance and encouragement of adult learning and training
- the introduction of flexible learning in education and training (distance learning)
- high-quality telecommunications infrastructure for distance or internet-based education and training
- proximity to major urban centres with education facilities (universities and institutes of technology) enabling greater access to education and training programs
- continuous changes in the diversity and/or complexity of work, requiring greater technical and professional skills
- an increasing requirement by employment, workplace and safety regulations for higher qualification levels (BRS 2008b).

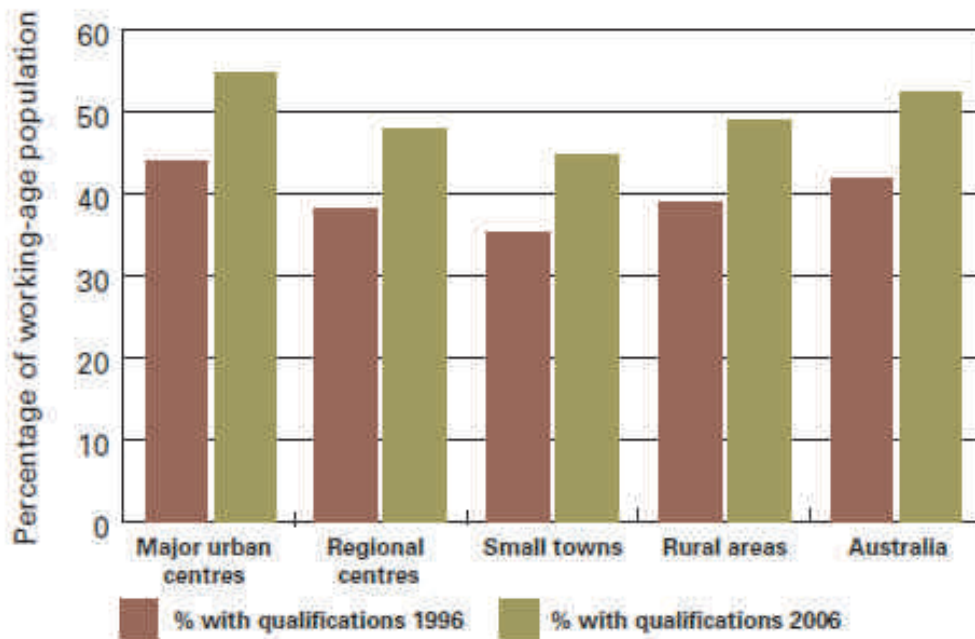


Figure 6: Proportion of working-age population with a post-secondary school qualification in urban and rural areas, 1996-2006

Source: *2008 Social Atlas -Education* (BRS 2008b)

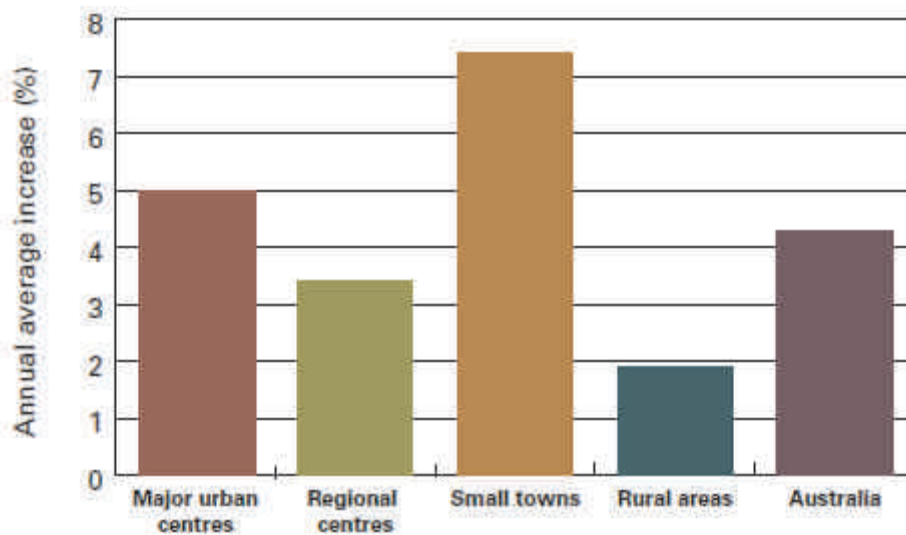


Figure 7: Annual average change in working-age population with a post-secondary school qualification, in urban and rural areas, 1996-2006

Source: *2008 Social Atlas - Education* (BRS 2008b)

Conversely, some areas had very low levels of education and training. The reasons for this reflect different opportunities particular communities have, including:

- poor access to educational facilities (including distance to an education or training facility or the lack of availability of adequate telecommunications infrastructure to enable distance learning)
- socio-economic disadvantage (a barrier to the high costs of education and training)
- the age profile of communities (for example, an older age profile of a ‘sea-change’ community may correspond with higher qualification levels, but less change per year in attaining new qualifications).

Comparing vocational qualifications with a bachelor degree

In 2006, many more people in Australia had vocational qualifications than a bachelor degree (3 784 000 versus 2 477 000, respectively) (Figure 8) (BRS 2008b). Nearly one-quarter (23.8 per cent) of the working-age population had vocational qualifications, compared with the much smaller proportion with bachelor degrees (15.6 per cent). In regional centres, small towns and rural areas, this difference was much more pronounced than in major urban centres. This has implications for the potential of people in these communities to diversify into the information economy or service industries. It also has implications for farmers, members of farming families and farmhands seeking work off-farm to supplement their income during drought, with work options possibly being constrained by the qualifications they have related to their farming operation. With employers’ increasing demands for information technology skills or vocational certification, taking on off-farm work may require further qualifications to be gained. Gaining new qualifications or training may present challenges—especially during drought—due to difficulties accessing educational or training programs (e.g. distance, access to broadband), program costs (especially for those already experiencing financial hardship), and time spent away from farm and family.

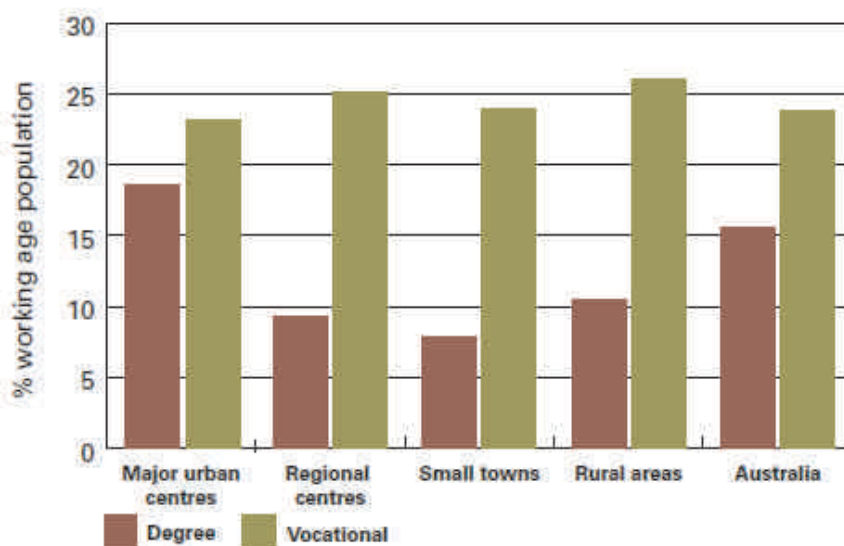


Figure 8: Proportion of working-age population with a bachelor degree or vocational qualifications, 2006

Source: 2008 Social Atlas - Education (BRS 2008b)

The farming population's qualification levels in 2006

The following figures on the farming population's qualification levels are drawn from the 2006 ABS Census of Population and Housing (using the Australian Standard Classification of Occupation 2002). For these figures, 'farming population' is defined as that portion of the population aged 15 years and over that is actively engaged in farming work, including the categories of 'farmers and farm managers', 'farm specialists' (e.g. shearers and other contractors), and farm workers (e.g. farmhands and labourers). For this analysis, 'Non-school qualification' refers to educational attainments other than those of pre-primary, primary or secondary education and that may be attained concurrently with school qualifications (ABS 2008a).

For the farming population, 23.5 per cent of workers had non-school qualifications while 42.0 per cent of the total Australian population held non-school qualifications. Of these, nearly 5 per cent of the farming population held a bachelor degree or post-graduate qualifications. This was less than a quarter of the level in the Australian population as a whole (21.9 per cent). 18.5 per cent of the farming population held either an advanced diploma, diploma or certificate, which was 40 per cent less than the total Australian population (30.0 per cent).

Because these figures are based on the total Australian farmer population, they mask important differences between 'peri-urban' farmers living near major cities, regional centres, and small towns, and those farmers in rural and remote areas. Nevertheless, they serve to highlight the relatively low levels of education and training within the farming population. This has implications for the farming population's ability to diversify into off-farm occupations as a risk management strategy during drought.

Drought's impact on education and training

There is limited research on drought's impacts on education and training (Alston and Kent 2004, 2006, Isolated Children's Parents' Association 1999, Sartore *et al.* 2008). Alston and Kent (2004) point out that most farm families in rural and remote Australia have no choice but to send their children away for high school because of their distance from town. The drop in enrolments at Bourke High School from 208 to 172 during 2003 and until early 2004 was attributed to the relocation of workers and their families who had lost their jobs as a consequence of the drought. The cost of education was cited as a significant financial pressure for farm families. This pressure led to more mothers seeking off-farm work to pay for school fees and to ensure their children could remain in quality education facilities. This had significant consequences for some farm families. Some women had to live in town during the week, leaving the men behind on the farm without the companionship and support of their wives. It was also reported that this increase in off-farm income resulted in some families becoming ineligible for EC payments. This led to some mothers foregoing the off-farm income, while others resented the compounding hardship that resulted (p.53):

It was a real kick in the teeth... No-one's out there trying to make money at the moment. They're just trying to get some money. (Farm woman)

[My income] has gone on education. Now it's going on other things as well – property expenses, general living because we don't get any of the allowances because of my income. (Farm woman)

I would be financially better off if I gave up work as far as getting drought assistance... I didn't feel they had a real understanding. They didn't appreciate our circumstances. It's just so cut and dried. It's not like that. (Farm woman)

Sartore *et al.* (2008) support this finding, reporting that parents were concerned about not being able to provide the level of financial support they had planned for their children's education. They reported that as a consequence of their parents working longer hours either on- or off-farm students

were spending more time alone doing their schooling. Increased workloads and debt of farming families led to most young people in the study by Alston and Kent (2004) working long hours both on- and off-farms, assisting with farm labour tasks, and sometimes missing school as a result. For university-aged children, the lack of financial support meant spending more time working to support themselves, resulting in poorer grades and less opportunities to visit the family farm (Alston and Kent 2004).

Teachers revealed that the drought and related debt burden had a noticeable effect on poverty levels, with some students being prevented from attending excursions or from taking part in representative events for financial reasons (Alston and Kent 2006).

Drought's impacts on access to education

Research by Alston and Kent (2006) on drought's impacts on access to secondary education in Australia's rural and remote areas, provides the most up-to-date and relevant work on this issue. The report highlights the significant impacts on *educational access* for all levels of schooling, from primary school, to secondary school, through to post-secondary education and vocational training. Except where otherwise stated, the key findings reported below are drawn from Alston and Kent's (2006) report.

Impacts on primary school education

Young people in remote areas have been particularly affected by drought and ongoing restructuring. For example, the drift of people away from rural and remote areas has resulted in the closure of small schools and the loss of school buses (Isolated Children's Parents' Association 1999)¹. Children of primary school age in remote areas have the choice of attending a small school if it is accessible, of boarding in their nearest town at a hostel, or being home-schooled (Alston and Kent 2006). Home tutors (who are overwhelmingly mothers) reported being under significant stress during drought because of their need to work on their properties in the absence of hired labour, and the increased workloads associated with drought feeding. They reported being torn between their responsibility to the farm and their responsibility for distance education lessons. Whereas up to 50 per cent of remote students had governesses less than fifteen years ago, now only seven per cent do so. Mothers reported they had multiple demands on their time, and some commented on their own lack of ability to teach their children. They also reported that their children were often needed to work on properties.

Primary school education for young people in remote areas is heavily dependent on their mother's time and ability to deliver the lessons, the farm's financial capacity to do without family labour, and young people's ability to access distance education resources (Alston and Kent 2006).

Alston and Kent (2006) have reported that several families in the case study areas had taken up the opportunity provided by the second home allowance. This allowance was welcomed by many families as it enabled (usually) mothers to move to their closest centre with their children. The children attended local schools and women had the opportunity to work, providing an often much-needed second income for the family. Young people in remote areas may also attend hostels such as those in the case study sites of Hay and Longreach. The cost of hostel accommodation is as much as \$2000 over the Assistance for Isolated Children allowances, causing significant hardship for families and for the hostels which are not funded to provide additional education services.

Impacts on high school education

In all seven communities included in the study, the researchers visited the local high schools and spoke with students, teachers and their parents. All but one of the schools were reported to have experienced a downturn in student numbers as a result of rural restructuring and drought. In Blackall, for example, numbers were reported to have dropped by one-third over a one-year period.

¹ A submission to the National Inquiry by the Human Rights and Equal Opportunity Commission into Rural and Remote Education by the Isolated Children's Parents' Association (1999)

This was reported to have affected teacher numbers, subject offerings, the need for teachers to teach outside their discipline, difficulties with teachers accessing professional development, students taking more subjects by distance, problems associated with families funding extra-curricular activities, and some increases in difficult behaviours among children (Alston and Kent 2006).

The researchers were also told that some children were going to school hungry. Indigenous students and parents also reported problems associated with access to literacy and numeracy classes, problems with absenteeism, the need for Indigenous support people in the classroom, and the need to provide a breakfast program (Alston and Kent 2006). Special needs children were reported as having suffered particular disadvantage especially when they live in a remote area away from services and supports. The research team found that there was an urgent need for support programs, respite care and special supports for home tutors to support the education of special needs children.

Impacts on boarding school education

According to Alston and Kent (2006), many young people—but particularly those from rural and remote areas—attend boarding school for their high school years. Parents reported difficulties with paying fees, reduced ability to visit their young people, and a trend towards sending them away at a later age. Boarding schools reported that their rural and remote families were under particular stress and that they had tried to support them through delayed payment schemes, increasing bursaries and scholarships and making staff aware of the rural situation. The study found that many parents had opted to pay their fees over a longer time period, resulting in their greatly reduced ability to support their young people going on to tertiary levels.

Boarding school respondents also reported that some parents were urging their young people not to go on to tertiary level study for financial reasons (Alston and Kent 2006). Young people at boarding school were reported to be anxious about their parents and about the circumstances at home as a result of drought, and worried that their parents were unable to afford either the time or money for them to be away. There were also reports of families being unable to send younger children to boarding school.

Impacts on high school retention

Alston and Kent (2006) reported that there was evidence to support the contention that high school retention rates have been dropping for rural and remote young people for the following reasons:

- young people reported that they might leave school to save their parents from the additional financial stress associated with tertiary education
- if work was available, then students would take it in preference to staying on because they were determined to become financially independent to relieve the family of a financial burden
- boys were more likely to leave early because of available work opportunities.

Impacts on post-school education

Alston and Kent (2006) found that young people who left school early were less likely to find an apprenticeship or traineeship during the drought. Further, they reported that young people who left school early and remained in their communities were likely to experience significant unemployment and underemployment. In particular, because of cost and lack of public transport and the reliance upon parental support for transport, the need for young people in rural and remote areas to travel long distances for TAFE training was a significant issue.

The opportunities for rural youth to support themselves to undertake further studies were found to be constrained by the lack of availability of work. This was because there are fewer jobs in rural and remote communities for young people and they were often in part-time, insecure work. Further, any who were unemployed were not eligible for Youth Allowance because of the means-testing

associated with this award, causing significant hardship and placing them at risk (Alston and Kent 2006).

Impacts on tertiary access

The researchers heard most about the disadvantage associated with access to tertiary education (Alston and Kent 2006). Drought had particularly affected rural and remote young people's access to tertiary level education primarily because of the financial costs associated with access, but also because of the need to move away from home for tertiary education. The difficulties that Alston and Kent (2006) found young people were facing in relation to access to post-secondary school education are presented below:

At TAFE level, young people in the study reported:

- a lack of access to TAFE campuses
- the need to travel some distance for training
- a lack of public transport to facilitate their access
- the need for high levels of parental support to access courses
- the lack of access to living away from home allowance
- for remote young people, the need to live at a distance from home (Alston and Kent 2006, 18).

At university level, young people in the study reported:

- a lack of access to Youth Allowance because of means-testing on parental assets
- financial difficulties associated with parents being asset-rich and income-poor
- many families being unable to support their young people away from home
- an increased need for them to delay their entry to university in an attempt to earn the required amount to be classified as independent for the purposes of Youth Allowance
- the lack of unskilled full-time employment in their towns as a result of drought, making it difficult or impossible to earn this money
- that some give up their university places because of financial pressures
- for those who did go away, the need to work to try and support themselves while at university
- anecdotal evidence that some dropped out of university because of financial and emotional pressures
- that rural and remote young people chose a regional university over a capital city because of cheaper costs of living
- the need to choose shorter courses to relieve the family's financial burden and / or allow younger siblings access
- for those families where there was more than one child hoping to go to university, offering not to go, or being unable to go because of family financial pressures
- a huge sense of frustration that university education was no longer available on a merit basis (Alston and Kent 2006, 18-19).

While Alston and Kent's report has provided invaluable insights into the impacts of drought on the education and training of young people in rural and remote areas, further research is needed to understand the 'lived experience' of the impacts of drought on the education and training of older

age groups. ‘Informal’ education services such as agricultural extension programs are of particular interest given that farmers are facing extended drought conditions with which few have previous experience. Research into the extent and effectiveness of rural extension programs is patchy at best, representing a significant gap in the literature.

Commonwealth initiatives supporting training and education in rural and remote areas

Federal Government ‘Drought Assistance for Schools’

On 25 September 2007, a package of new drought assistance measures totalling \$714 million to support farmers, small businesses and communities in rural and regional Australia was announced (DEEWR 2008f). Part of this package was the *Drought Assistance for Schools* funding which provides assistance in recognition of the financial and social pressures on families and schools located in EC declared areas. The *Drought Assistance for Schools* funding is provided to rural and remote schools to assist with ongoing education expenses and the cost of educational activities such as student excursions, which may be cost prohibitive for families experiencing financial hardship as a result of the drought. Table 3 identifies the funding for the *Drought Assistance for Schools* initiative that has been paid (as at 1 June 2008) to Australian schools which are located in EC areas (DEEWR 2008a). This program has been continued in the current Federal Budget (DEEWR 2008b).

Table 3: 2007–08 Drought Assistance for Schools, funding by state or territory

State	Government \$	Non-government \$
New South Wales	5 098 410	1 915 560
Victoria	Not currently available	1 974 630
Queensland	4 306 450	1 256 990
Western Australia	Not currently available	164 860
South Australia	2 251 490	Not currently available
Tasmania	198 580	10 000
Northern Territory	138 580	70 600
Australian Capital Territory	4 700	Nil

Source: 2007-08 Drought Assistance for Schools measure funding (DEEWR 2008a)

Other Commonwealth measures to support education and training

The Digital Education Revolution—investment in internet connection, with attention to remote areas

In the 2008 Federal Budget, the Government made a commitment to a \$1 billion investment over four years in the *Digital Education Revolution* (DEEWR 2008b). Nine hundred million dollars will be delivered through the National Secondary School Computer Fund, with an additional \$100 million to be used to contribute to the deployment of *Fibre to the Premises* broadband connections to deliver faster internet speeds to all Australian schools or an alternative technology to those remote areas where fibre is not possible. The Government has provided an additional \$200 million to extend the Fund to 2011-12.

Assistance for higher education and vocational training—targeting participation, productivity and social inclusion

Under ‘Workforce participation’ in a 2008 Budget Statement (Outcome 8) by the Department of Education, Employment and Workplace Relations (DEEWR), the Australian Government stated that its long term economic priorities are focused on enhancing productivity growth and lifting workforce participation (DEEWR 2008e). The budget for this Outcome is just over \$252 million across the nation. The Government’s strategy to increase workforce participation includes investment in training and skills for both job seekers and those who are already working and making employment services more responsive to individual needs (DEEWR 2008e). The Budget targets broader participation through Social Inclusion and other policies encouraging increased participation, *specifically mentioning rural and remote disadvantage*. The objectives of ‘Workforce participation’ include:

- giving every Australian the opportunity to secure a job, access services, connect with family, friends, work and local community, deal with crises and have their voices heard
- following a place-based approach which takes into account factors such as any rural, remote and metropolitan disparities characterised by differences in access to resources, services, information and employment opportunities.

Gaps in research on higher education and vocational training

In a report to the Department of Education, Science and Training (DEST) on the impacts of drought on secondary education access in Australia’s rural and remote areas, Alston and Kent (2006) were critical of the lack of information on the circumstances of children living and being educated in rural and remote Australia. In particular, they found that there was little in the way of reporting on national statistics about the population of young people in education (and that much of this is now dated) and that there was a dearth of information about how chronic crises like the drought were affecting access to education.

While their work provides much-needed understanding about the ‘lived experience’ of the impacts of drought on access to secondary education in these areas, it does not provide broad statistical information about rates and levels of access to education and training in rural areas, how these are changing over time, and the degree to which these have been affected by the drought. In addition, while a qualitative study of seven communities provides a rich source of information, the diversity of rural communities indicates that more work needs to be done in this area. That is, notwithstanding a small number of reports on the topic, the impact of drought on educational access and quality remains under-investigated.

Further research is needed into the impacts of drought on educational facilities servicing rural and remote areas, including the impacts on the education workforce (Alston and Kent 2006). Better understanding is needed of the strategies that would enhance educational access for students, and the impacts of drought on teachers and educational facilities in these areas.

There are similar gaps in information about access and equity of access to vocational and higher education, with the research literature in this area now being quite dated (Employment and Skills Council - NBEET 1994, Garlick 2000, James *et al.* 1999, Jones 2001). The question of equity of educational opportunities was raised in an earlier discussion paper (2004) by the Department of Education, Science, but the questions and issues raised were not taken up in further studies or reports (DEST 2004). Questions of equity of access are particularly relevant to remote and rural Australia, representing an important area for future research.

Another area of inquiry requiring attention is the question of the effectiveness of drought assistance for education and training: how well-targeted is the assistance, and how effective is it in delivering the intended outcomes?

In relation to training that might support adaptation to a changing climate, there is also a lack of research into the extent and effectiveness of rural extension programs in supporting farmers to mitigate the impacts of drought. Over recent decades there has been a restructuring of both agricultural research and development programs and extension programs, with little known about the impacts of the decline in these services—representing another gap in research.

People's physical health

Health determinants

In developing policies that take account of the impact of drought upon health, policy makers need to take into account the population profiles of rural communities. Issues like population migration or growth, ageing, changes in sex ratios, socio-economic circumstances, fertility, and the proportion of Indigenous Australians, have implications for developing health policy (AIHW, 2008c). Determinants of health are factors raising or lowering the level of health in an individual or population, including:

- environmental factors – including extreme climatic events
- socio-economic factors – including financial stress
- community capacity – including access to services, cultural preferences and
- health behaviours – including risky behaviour, dietary preferences, alcohol and smoking
- person-related factors – including personal resilience, family cohesion and support.

These issues are important in assessing the impacts of drought on the health of rural populations.

Health in rural populations

A report by the AIHW, *Australia's Health, 2008*, cautions that there is considerable variation in health outcomes for rural and regional Australia within each geographical location that is masked by broad statistical patterns (AIHW 2008a). Despite these differences, it is possible to detect a number of common patterns and identify common factors affecting the health of Australians living in rural and remote Australia. Populations in these areas generally have poorer access to health-care services and experience poorer health than people living in major cities (AIHW 2008a, Productivity Commission 2005). They have higher levels of mortality, morbidity and health risk factors than those who live in major metropolitan areas (AIHW 2007, 2008a, 2008c).

This section reviews the literature in relation to health in rural Australia before turning attention to the impacts of drought on the health of rural Australians.

Access to health-care services

The recent AIHW report (AIHW 2008a) is consistent with the findings of an earlier report by the Productivity Commission (Productivity Commission 2005) on access to health-care services in rural Australia. In particular, the reports are consistent in their conclusion that the health-care system in rural and remote areas can be influenced by common factors such as distance to services, larger client capture areas, smaller populations, fewer general and specialist medical professionals per population, and fewer services (AIHW 2008a). People in rural areas also have different patterns of use of health-care services.

The health-care workforce

The Productivity Commission report (2005) on the reasons people in rural and remote Australia often have difficulty in accessing health-care services, focuses on the workforce aspect of the provision of health care. A key finding of an audit by the Department of Health and Ageing (DoHA) (2008g) of the health workforce in rural and regional Australia is that regional and remote Australians continue to be disadvantaged in their access to health professionals compared with their urban counterparts. A major issue for access to health-care services is the diminishing number of health professionals, apart from nurses, relative to distance from major cities and urban centres (Figure 9).

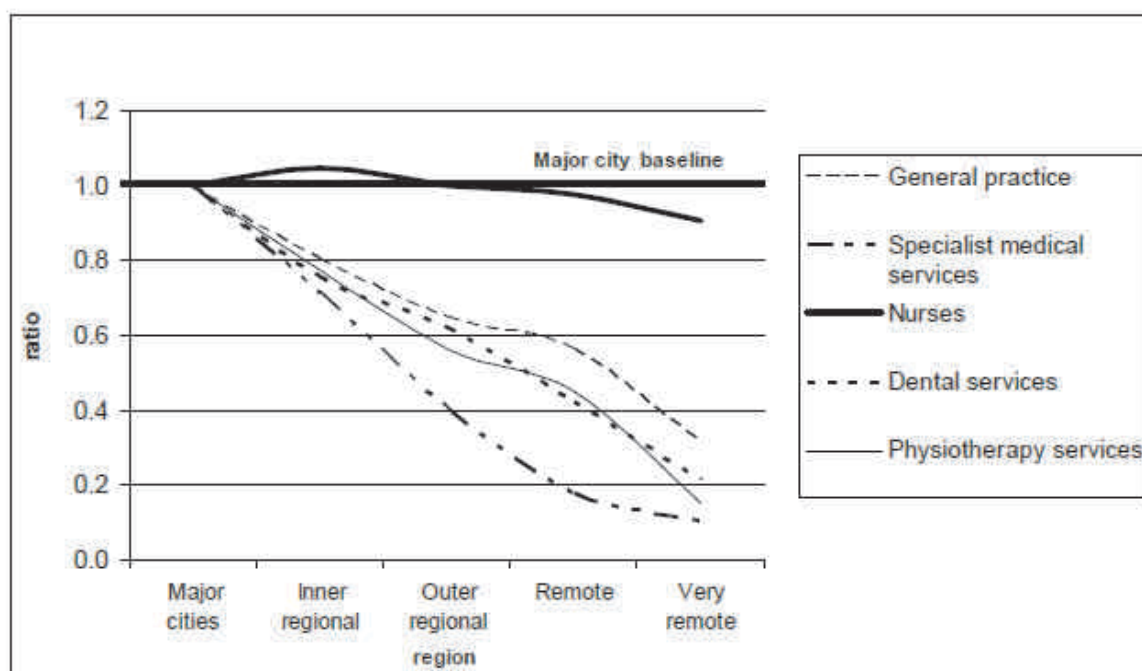


Figure 9: Health practitioner to population ratios relative to major city levels (2003)

Source: Australia's Health Workforce (Productivity Commission 2005)

The AIHW (AIHW 2008a) reported that in 2005, most primary care medical practitioners (80 per cent) were in major cities, providing services to two-thirds (66 per cent) of the Australian population. The corollary of this is that 20 per cent of primary care medical practitioners service the remaining one-third (33 per cent) of the population outside major cities. The report also noted that Indigenous communities in remote Australia generally have the smallest numbers of health-care practitioners.

The impact of distance on the provision of rural health-care services

According to the report, access to even primary care services can be many hours away, with access to more specialised services available only in the larger population centres, entailing even longer travelling times (Productivity Commission 2005). These travel-related delays in accessing services may affect ultimate health outcomes. Distance to health-care services may be associated with considerable financial costs and cause potential interruptions to careers and education. These health-related disruptions to family and social life may also place a burden on other family members. The report predicts that these social and financial costs associated with health-care services in rural and remote Australia are likely to increase in the future as the incidence of chronic conditions associated with an ageing population rises over the decades ahead.

Patterns of use of health-care services

People in rural and remote areas also have different patterns of use of health services (AIHW 2008a). For example, given the shortage of general practitioners and specialists in rural and remote areas, there was a greater tendency for people in these areas to use hospital emergency departments as a source of primary care than people in major cities. People living in rural and remote areas were also more likely to be admitted to hospital for conditions which potentially could have been prevented by providing non-hospital services and care. The greater distances involved in travelling to and from health-care facilities, or the isolated nature of homes in rural or remote areas, may also explain the higher admission rates. For example, medical staff may be more cautious about discharging patients who are at risk of developing further symptoms than they would be if speedy access to health services were possible, as it is in larger urban centres.

Health indicators in rural and remote Australia

According to recent reports by the AIHW (AIHW 2008a, 2008c), despite the variety of circumstances in rural and remote Australia, the higher levels of mortality, disease and health risk factors of those who live in these areas indicate that they generally have poorer health than their major city counterparts. The reports also note that compared with those in major urban centres, Australians living in rural and remote areas generally have greater risks of accidents while driving (poorer road conditions and longer travelling times), and at work (especially those in agricultural and mining sectors).

Life expectancy was found to decrease with increasing remoteness (AIHW 2008a). A major contributor to the higher mortality rates in remote areas is the large proportion of Indigenous Australians living in these areas who have death rates generally over three times higher than for non-Indigenous Australians, and a life expectancy of 17 years lower than that of the total Australian population (AIHW 2007). While the high proportion of Indigenous Australians in rural and remote Australia may partially explain the higher rates of mortality in these areas, there are other factors at play. For example, people in rural and remote areas were more likely to have risk factors associated with chronic diseases. Table 4 sets out the main causes of elevated death rates outside major cities (where major cities are the reference case) for the period between 2002 and 2004.

Diseases associated with lifestyle factors like smoking, alcohol intake and dietary preferences are a major contributor to the 'excess' number of deaths in rural Australia in comparison to the death rate associated with major cities (AIHW 2008a). In particular, coronary heart disease (19 per cent of 'excess deaths'), 'other' circulatory disease (18 per cent), diabetes (6 per cent), and lung disease and lung cancer (13 per cent), are associated with smoking and diet (AIHW 2007). Other forms of cancer accounted for a further 15 per cent of 'excess' deaths between 2002 and 2004, while motor vehicle accidents accounted for 9 per cent.

Table 4: Leading causes of ‘excess’ deaths outside major cities, 2002-2004

Cause of death	Average annual ‘excess’ deaths	Percent of total annual ‘excess’ deaths
Coronary heart disease	845	19
‘Other’ disease of the circulatory system	807	18
Diabetes	267	6
Chronic obstructive lung disease	387	9
Lung cancer	177	4
Prostate cancer	182	4
‘Other’ neoplasms	325	7
Suicide	186	4
Motor vehicle accident	416	9
‘Other’ injuries	221	5
‘Other’ causes	604	13
Total	4418	100

Source: *Australia’s Health, 2008 (AIHW 2008a)*

A higher proportion of people living in remote areas reported daily or current smoking (28 per cent), compared with those living in major cities (20 per cent) (AIHW 2008a, 2008c). Australians living in rural and remote areas were more likely to eat the recommended five serves of vegetables and two serves of fruit each day, but they were also more likely to be overweight or obese than those living in major cities, and were more likely to report sedentary lifestyles (AIHW 2008a). Suicide levels will be discussed in more detail in the section on drought’s impacts on mental health.

Drought’s health impacts

The AIHW report, *Australian Health, 2008*, points out that it is difficult to measure or forecast with any precision how climate conditions or environmental hazards affect human health (AIHW 2008a). This is because the links often involve indirect and complex relationships and effects are often delayed or displaced. In a submission to the Garnaut Climate Change Review, Bambrick *et al.* (2008) also advise that we have not yet been able to quantify the extent of the adverse health outcomes (deaths, injuries, infections, stress disorders, etc.) specifically caused by extreme climatic events. They suggest that this is because we have not yet been able to develop methods that are able to separate out the specific impacts of climatic events from co-existing health risk factors.

Further, they argue that the human and social impacts of drought on health are not readily measured by economic instruments. For example, the premature death during extreme warm weather of an elderly person no longer in the workforce may not be as significant in economic terms as an outbreak of a three-day diarrhoea event amongst working-age adults. That is, they are arguing that the emotional and social impacts of the premature death of a grandparent cannot be captured by economic instruments, indicating that additional methods of assessing drought’s impacts on human health are needed.

The report also comments that there will be significant variations in the health impacts of climatic events, depending on location and intensity of the event, and on the infrastructure and preparedness of exposed communities.

Notwithstanding these cautions, we are able to gain some idea of the health impacts of drought by using the numbers of deaths, hospitalisations or primary health-care consultations as estimates of time spent with suffering or disability, as estimates of the duration of the healthy life lost, or as estimates of economic costs incurred (Bambrick *et al.* 2008). In recent years, researchers have begun to adopt these kinds of approaches to help understand the effects of climate events on human health and wellbeing (Bambrick *et al.* 2008).

Although the focus of the Bambrick submission to the Garnaut Review was on the future impacts of climate change on health outcomes, the report's warnings are relevant to drought's impacts on the health of rural populations. In particular, exposure to prolonged high temperatures promotes various physiological changes that may exacerbate circulatory disease processes, leading to an increased incidence of heart attack or stroke. People in rural areas have higher rates of chronic diseases (e.g. circulatory diseases and diabetes) and existing health risk factors like obesity and smoking, and are consequently more susceptible to drought's impacts. Given that these diseases are more commonly associated with older people, the ageing profile of rural populations is an additional factor in the health risks of drought for rural communities.

A correlation between warmer weather conditions and increased mortality has been established in a report by McMichael *et al.* (2003). They report on a case study of Sydney, indicating that for each one degree rise above 20°C, there is a corresponding one per cent increase in deaths. Although figures have not been calculated for rural communities, this kind of work on health risks associated with warmer conditions may have implications for health risks for rural Australian during drought.

The report by the AIHW (2008a), *Australia's health 2008*, also notes that the health of people living in rural Australia 'can be dramatically influenced by climatic conditions such as drought [which can] affect population migration, employment and demand for infrastructure and services' (p.83). The report raises concerns about drought's impacts on drinking water quality and the effects of this on human health. Concerns were expressed about the enhanced risk of contamination associated with the warmer, drier conditions associated with drought. For example, drought is a known factor in outbreaks of cyanobacterial (blue-green algae) blooms and their toxins, resulting from increased nutrient levels, warm water temperatures and reduced water flows. Further, a broad range of viruses (e.g. adenovirus, hepatitis and rotaviruses), bacteria (e.g. *E. coli*, *Enterococci*, *Campylobacter* and *Salmonella*) and protozoa (e.g. *Cryptosporidium* and *Giardia*) can be transmitted by contaminated water supplies, posing a risk to human health. Research specifically targeting these biophysical aspects of drought's health impacts on rural communities is yet to be undertaken, representing a gap in the research literature.

Alston and Kent's report (2004) on the social impacts of drought provides insights into the human and social aspects of drought-related illness. In contrast to other reports, this report presents rural people's own accounts of the lived experience of drought's impacts on their health and wellbeing, or that of loved ones. Most of the evidence relates to stress-related health impacts. This includes increased anxiety about future prospects, often leading to depression, sleep disturbance, and to increasing suicidal thoughts and actions. These mental health issues will be discussed further in the section on **People's mental health**.

Some people reported that their loved ones were being treated for high blood pressure since the onset of the drought or were drinking more heavily (see pp.87-89):

He's aged dramatically in the last 12 months. He's been drinking more. He's quite depressed at times. (Farm woman)

My husband has gone on to blood pressure tablets because of the strain and he's very depressed. I'll see him standing there looking out. (Farm woman)

I was suicidal in January and February. Emotionally the worst period of my life... I felt very isolated... I'm running out of resilience to keep taking the blows and to keep moving on... (Farm man)

The drought also represented an additional stress in dealing with pre-existing conditions. For some, the drought meant that people could not leave the farm because livestock had to be hand-fed (Alston and Kent 2004). This limited the time available for family members to support each other in seeking medical treatment. For example, one farming woman who was receiving radiotherapy for cancer had to go to Melbourne on her own for treatment as her husband was tied up trying to keep the family farm afloat. Understandings about the lived experience of the human and social dimensions of the health impacts of drought cannot be gained through broad statistical patterns. These insights can only be gained by engaging directly with those who live and work in rural communities.

Commonwealth initiatives to support access to health-care services in rural Australia

As part of the 2008-09 Federal Budget, the Australian Government announced a number of initiatives to support access to health-care services in remote and rural Australia (DoHA 2008d). The initiatives included funding for:

- establishing the National Rural and Remote Health Infrastructure Program, which will provide more than \$46 million over the next four years to improve rural and remote community access to funding for essential health infrastructure, equipment and service planning
- providing funding for the Rural and Remote General Practice Program that supports the improvement of the recruitment and retention of GPs to rural and remote areas
- the Training for Rural and Remote Procedural General Practitioners Program which provides financial assistance for procedural GPs in rural and remote areas to access relevant activities in order to assist them in maintaining or updating their skills
- the Rural Undergraduate Support and Coordination program which funds Australian medical schools to promote the selection of rural applicants, develop support systems for medical students with an interest in rural medicine, and to provide short-term rural placements for all Australian medical students
- the Rural Health Support, Education and Training program which contributes towards recruiting and retaining rural health workers. It does this by funding initiatives that provide health workers with appropriate support, education or training to improve the health status of rural and remote communities.

Other initiatives designed to improve access to health-care services in rural Australia can be found at: <http://www.health.gov.au/internet/main/publishing.nsf/Content/portal-Rural%20health%20services>.

Gaps in research on people's physical health

The reports by the AIHW (2008a) and Bambrick *et al.* (2008) advise that there are major gaps in research on understanding the general health characteristics of people in rural and remote areas, which represents a key challenge for health policy in rural and remote Australia. These reports found that there is limited availability, representativeness and quality of data, with few sources with sufficient comprehensiveness and accuracy to allow meaningful comparisons. Although the literature on the impacts of drought on the health of rural Australia is even more limited, several reports indicate that there are significant impacts of drought on health that are yet to be fully documented and accounted for in health policy (AIHW 2008a, Alston and Kent 2004, Bambrick *et al.* 2008).

People’s mental health

Mental health is one of Australia’s National Health Priority Areas (AIHW 1997, 2008b). Almost one in five Australian adults will experience mental illness at some stage in their lifetime (ABS 1997). Mental illness affects both sexes and all ages, with females accounting for 53 per cent of mental illness in 2003, and males 47 per cent (AIHW 2008b).

According to *The burden of disease and injury in Australia 2003*, mental illnesses were estimated to be responsible for 13.3 per cent of the total burden of disease² in Australia in 2003 (AIHW: Begg S *et al.* 2007). There were marked sex differences in mental health burden across a range of disorders (AIHW 2008b). In females, anxiety and depression were the most common expressions of mental illness. Anxiety and depression accounted for 10 per cent of all mental illnesses in females while accounting for just 4.8 per cent in males. Conversely, substance abuse was more than three times as high in males as in females (AIHW 2008b).

Figure 10 demonstrates that there is a distinct peak in the burden of mental health in the later teen years—especially in relation to anxiety and depression—before tapering off with increasing age, apart from a small peak in the 40–44 year age group also due mainly to anxiety and depression (AIHW 2008b).

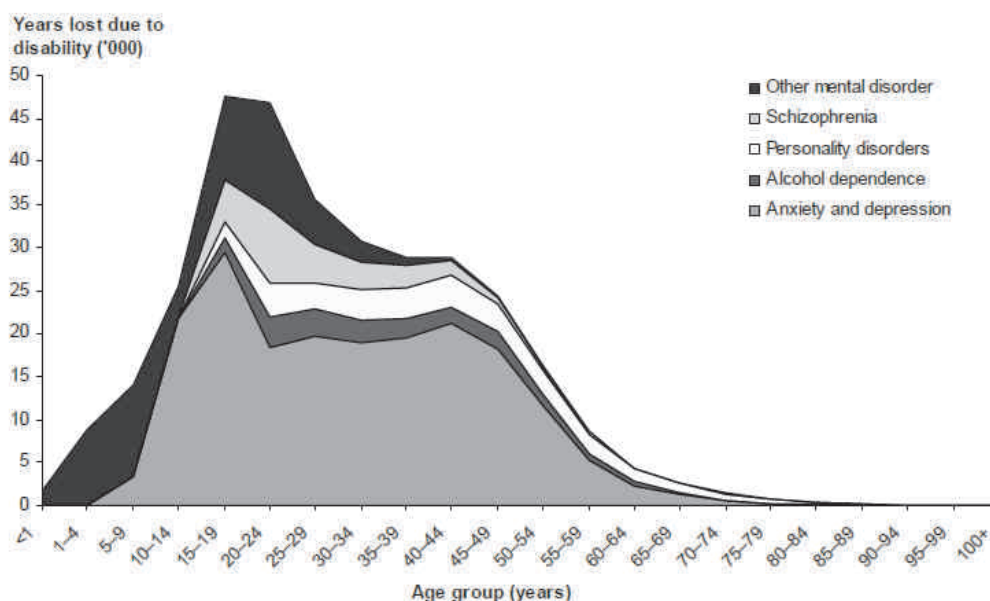


Figure 10: Prevalent burden by age, numbers by specific cause, 2003

Source: *Mental Health Services in Australia 2005-2006* (AIHW 2008b)

Mental health in rural areas

Overall, in 2004–05, there were few significant regional differences in the prevalence of depression (AIHW 2008c). An exception to this was the finding that males between the ages of 45 and 64 years living in rural and remote areas were 1.4 times more likely to report depression as males of the same age in major cities (AIHW 2008a). In the same period, those in outer regional and remote areas were significantly (1.2 times) more likely than those in major cities to show high to very high levels of psychological distress (AIHW 2008c). This compares with the 2001 National Health

² The *total burden of disease and injury* is derived from adding fatal burden (years of life lost due to premature mortality) to non-fatal burden (years of healthy life lost due to non-fatal health conditions, which is estimated by combining the average duration of new cases of a condition with a severity weight quantifying the impact of the condition).

Survey in which there were no significant regional differences in the prevalence of ‘psychological distress’. Although causal links have not been established, the difference in the incidence of ‘psychological distress’ between the two periods may be attributed to the onset of the drought in 2002.

A study by the Centre for Rural Mental Health (2005), *Depression in farmers and farming families*, identifies a number of factors which may contribute to poor mental health in people living in rural and remote communities, including:

- lack of resources in rural and remote areas
- having to travel long distances to access care
- reluctance to seek care from health professionals
- reluctance to admit there is a problem
- reluctance to seek care because of high visibility within a close-knit community
- rural and remote stressors such as drought and flood
- lack of available mental health services.

The report notes that the supply of mental health services to rural populations was considerably less than for capital cities (Beyondblue National Depression Initiative 2008, Centre for Rural Mental Health 2005). The supply rate of mental health services was 13 per cent less in large rural centres than in capital cities, and 23 per cent and 35 per cent less for small rural centres and ‘other rural areas’, respectively. The report also found unequal distribution of specialist services, with approximately 8 per cent of psychiatrists and 12 per cent of psychologists practising outside metropolitan areas.

Drought’s impacts on rural people’s mental health

Mental health stresses have resulted from environmental, economic and social stresses associated with the prolonged drought experienced in much of rural Australia (particularly in the south and south-east, and parts of eastern Australia) between 2002 and 2007, with wellbeing and lifestyles being challenged (Berry *et al.* 2008, Sartore *et al.* 2008, Sartore *et al.* 2007). There are multiple stresses associated with drought’s impacts, including lost income; increasing debt and workloads; isolation as a consequence of spouses seeking off-farm income; and the experience of ongoing erosion of environmental, social and financial capital required to sustain the farming operation. The severity and distribution of mental health problems resulting from these stresses are reported to be influenced by aspects of the adaptive capacity of communities (Alston and Witney-Soanes in prep., Berry *et al.* 2008). That is, the impacts of drought will be felt differently across different industries and regions, with varying levels of vulnerability and resilience being experienced across the nation. Further, these impacts affect different subgroups of the population in different ways (Alston 2006, Alston and Kent 2004, 2006, Alston and Kent 2008, Alston and Witney-Soanes in prep., Dean and Stain 2007b). For example, there are specific issues arising with different age groups and different genders that are described in the sections on the impacts of drought on *Families* and on *Communities*.

Several studies have applied qualitative approaches to understanding drought’s impacts on the mental health of rural Australians (Alston and Kent 2004, Alston and Kent 2008, Alston and Witney-Soanes in prep., Birchip Cropping Group 2008, Centre for Rural Mental Health 2005, Dean and Stain 2007a, Sartore *et al.* 2008, Sartore *et al.* 2007, Stehlik 2003). These reports provide invaluable insights into the lived experience of dealing with drought and the effects this has on mental health and wellbeing, and community capacities to deal with drought-related stress that cannot be gleaned from research that describes broad statistical patterns.

Sartore *et al.* (2008) describe the impacts of prolonged drought as ‘a chronic stressor akin to natural disaster experienced over a longer time’ (p.2). Several authors note that natural disasters can give rise to feelings of loss of control and mastery, fear, helplessness and futility, as well as concerns for their future financial viability, the farm itself, and the local community (Albrecht *et al.* 2007, Alston and Witney-Soanes in prep., Birchip Cropping Group 2008, Caldwell *et al.* 2004, Sartore *et al.* 2008, Sartore *et al.* 2007). These kinds of feelings and responses are implicated in an increased risk of psychiatric morbidity, especially in the context of a lack of mental health resources and opportunities for intervention (Sartore *et al.* 2008).

The prolonged experience of these multiple stressors has resulted in significant mental stress and anxiety amongst some agricultural workers and their families (Birchip Cropping Group 2008). The following quotes selected from the report by the Birchip Cropping Group (2008), ‘*Critical breaking point?*’ *The effects of drought and other pressures on farming families*, illustrate that significant stress is caused by the threat of loss, not only because of the uncertainty surrounding the potential loss, but also because of the importance of what is at stake, including the family farm and the financial viability of the family:

The stress has definitely built in the last month. Up until a few weeks ago, I was super positive and things were ticking along really well. But that element of doubt is beginning to creep into my mind now... You know there are these beautiful crops that are just one good rain away from being a really good year, but we’re just not home yet. You just have that shadow of doubt there that it could all fall in a hole again... We’re just on a knife edge waiting. (Birchip Cropping Group 2008, 78)

The decision to continue farming requires people to take on more risk in the short term (Birchip Cropping Group 2008). The decision to continue is made in the context of the uncertain expectation that it will rain, entailing considerable financial risk, with families extending themselves to put crops in by using savings, liquefying assets or taking on more debt to do so. This often results in chronic erosion of financial capital that will take several ‘good’ years to recover from (Birchip Cropping Group 2008, 75-76):

We couldn’t buy our super[phosphate] the last few years. We’ve been buying it and paying for it the following year. But we couldn’t do that this year because of the failed crops last year... So we sold some shares to buy it...

The ongoing stress and uncertainty has resulted in significant psychological and emotional strain:

We’ve given up hope that it’s going to rain. It’s not going to rain. (p.81)

Some farmers have interpreted the impacts as being a result of their failure to manage the risks of drought better, taking personal responsibility for impacts on the farming operation and on their families, and expressing feelings of guilt about letting everyone down:

You feel like you are letting everybody down. You’ve got your parents and your kids to look after and you’ve got to keep your wife happy. (Birchip Cropping Group 2008, 81)

These feelings may be precursors to pathological levels of depression or to contemplating suicide (Birchip Cropping Group 2008, 82):

I’ve been feeling low... I try to hide my negative impulses... but X said to me the other day: ‘I haven’t seen you for weeks. Where have you been?’ I guess I’ve been less social than I have in the past.

This issue of suicide is taken up in the next section.

Suicide

In 2005, suicide accounted for 1.6 per cent of all deaths in the Australian population (ABS 2005). Although this is only a small proportion of the overall number of deaths, it accounts for greater proportions of specific subgroups. In particular, nearly 80 per cent of all suicides were males, with the highest rates of suicide occurring in males between 20 and 34 years (ABS 2005). Suicide accounted for 20 per cent of deaths of males in this age group. Recent studies examining trends in Australian suicide rates have consistently demonstrated that male suicide rates are higher in rural and remote areas than they are in major cities (Berry *et al.* 2008, Caldwell *et al.* 2004). Suicide accounted for 6 per cent of the 'excess' deaths experienced in rural areas (AIHW 2008c). Further, there is some primary evidence linking suicide to drought in New South Wales, with an 8 per cent rise in the long-term mean suicide rate being associated with a decrease in precipitation of about 300 mm (Nicholls *et al.* 2006).

The literature suggests that access to mental health-care services, and cultural aspects such as reluctance to seek help, may be significant factors in higher suicide rates in males in rural areas (Alston and Kent 2008, Caldwell *et al.* 2004, Centre for Rural Mental Health 2005, Sartore *et al.* 2007). It has been argued that men do not seek health-care for a range of reasons, including a tendency to use indirect sources of help; the perception that seeking help will show their vulnerability, fear and denial; difficulty in relinquishing control; and a range of systematic barriers (Caldwell *et al.* 2004). Mental health literacy may be a particular problem for young men in rural areas because they are less likely to recognise or report symptoms of distress or to know what can be done to help (Caldwell *et al.* 2004). These reasons may also apply more generally to males in other age ranges in rural areas, resulting in recommendations being made for suicide prevention strategies to include access to help through trusted sources such as rural financial counsellors and agricultural advisors (Alston and Kent 2008, Caldwell *et al.* 2004, Fuller *et al.* 2007, Sartore *et al.* 2005).

A report currently being prepared by the Australian Institute for Suicide Research and Prevention (De Leo *et al.* in prep.) on the incidence of suicide in the Queensland working age population (15–65 years) between 1990 and 2004, across a number of occupations, finds that agricultural workers (farmers, farm labourers, farm managers and the like) had significantly higher suicide rates than all other occupations examined (27.5 per 100 000 versus 11.9 per 100 000). It also finds that agriculture was one of only two occupations with a higher proportion of suicides for the population over the age of 55 years. Of concern was the finding that, of those who committed suicide in Queensland over this period, agricultural workers were the only occupational group studied that was less likely than others to have a known previous suicide attempt. That is, this group was more likely than others to succeed in their first suicide attempt. This indicates that there may be fewer opportunities to recognise that members of this group are contemplating suicide, and for interventions that would prevent suicide, than for other groups. These findings highlight the need for further research into the specific impacts of drought on the mental health of the broader farming community in other states and territories, with particular attention to males of all working age groups as well as into the effectiveness of suicide prevention programs and initiatives.

Government initiatives to provide mental health-care services to rural Australia

State and territory governments, and the Australian Government, have committed to improving the mental health of the Australian population through the ongoing National Mental Health Strategy and the Council of Australian Governments National Action Plan on Mental Health (AIHW 2008b). These two major government initiatives set the broad agenda for mental health service provision in Australia.

National Mental Health Strategy

The National Mental Health Strategy, endorsed by the Australian and state and territory governments in 1992, was established to provide a framework to guide the reform agenda for mental health in Australia in a coordinated manner across the whole of government (AIHW 2008b). The current National Mental Health Plan (2003–2008), endorsed by all Australian health ministers in July 2003, emphasises a shift from institutional to community-based care, and delivery of services in mainstream settings.

COAG National Action Plan on Mental Health

The Council of Australian Governments (COAG) National Action Plan on Mental Health was endorsed in July 2006 (Australian Health Ministers' Conference 2008). Health Ministers agreed to commit \$4.1 billion to a wide range of initiatives over the 2006-2011 period. A further \$935 million was also committed subsequently. An additional \$30 million was provided to fund mental health care in drought affected communities. In 2006-2007, funding agreements were finalised with 15 auspice organisations to enable greater access to mental health services for people living in rural and remote Australia.

2008 Budget Statements on mental health for rural and remote Australia—targeting drought-related mental health

The 2008 Commonwealth Budget provided funding for a number of mental health initiatives (DoHA 2008b, 2008c, 2008e, 2008f). In particular, in addition to the \$51.7 million originally allocated to mental health services in rural Australia, in the 2008 Budget the Government committed a further \$10.1 million over two years to the new mental health initiative for drought-stricken areas, and an additional \$20.6 million over four years to the Mental Health Services in rural and remote areas (DoHA 2008a).

The new *Mental Health Support for Drought-Affected Communities* measure is designed to provide crisis counselling services for distressed individuals in drought-declared rural areas, and education and training for clinicians and community leaders. It is also intended to increase the capacity of communities to respond to drought-related psychological trauma. The funding will see the expansion of the existing Mental Health Services in Rural and Remote Areas and will support additional mental health services provided by allied health professionals, including social workers, psychologists, occupational therapists, mental health nurses, and Aboriginal health workers (DoHA 2008a).

Gaps in mental health research

There is an urgent need to understand the consequences of drought for the mental health of people in rural Australia (Berry *et al.* 2008, Sartore *et al.* 2008, Sartore *et al.* 2007). While we are gaining knowledge about mental health issues like access to services, and the relationships between socio-economic and community characteristics and mental health for the broader population (ABS 1997, 2005, AIHW 2008b), little is known about the impacts of chronic long-term drought on rural people's mental health (Albrecht *et al.* 2007, Berry *et al.* 2008, Sartore *et al.* 2008, Sartore *et al.* 2007), and how best to help people cope.

In the context of increasingly warmer and drier conditions associated with a changing climate, these understandings are even more pressing. A submission to the Garnaut Climate Change Review (Berry *et al.* 2008) on the impacts of drought and climate change on mental health, reinforces the point that mental health has not received adequate research attention. For example, while a recent report on mental health services (AIHW 2008b) documents data on the number of mental health-care facilities and the workforce, little is known about the geographic distribution of mental health services across Australia, issues of access to services by clients, patterns of use, and the causes, nature and rates of mental health conditions in rural Australia. Notwithstanding a small number of

reports targeting the impacts of drought on mental health of specific rural populations (Alston 2006, Alston and Kent 2004, Alston and Kent 2008, Centre for Rural Mental Health 2005, Dean and Stain 2007a, Sartore *et al.* 2007, Stehlik 2003), a broader picture of the mental health and wellbeing of rural populations is needed.

Further, given that mental health problems are a major risk factor for suicide, a better understanding of the reasons behind the suicide of young rural men is of considerable importance. The report on suicide rates in Queensland also points to the need for further research targeting the broader population of male agricultural workers (De Leo *et al.* in prep.). In relation to this, following up on the work by Fuller *et al.* (2007) and Caldwell (2004), there is a need to gain insights into how effective mental health care services for rural males are, and how to deliver these services in ways that are more accessible to them.

Family life

Major sources of background statistics relating to rural Australian families include the 2008 *Country Matters* atlas and its supporting booklets, and ABS publications, including a recent one on farming families (ABS 2008a, BRS 2008a, 2008b, 2008c, 2008d, 2008e). A report by Barr *et al.* (2005) also provides relevant information. Some relevant statistics are summarised in Table 5.

General impacts on family life

Impacts of drought on various aspects of family life have been summarised in a companion booklet to the 2008 *Country matters: social atlas of rural and regional Australia* (BRS 2008a) drawing on findings from the report by Stehlik *et al.* (1999) mentioned above, plus work by Alston and Kent (2004), two regional case studies undertaken by the former Department of Transport and Regional Services (2005), and a study of the Bourke area of New South Wales by the Western Research Institute (2006). Farm family-related impacts identified in these studies include:

- drought may strengthen migration away from rural and regional areas, particularly by young people—thereby affecting membership of households and the availability of family members to work on-farm
- there may be less support and encouragement for young people to take over farms
- there is greater pressure on women to work off-farm to supplement on-farm income
- gender roles may change as women need to work both on- and off-farm
- family workloads may increase because farm families cannot afford paid labour to help with on-farm work
- community networks may be lost as farm families' social interaction decreases—contributing to their feelings of social isolation.

Table 5: Some key statistics for rural families

Topic	Statistics and notes
<i>Rural families and households overall</i>	
Family size	Family size in rural areas is generally falling, but still remains larger than in regional centres and cities (BRS 2008e)
Numbers of children	Declined across all states and territories over the period 2001–2006, with the greatest decline for rural areas being in Queensland (BRS 2008e)
Numbers of young people	Numbers of young people aged 15 to 24 years declined in rural areas in all states and territories over the period 2001–2006, largely reflecting members of this age group moving to urban centres (BRS 2008e)
One-parent families	Rural areas have the lowest proportion of one-parent families of all areas (see also statistics below for <i>Farming families</i>)
Home ownership	Rural areas have the highest level of home ownership as compared with small towns, regional centres and urban locations—in 2006, 76.2% of all dwellings in rural areas were owned or being purchased, reflecting both housing affordability and the older age profile of residents in rural areas (BRS 2008e)
Motor vehicle ownership	In 2006, only 2.8% of rural dwellings did not have a motor vehicle, as compared with 11.2% of dwellings in major urban centres and cities (BRS 2008e)
<i>Farming families</i>	
Number of farming families	The number of Australian farming families declined by 9% from 112 800 in 2001 to 102 600 in 2006 (ABS 2008a). The smallest decrease was 1% in the Northern Territory, and the largest 13% in Queensland
Family types	At the 2006 Census, around half (51%) of farming families were couple families with children—as compared with 45% of families in this category Australia-wide. There was a considerably smaller percentage of one-parent farming families (3%), than one-parent families in Australia overall (16%) (ABS 2008a)
Family income	From the 2006 Census, the median household income for farming families was \$1122 per week. Negative or nil income was reported by 3% of farming families as compared with 1% of all households Australia-wide. When adjusted for differences in household sizes, the median household income for farming families was lower than that for all Australian households (\$605 per week as compared with \$649 per week) (ABS 2008a)
Average age of farmers	The average age of Australia’s farmers has been steadily increasing since 1981 (Barr <i>et al.</i> 2005), and the median age was 52 years at the 2006 Census (ABS 2008). The proportion of farmers older than 65 years increased from 15% in 2001 to 18% in 2006; and the proportion of farmers under 35 years decreased from 12% in 2001 to 10% in 2006 (ABS 2008a)
Women in farming	In 2006, more than half (56%) of women who were the Census reference person or spouse/partner in a couple farming family reported being a farmer or farm manager as their main occupation. The remainder reported main occupations of clerical, sales and service workers (32%); education professionals (13%); labourers and related workers (10%); and health professionals (10%) (ABS 2008a)
Entry of young men into farming	Fewer young men are entering agriculture—since 1976, the number of men aged in their 20s entering farming has more than halved (Barr <i>et al.</i> 2005)
Entry of young women into farming	Fewer young women are entering agriculture—since 1976, the number of women in their early 20s entering agriculture has declined by 80%. Many young rural women move to urban locations for education and career opportunities (Barr <i>et al.</i> 2005)

In a report based on a two-year study undertaken with farm families in central Queensland (beef producers) and the western rangelands of New South Wales (sheep/wheat producers), Stehlik and her co-authors (1999), analysed the social construction of drought in terms of farm families' stock, water and soil management strategies; their family and community relationships; effectiveness of drought policies; individual and family health; and their strategies for future recovery. They found that defining drought had become more complex, due primarily to shifts in government policy and more sophisticated technologies for measuring climatic factors and their spatial and temporal variations. Accordingly, drought could no longer be seen as a single cataclysmic event like a flood, fire or cyclone for example. The study's main findings are summarised in Table 6 by the different kinds of 'actors' or 'agents' involved.

Table 6: Main findings of a study of farm families' experiences of drought in the 1990s

Actor or agent	Main findings
Producers	<ul style="list-style-type: none"> • strive for self-reliance, to manage risk, and to plan and operate sustainably, including by undertaking 'whole-farm' strategic planning • do have an environmental consciousness • express cynicism about the media
Men and women	<ul style="list-style-type: none"> • experience drought differently
Families	<ul style="list-style-type: none"> • are the 'first line of defence' against the hardships of drought
Rural Australia	<ul style="list-style-type: none"> • feels isolated from, and abandoned by, urban Australia
Rural communities	<ul style="list-style-type: none"> • should not be taken for granted
'Experts'	<ul style="list-style-type: none"> • can cause additional stress on farm families
Policy makers	<ul style="list-style-type: none"> • need to be aware that drought policy can have unintended consequences
Human service providers	<ul style="list-style-type: none"> • responses require better integration
Researchers	<ul style="list-style-type: none"> • further sociological research is required

Source: Stehlik *et al.* (1999)

In a report currently in preparation, Alston and Witney-Soanes (in prep.) summarise a range of impacts drought is having on families in the Murray–Darling Basin. These impacts include:

- physical, psychological and behavioural changes, including increased use of alcohol, stress-related skin problems, fatigue and social withdrawal
- older families having to work past their planned retirement age
- loss of value of farm properties—which may represent family superannuation savings
- splitting of families in cases where spouses have had to move into towns some distance away in order to earn an income
- stress related to having to make significant life-changing decisions.

However, the authors report some positive aspects of drought in the form of increased awareness of mental illness and factors triggering depression, as well as more help now being available to those affected by drought.

A report commissioned by the Birchip Cropping Group (Birchip Cropping Group 2008) identifies some drought-related trends affecting families in the Wimmera Southern Mallee Region of Victoria. Its primary findings are that drought erodes farming families' financial reserves and worsens their other problems. They may be forced to take on more debt, sell assets or eat into their savings. They may lose faith in farming as a livelihood. One of their major coping strategies is to

commit more money, time and energy to off-farm interests to help protect themselves against further financial impacts of drought.

Gender roles

Stehlik, Lawrence and Gray (2000) focus on women's experiences of drought and confirm that drought as a disaster is experienced differently by men and women. Similarly, Alston (2006) has pointed out the gendered way in which drought is experienced. In particular, she has reported on the ways women's stories and women's contributions to the economic and social survival of farm families that are enduring drought may be accorded secondary status to those of the men who are principally designated as 'the farmers'.

While reporting from a developing country context very different from Australia, Tichigwa (1994) also identifies important ways in which drought can affect rural women and result in economic, environmental, social and health impacts. The policy implications he draws are relevant to Australia in that he advocates strengthening women's roles as farmers in their own right, and recognising the additional burden that child-bearing and child-care responsibilities place on women—these responsibilities may constrain their adaptation to drought. For example, women with dependent children may find it difficult to work off-farm to earn extra income to help compensate for losses in on-farm income during drought (BRS 2008a).

Alston and Witney-Soanes (in prep.) point out that women may have an increasingly active role on farms as a result of drought, and may have to undertake the labour that might previously have been provided by hired farm hands. In addition, there is increasing pressure for them to obtain off-farm work to maintain family incomes. However, there appear to have been some positives, including rural women's increasing use of new technologies, particularly the internet, to help maintain social interactions.

On the other hand, drought's impacts on farm men may include leading them to spend longer hours working on farm as farm labour becomes unaffordable; increasing their feelings of loneliness and depression; making them withdraw from social interaction; making their health poorer; and leading them to drink more alcohol. Men may be more reluctant than women to seek help, partly due to pride and the stigma of admitting to mental health issues (Alston and Witney-Soanes in prep.).

Isolation and distance

Isolation and distance from services exacerbate many of the issues mentioned above. Fagan and Bowes (2004) specifically discuss isolation in rural and remote communities. They point out the many challenges that geographically isolated families face in relation to matters like their distance from other members of their extended family, their transport costs and poorer access to public transport, possibly poor telecommunications services, and the particular issues that arise during family emergencies or illnesses. These are ongoing challenges for these families, but also ones that can be made more difficult by drought—for example if drought stresses lead to more illness, or family financial situations worsen and families cannot afford particular services that help overcome the disadvantages of isolation.

Supporting points about the effect of isolation and distances on access to health care services have already been made in the sections entitled *People's physical health* and *People's mental health*.

Family life stages

A further point to be kept in mind when considering drought's impacts on farm families is family 'life stages' and the ages of farm household members. People at different life stages are faced with different kinds of decisions. As Foskey (2005) points out, the average ages of Australian farmers are considerably older than those of people in most other occupations, and have been steadily increasing over recent decades. The increase in farmers' average age is due both to the fact that fewer and fewer young men and women are entering agriculture, and that older farmers are delaying retirement (Barr *et al.* 2005). Older farmers may be reluctant to retire because they see

this as an acknowledgement of ageing and as foreshadowing a loss of the independence that has been central to their life and identity as farmers. This may also be a major factor in their resistance to exit and adjustment programs aimed at encouraging ‘non-viable’ producers to leave agriculture. Not having a family member they can pass the farm onto is also a contributing factor for some families. Recent low or negative investment returns have undoubtedly eroded the superannuation savings of many farmers, possibly making retirement unaffordable for them. In addition, the fact that many farmers are in older age groups and have correspondingly relatively low levels of formal education may contribute to their lack of resilience and adaptability in the face of drought.

Foskey (2005) believes that it is important to provide advice and assistance specifically focused on helping farmers and farm families envisage life outside farming, and that their farming peers who have made this transition may be the best people to provide this advice. This suggestion relates to the service needs of rural Australians, discussed further in the section entitled *Support Services*.

Gaps in research on rural families

In addition to the research discussed above, two papers discuss gaps in rural social research in a more general sense, and mention items relevant to rural families. The two papers are a report by Black *et al.* (2000) on research priorities for rural communities and rural social issues, which contains some recommendations relevant to research on farm families; and a paper by Holmes (2006) on the broader changes occurring in Australian agriculture and corresponding emerging research needs.

Black and his co-authors suggest that it is important to focus on issues that have the potential to inform public policy-making, public discussion and/or social practice. This is very much the focus of this review. They further suggest there is a need for further research on farm sizes, and the business structures of farms—which would include family farms as well as other kinds of farms.

The second point highlights the increasing significance of corporate farming in Australia, and the need to better understand how corporate farms and their decision-making processes differ from those of family farms (Tonts and Black 2002).

A further recommendation in the Black *et al.* (2000) report deals with research on demographic change in rural Australia. In relation to rural families, there is a place for more detailed work on the reasons why people choose to stay in or to leave rural situations, and the role drought plays in their decision-making—and particularly on the reasons why young people choose to leave rural situations, and why older people choose to stay, in spite of drought impacts.

Closely related to this recommendation is the need for research on appropriate decision-support services tailored to the needs of rural families facing drought. These support services need to recognise the family dimensions of decision-making processes, and also acknowledge that not only farm families but other rural families may need this kind of support during drought.

Holmes (2006) highlights the changing mix of social values affecting rural Australia, and in some cases, driving changes in land use away from agricultural production to amenity, lifestyle and protection values. This mix of competing values can be reflected in family decision-making processes, as well as influencing farmers’ opportunities to exit farming and sell their properties. These changes in the mix of values in rural areas need to be included in research into family decision-making during drought. Holmes’ work also highlights the fact that the research agenda tends not to acknowledge sufficiently the fact that many farm families now depend largely on off-farm income and, in this respect, on-farm primary production may be only one source of income for them and part of a broader set of livelihood strategies that enables them to continue their farming lifestyles. A better acknowledgement of the diverse financial strategies being followed by farm families, particularly those in peri-urban areas, is warranted. It is this very diversity that allows many families to remain on-farm during drought and reduces their need for income support.

Some social researchers would focus on the need for additional research that documents ‘lived experiences’ of rural families during drought rather than just presenting ‘facts and figures’. This is very much a call for more research using ethnographic and phenomenological methods, along the

lines of the work done by Stehlik *et al.* (1999) and Alston and Kent (2004). This kind of work allows farm families to describe their own experiences in their own words.

There appear to be significant gaps in our understanding of drought's impacts on Indigenous families and communities. This results partly from the strong focus of drought research on farming, farm families and farm businesses. However, rural and remote Indigenous families and communities, whether engaged in formal agriculture, more traditional subsistence hunting and gathering activities, or 'bush food' industries, are all likely to be affected by drought—for example, their health may suffer as bush food becomes scarce. This warrants further research and a broadening of the research agenda to include this already highly disadvantaged population segment. Research on Indigenous families and communities is becoming an increasingly important part of the picture as the area of land in rural and remote Australia managed by Indigenous people continues to increase. A similar point can be made about the need for further research on other kinds of non-farming families and communities in rural Australia, and how drought affects them.

Community development and sustainability

Many of the points made under the theme of *Family life* also apply to communities—as communities are made up of families and households combined at different geographical scales (communities of place), or in relation to particular interests (communities of interest).

There are a number of excellent sources of regional statistics—if 'community' is interpreted as 'region'. They include the National Regional Profiles (ABS 2008c), which provide a range of social and economic statistics for regions; the Bureau of Infrastructure, Transport and Regional Economics' taxable income data base, which contains small-area data on a range of indicators and enables inter-regional comparisons (BITRE 2008); and the same Bureau's study of the effects of government interventions in pursuit of regional development (BTRE 2003). All these sources can be examined for information on areas currently subject to drought.

The 2008 *Country Matters* summary booklet on *Social fabric* discusses many topics relevant to identifying key statistics related to rural communities and drought's impacts on them (BRS 2008d). Some of these topics include community participation and isolation, community volunteering, the role of women in communities, recent arrivals from overseas, and population ageing and need for services. Some key points are summarised in Table 7. The summary concludes that drought poses increasing difficulties in maintaining the social fabric or social capital of rural and regional Australia, and hence may threaten the viability of some rural communities.

Burnside (2007), in a study for the National Land and Water Resources Audit, examines the relationship between community vitality, viability and health, and natural resource management. The study aims to investigate how links can be drawn between socio-demographic factors (human, social and economic capital), at a community and regional level, and natural resource outcomes. Burnside argues that communities that are vital, viable and healthy are characterised by such factors as growing and mobile populations, high social capital, good administrative and decision-making capacity, availability of skills and experience, economic resources, willingness to use external information, and the quality of leadership and networks. Hence measuring vitality, viability and health requires indicators of these kinds of factors. Burnside considers that higher levels of community vitality, viability and health add value in encouraging investment in land use planning, provision of resources, and management of natural resource strategies, programs and investments at the regional and local scales. So it might well be inferred that community ability to manage the social impacts of drought could also be related to measures of vitality, viability and health.

Table 7: Some key statistics for rural communities

Topic	Statistics and notes
Community participation and isolation	In 2006, 63.5% of households in rural areas were connected to the internet, second only to people in major urban centres (66.1%), and higher than those in regional centres (54.8%) and small towns (51.3%) In 2006, only 2.8% of rural dwellings did not have a motor vehicle, in contrast to 11.2% of dwellings in major urban centres
Volunteering	In 2006, 27.9% of people in rural areas and 26.6% of people in small towns undertook voluntary work, as compared with the national average for the Australian population of 19.8%
Role of women	In 2006, mothers in rural areas had higher levels of participation in the work force than mothers in regional centres, small towns or major urban centres (71.0% of mothers with dependents in rural areas participated in the workforce as compared with 67.3% of similar mothers in major urban centres) In the five years to 2006, the greatest <i>increase</i> in the level of participation by mothers in the workforce occurred in small towns and regional centres. This is a possible response to flow-on effects of drought in the form of reduced agricultural incomes in rural areas, and hence a greater need for other income sources
Recent arrivals from overseas	In the five years to 2006, 65 100 people from overseas settled into regional centres—an increase of 39.1% over the figure for the five years to 2001. In the five years to 2006, 3500 people from overseas settled into small towns, and 16 900 into rural areas outside towns and regional centres. New arrivals may contribute to cultural and ethnic diversity and enhance community resilience and adaptability during drought, as well as making local services (e.g. schools, health services) and local businesses more viable than they would otherwise be
Population ageing and dependency	The total population of rural and remote Australia decreased between 2001 and 2006, possibly making community services in some places non-viable Over these five years, dependency ratios decreased in rural and regional Australia due to a decrease in the number of children—thus accelerating the rate of population ageing overall, and possibly increasing the need for aged care services

Source: BRS (2008d, 2008e)

General impacts on rural communities

Two recent reports provide overviews of drought's impacts on rural communities—the report currently being prepared on drought's social impacts in the Murray–Darling Basin (Alston and Witney-Soanes in prep.), and the report prepared for the Birchip Cropping Group on the effects of drought in the Wimmera Southern Mallee Region of Victoria (Birchip Cropping Group 2008).

Alston and Witney-Soanes (in prep.) report that major issues affecting communities in the Murray–Darling Basin as a result of drought fall under the headings of population loss; loss of skills and local knowledge; mental health issues; increased crime (reported in Bourke Shire in New South Wales); changes in family structures; increased marriage separations; increased poverty; and community disharmony and increased conflict. Respondents to the survey they conducted reported that there was a general decline in participation in community groups, and therefore a loss of social capital. Respondents noted that an increased demand for services had gradually resulted in increased funding and additional staff for some drought-related services. However, some respondents also commented on the difficulties of attracting service professionals to parts of the Basin. Loss of population had reduced the rating base for some local governments and made it more difficult for them to continue to provide community services. In relation to the issue of community disharmony, there were comments to the effect that changes in water allocations in the Basin had led to tension between community groups.

The Birchip Cropping Group report (2008), while focusing on farm families, provides some comments about the concerns that farm families have about their local communities. Many of the study's interviewees strongly valued their local communities and had a strong 'sense of community'. They expressed concerns about population loss and its effects in increasing community vulnerability, and the sense of social isolation and of shrinking support networks they experienced when their neighbours left. Their concerns were not only for themselves and their neighbours, but also for their local towns and communities. A further area of concern related to population decline was that it led to loss of the community volunteers who were so essential in providing many services and supporting local organisations (BRS 2008a). A remark to this effect was:

The town is getting smaller and the pool of people that are willing to do things is shrinking. That is one thing that I worry about—is where that is going to be in another 10 or 12 years. (Birchip Cropping Group 2008, p.168)

There were also comments on changing community composition and the arrival of new people who were different from those who were leaving, and who were sometimes seen by the 'locals' as undesirable additions to the community (Birchip Cropping Group 2008).

Rural community diversity and agriculture's significance

A study entitled *Profiling rural Australia* (Chapman and Greenville 2002), examines the effects of changes in agriculture on rural towns. It emphasises that despite the continued decline in the importance of the agriculture sector to the overall Australian economy, this sector remains important to many rural and regional towns. Through case studies, it demonstrates that the importance of the agriculture sector *increased* between 1991 and 1996 in some towns in the wheat-sheep belt, including Emerald in Queensland and Griffith in New South Wales. Towns where the agriculture sector *declined* in relative importance tended to be in the pastoral zone. The authors interpret this as indicating that in the pastoral zone locations, there were no viable alternative agricultural production activities and hence agriculture diminished in significance overall in the economies of the respective communities. In other locations, farmers were able to adjust their agricultural production mix according to changes in commodity prices, and hence agriculture maintained its significance in their regional economies. This highlights the significance of diversity in agricultural production systems in helping to buffer impacts of change, including drought.

More generally, it is clear that rural communities with more diverse economic bases, and where agriculture is a less dominant component of the local economy, are likely to be less vulnerable to drought's impacts and may be more sustainable in the long-term (Fincher 1999). Some comments made in the Birchip Cropping Group report (Birchip Cropping Group 2008) are also relevant here in that they refer to community compositions changing as a result of drought. While these changes may be seen as undesirable by traditional rural residents and traditional farming families, they may also ultimately lead to more diversified rural communities and economies.

Farm business structures and rural communities

The nature of farm business structures is relevant to rural communities, their responses to drought, and their overall sustainability. This aspect of structural change is often neglected. Tonts and Black (2002) point out that Australian agriculture is experiencing a gradual shift away from traditional family farming towards more corporately-oriented farm business structures. However, family farms, where decisions about farm management and indeed whether or not to continue farming, are made within the family unit, still represent the dominant type of farm structure in Australia. In some sectors, for example broad-acre beef production, corporately-owned farms are significant players. It is likely that corporately-owned farms adopt different risk management strategies from family farms, have different effects on local labour markets, different service and infrastructure requirements for their workforces, and different implications for local community interactions and

social structures. Correspondingly, they are likely to affect all these aspects of community responses to drought.

Rural community poverty and disadvantage

Several studies investigate rural community poverty and disadvantage. Posselt (2000) applies a combination of classifications of accessibility and remoteness (the ARIA index), and the ABS 'section of state' classification, to examine broad patterns of social disadvantage in Australia. His major findings are that:

- the majority of people living in disadvantaged areas live in major urban centres
- those living in remote areas, while relatively small in number, are the most disadvantaged group in Australia from a locational perspective, in terms of accessing goods and services, and in terms of their socio-economic characteristics (e.g. education and income)—this is highly associated with the fact that many of these people are Indigenous
- rural and regional areas, between major urban centres and remote areas, have an over-representation of people living in less-advantaged areas
- more generally, there are clear spatial differences in socio-economic characteristics and levels of disadvantage that need to be taken into account in delivering services.

A paper by Hall and Scheltens (2005) explores how drought is portrayed by the media and by rural people calling the Australian Government's Drought Hotline, which was set up in November 2002 to provide advice to distressed rural people through Centrelink. The hotline primarily provided support for financial assistance claims, but also gave immediate access to counselling and support during 2002-03. The authors conclude that although drought is primarily framed by the media as a 'crisis', rural people's own stories reveal a complex picture of entrenched and chronic problems that go well beyond drought. They consider that the stories indicate chronic rural disadvantage and that improved ongoing support services are needed for rural communities, not just ones that focus on 'crises' like drought.

Gaps in research on rural communities

A number of the gaps that can be identified from this brief review, and from the workshop discussion, relate to the need for studies that trace the flow-on effects of drought from farmers and farm families to other segments of rural communities and other rural businesses. This could include, for example, the retail sectors of rural towns and regional centres in drought-affected areas. A comment was made at the workshop that good data exist on farm businesses but the information about impacts on town businesses is 'mostly anecdotal'. An exception to this is a study on the impact of drought on small business in Wee Waa (Spanswick *et al.* 2007). It found significant flow-on effects to local businesses, schools and health organisations. For example, permanent staff numbers in small businesses in Wee Waa fell by 60 per cent between 2004 and 2007, and casual employment fell by 40 per cent. This highlights the fact that not only farm families and employees are affected by drought, but also employees in other rural business sectors. Similarly, the report by Alston and Kent (2004) traces some of the flow-on effects of drought in the New South Wales' communities studied, as also do the reports by Alston and Witney-Soanes (Alston and Witney-Soanes in prep.) and the Birchip Cropping Group (Birchip Cropping Group 2008). While it may be difficult to conclusively demonstrate how much of these impacts are due to drought as opposed to other factors, there is clearly a place for further studies that take a whole-of-community approach to the social and economic impacts of drought.

A more systems-oriented approach is also needed to trace the flow-on impacts of drought from specific locations and specific communities to larger regions, and to see how these impacts are reflected in larger-scale social and demographic changes. Social researchers often talk of these challenges as being ones of connecting micro- and macro-scale social processes. This is where

some of the aggregate social indicators constructed to measure concepts like community vitality, adaptability or vulnerability, at different spatial scales, have a place.

Another gap that can be identified is the need for longitudinal studies of drought impacts on communities. Largely because of research funding constraints, most studies are ‘one-off’ snapshots and few researchers have the opportunity to do longitudinal studies that span a number of years. These longer-term studies are potentially very valuable in allowing us to understand better how communities adapt to chronic drought conditions and, hopefully, those factors and conditions that support recovery from drought when it ends.

Comments made at the research workshop echoed those made in the report by Black *et al.* (2000), to the effect that social equity and social inclusion research largely neglects rural Australia. This kind of research would focus on identifying rural people and communities that are systematically disadvantaged or excluded, for example in relation to drought support, and exploring ways in which this disadvantage can be reduced. Points have been made earlier in this report about the lack of focus on Indigenous people and communities in rural and remote Australia. They provide an example of a group that is systematically disadvantaged in many ways, but there may well be other disadvantaged groups and communities in rural Australia that warrant special attention and action—for example, rural people from non-English-speaking backgrounds.

Support services

Some key statistics related to rural service provision and rural communities' perceptions of their access to services are given in Table 8. A wide range of services is relevant both to the overall quality of life in rural and regional Australia, and to providing specific advice and assistance to help rural people cope with drought's impacts. These services overall include employment, social work, counselling (including financial counselling), transport, communications and information technology, aged care, and continuing access to basic community services and infrastructure like water, electricity, and sewerage services; housing; health care; education; emergency services; banking; and postal services.

In relation to drought support services, DAFF provides a comprehensive summary of the measures provided by the Australian, State and Territory Governments, which is available online. The latest edition was published in February 2008 (DAFF 2008b). Appendix D of the Expert Social Panel's Issues Paper (given here as *Appendix I*), also provides a list of services directly relevant to drought that are provided in the different states and territories. Similarly, the recent report by the Productivity Commission (2008) specifically focuses on drought support programs and services provided by government. In the time available for this review it has not been possible to examine these different services individually or to examine service provision by state and territory. This is partly because, while there is considerable published research on different aspects of rural services, many of the individual services may not have been the subject of formal research or evaluations available in the published literature. In addition, relatively little published work on rural support services has a primary focus on drought, and possible implications for providing drought services must often be inferred.

Table 8: Some key statistics on rural service provision and perceptions of services

Topic	Statistics and notes
Population change	Loss of population (particularly of young people) from rural and remote areas threatens provision of some services and may increase relative demand for aged care services as the overall age of the population increases – over the period 1996-2006, the population of rural areas decreased by an average of 0.8% per year (BRS 2008e)
Population shift	Population shift to larger regional centres, due partly to decreased employment in agriculture in rural areas, may encourage centralisation of services – the population of regional centres grew by more than 20% over the period 2001-2006 (BRS 2008d)
Role of volunteers	Provision of services and community facilities is highly dependent on volunteer contributions – volunteering rates tend to be higher in rural areas (27.9%) and small towns (26.6%) than the national average (19.8%) (BRS 2008d)
Declining population and volunteers	May lead to a smaller pool of potential volunteers, with implications for services dependent on volunteering (e.g. the Rural Fire Service) (BRS 2008e)
Internet connections	In 2006, household internet connections in rural areas were relatively high (63.5%), as compared with those in major urban centres (66.1%), and higher than those in regional centres (54.8%) and small towns (51.3%) (BRS 2008d, 2008e)
Transport and motor vehicles	Only 2.8% of rural dwellings did not have a motor vehicle in 2006, as compared with 11.2% of dwellings in major urban centres (BRS 2008d, 2008e)
Perceptions of access to services	Recent data from the HILDA survey indicate that only 9.1% of rural people think they have adequate access to services, as opposed to 40.0% of urban people (Hogan <i>et al.</i> 2008c)

Models and approaches to service delivery

Two special issues of the journal *Rural Society* (Volume 14, Number 3, 2004, and Volume 15, Number 3, 2005) focus on human and social work services for Australian rural communities and contain a number of papers relevant to discussing support services in times of drought. Many of these papers identify losses in services that many rural communities have experienced over the last few decades, and the increasing stress that some rural residents are experiencing—see for example Stehlik (2004). Losses of services like banking and postal services may relate partly to population declines in some rural areas, as discussed earlier in this report.

Alston and Kent (2004), Alston and Witney-Soanes (in prep.) and the Birchip Cropping Group (2008) do address questions of support services during drought, drawing on information collected from drought-affected people and communities in New South Wales, the Murray–Darling Basin, and the Victorian Wimmera Southern Mallee Region. The first authors argue in a more general policy sense that withdrawal of services in rural areas relates particularly to neo-liberal responses to globalisation that place greater reliance than formerly on market forces, greater stress on a ‘user-pays’ philosophy, and a commitment to private sector provision rather than government provision. The relationship of this to the various policy responses to drought identified by Botterill (2004) is evident. The contrasting policy approaches to providing services may focus more on social welfare rather than structural adjustment or economic efficiency.

Alston and Kent’s (2004) study is based on three farming communities in New South Wales: a remote town in the far west (areas around Bourke); a broad-acre farming region in the central west (around Condobolin); and an irrigation community in the south-west (around Deniliquin). They conclude that the shift in policy from viewing drought as a natural disaster to viewing it as a manageable risk has led to some farming families slipping into poverty, while at the same time, loss of services has left them with reduced support in their own communities. One result was that local charitable organisations were ‘critically overloaded’ and access to services was compromised. Alston and Kent (2004) advocate a move to rural service models that are:

- culturally appropriate and do not carry a social stigma
- involve better cooperation between government and non-government service providers
- ‘managed close to the ground’ rather than from distant regional centres.

However, their main message is that the language of drought support needs to change from one of managerial responsibility and adherence to market principles, to one of social justice.

Alston (2005) further proposes a new model or paradigm for social work to respond to the crisis facing rural Australia. Her model advocates a key role for rural social workers in responding to local needs, drawing on the strengths of rural people and communities, and providing leadership, policy advice, counselling, community development, advocacy, social planning and project management. The model also aims to move away from a reformist policy framework that values economic objectives, to one that aims to strengthen and support people who choose to live in rural areas.

Alston and Witney-Soanes (in prep.) comment on the need to break down barriers to people seeking help during drought and make it more socially acceptable for rural people to ask advice, including from service professionals. They suggest a role for ‘community resilience groups’, and consider that it would be valuable to provide first-aid training to families, community leaders and non-clinical services in drought-affected areas. They also suggest that more innovative approaches could be adopted to take mental health information to rural people where they live and work—for example at rural field days. Similarly, the Birchip Cropping Group (2008) comment that some farming families have to change their mindsets before they will seek and accept drought assistance, and also make recommendations about the need to provide decision support services to help

families make difficult decisions arising from drought. They suggest a role for mentoring schemes and services that help assess farmers' skill sets, and provide career and employment advice to them. In a general study of welfare and support services for farm families, Stayner and Barclay (2002) report that service providers themselves consider that pride is the greatest barrier farm families have to overcome in approaching them and using their services, followed by a lack of knowledge about what services are available.

In a more specific study of a particular service, Paton and Cuckson (2004) focus on the Rural Family Support Worker Service run by the Queensland Department of Family Services in central Queensland, and examine how appropriate the model being applied is in delivering services, and how effective it is in meeting the needs and expectations of stakeholders. Like Alston and Kent (2004), they conclude that to be effective, service provision needs to be locally-specific and client-focused. Community credibility and trust are key success factors, as also noted by Stayner and Barclay (2002). Paton and Cuckson quote Funnell (2004, pp.10-11) in repeating that:

Without an understanding of the lived experience of marginalised people many good ideas, potentially sound approaches and methodologies can become perverted. Scarce resources can so easily be wasted.

Lynn (2004) discusses approaches to rural human services provision in Victoria and attempts made there to offer a generalist approach that integrates individual and community needs, and involves partnerships between community and government. She concludes that these attempts have not been truly egalitarian and government still maintains a dominant role. In terms of engagement and partnership with communities, the attempts have not been well-integrated with other initiatives and tend to be re-created as another specialised activity. These limitations constrain the success of a partnership and community development approach.

A specific Drought Mental Health Assistance Package was announced by the New South Wales Premier in 2006, designed to build capacity to deal with prolonged stress in rural communities affected by drought (NSW Department of Health 2008). It was coordinated by the New South Wales Centre for Rural and Remote Health. The final report of the project provides a number of recommendations about the model and approach that should be used:

- a capacity building model is needed and cross-agency partnerships developed with other rural service providers at both local and state levels
- clear communication and marketing strategies are needed for all involved
- appropriate resources need to be developed for professionals and community members
- for 'crisis' situations, an appropriate central body is needed to coordinate state-wide responses
- close consideration needs to be given to the needs of individual communities and appropriate consultation conducted with stakeholders and potential partners
- as drought continues, both a medium and longer term approach is needed with a focus on cross-government and cross-agency responses; high need populations and specific individual issues; building community resilience; and strategies that are responsive to current economic, human and environmental impacts on rural communities
- there is a need to be able to rapidly deploy staff in response to rural crises and disasters, including interim arrangements to provide visiting teams when there are few local resources, and ability to 'fast-track' recruitment and secondment processes.

Mlcek (2005) advocates a 'paucity management' model for human services delivery in rural Australia. 'Paucity management' is a form of management appropriate to complex situations and which is capable of addressing potentially limiting situations like the rigorous, time-consuming accountability regimes required by government, and overall lack of resources. It requires

innovation and creativity, and an ability to replace one form of complexity with another to address the divide between what service providers are supposed to do or have to do, and what they can actually do given the resources they have available.

Service providers and their needs

Several studies focus on the staffing side of rural services and the challenges faced by service providers working in rural and remote locations. Green and Gregory (2004) discuss the similarities and differences of providing rural and remote services as compared with providing urban services, using material gathered from two case studies of social work and welfare professionals in Victoria and the Northern Territory. They find that major differences between the two contexts were that rural and remote practitioners felt that they faced more personal and professional ethical dilemmas and concerns about their personal safety; were more dissatisfied with organisational and working conditions; and remote area practitioners in particular felt they lacked professional support and professional networks. Stayner and Barclay (2002) report on the perceptions providers of services for farm families had of their own skill and training needs. These service providers considered that they needed special attributes, skills and training to help them understand the 'rural ethos' and develop empathy with rural people; up-to-date information on available services; an understanding of the need for confidentiality in their dealings with rural people; support from relevant professional groups; good communication skills; and life experience and maturity.

A paper by Green and Lonne (2005) discusses occupational stress experienced by rural human service providers. It reports that social workers, welfare workers and other service providers living and working in small rural communities say that they are generally highly satisfied with their work and lifestyle but, paradoxically, they also report high levels of occupational stress and may experience 'burn-out'. Addressing this kind of stress requires systemic and structural strategies—employers have a key role in developing and implementing these strategies.

Cheney, Willetts and Wilson (2004) consider the needs of rural general practitioners and their relationship to social values and demographic change. They report that there continues to be high demand for health services and many rural and remote areas are under-served. Many patients must travel considerable distances for basic medical services. These disadvantages have been discussed in the earlier section of this report entitled *People's physical health* (see also Figure 9). Cheney *et al.* (2004) also note an increasing demand in rural areas for female doctors. General practitioners themselves want support for their family's needs as well as their own, including flexible work practices and support for professional development. Support for spouses' and children's educational, employment and lifestyle needs are also a priority. Cheney *et al.* (2004) advocate integrated strategies to address these needs—strategies that are aimed at broader-level change in the community and involve cross-sectoral approaches.

Chenoweth (2004) argues that living and working in rural communities poses significant challenges for human service providers and that they need special preparation for this kind of work. She considers that there is evidence that rural practice differs from urban in requiring more generalist skills, a better appreciation of space and place factors, a need for practice to be embedded in communities, an ability to work with Indigenous people, an awareness of the problems and opportunities posed by technology, and an ability to both live and work in a small community where it may be difficult to separate personal and professional life. To adjust to these differences, student rural placements may be valuable, together with more integrative education for human service practitioners. Some of these kinds of needs have been addressed in recent Australian Government policy initiatives.

Similarly, Cheers, Darracott and Lonne (2005) discuss 'domains' of rural social work practice, and also stress the need for practice to be embedded in communities, and for practitioners to be independent and reflective about their practice. They consider that practitioners are most likely to be able to achieve 'best practice' when they are connected with the community and place, have an effective organisational structure that allows autonomy, a position and practice that matches their

skills, and an integrative and reflexive orientation toward practice, development, and personal and professional domains.

Equity and disadvantage in access to services

Some work has been done with a primary focus on inequities in access to services in Australia—with an emphasis on particular population sub-groups or particular kinds of locations. Some of this work has already been discussed in the thematic sections of this report.

It is well-established that Indigenous communities in remote Australia are particularly disadvantaged in terms of their access to services and infrastructure, and the reliability of the services they can access (ABS 2008b). However, the extent to which this disadvantage may be further exacerbated by drought and its associated impacts, or how Indigenous communities needs for services might be affected by drought, does not seem to have been studied.

In terms of spatial disadvantage, Fincher (1999) has suggested that the spatial distribution of disadvantage in Australia has been shifting substantially over the last few decades and that new areas of disadvantage are appearing that include some small rural towns. The towns most likely to be affected are those whose economies are not diversified and that are most dependent on agricultural income. These are also the towns likely to be most vulnerable to the effects of drought. Fincher suggests that these kinds of towns may require ‘spatial affirmative action’ in which they are singled out for special investment or targeted in government programs. This action could include providing incentives for investment of certain kinds with the social objective of specifically sustaining the respective communities. It could also include special efforts to develop partnerships with local community volunteers and organisations to deliver and manage services. This may well be an appropriate strategy to help ensure services continue to be provided in places that are suffering particular disadvantage as a result of drought.

Gaps and areas for improvement

On the basis of this overview of recent research on services in rural and remote Australia, and how service provision may be affected by drought, the focus appears not to be so much on *gaps* in services, but in how *existing* services can be improved and made more appropriate and accessible to drought-affected communities, families and individuals. The major message is that it is not just *what* services are delivered but *how* they are delivered that is important. This is a major potential area for improvement.

However, there are clearly marked inequities in access to services, both between rural and urban Australians, and between rural Australians in different locations and in different circumstances. The poor level of services available to remote Indigenous communities, and the lack of understanding of their needs in times of drought, is clearly one gap that deserves further attention and action. So also are the spatial inequities between different small towns—the plight of small towns that are heavily dependent on agricultural income and hence have narrow economic bases is clearly a subject that warrants further work, as these are the towns most vulnerable to downturns in agricultural production resulting from drought.

In relation to the research on models and approaches to rural service delivery, and on service providers and their needs, the implicit message is that both the *demand* and *supply* side of rural services need attention.

At a more detailed level, there is much more scope to examine particular services individually and service provision by state and territory, as well as at the national level. There are many potentially relevant services, and these services should be evaluated individually as well as collectively. As pointed out earlier in this report, this review would benefit from additional evaluations focusing on the impacts and implications that drought has for service provision at the different jurisdictional scales, and from spatial analysis of how services are distributed in relation to drought-affected areas. Alston and Witney-Soanes (in prep.) have developed a spatial classification of drought’s

social impacts in the Murray–Darling Basin and mapped this against the ABS Socio-Economic Index for Areas (SEIFA), but more work of this kind could be done to help identify spatial disadvantage in access to drought-related services—for example covering all EC-declared areas, not only those in the Murray–Darling Basin.

Clarifying policy objectives

The literature raises important questions about the underlying objectives of providing support services that mirror the policy questions underlying drought policy as a whole. Is government aiming merely to ameliorate the most unacceptable social impacts of drought by providing support services to those most affected (a ‘welfare safety net’), or does it have positive policy objectives related to correcting inequities in access to services or ensuring that particular rural communities survive and prosper? These are clearly key questions. If service provision aims to correct inequities or actively sustain particular communities in times of drought, there is a place for targeted assistance along the lines of the ‘spatial affirmative action’ suggested by Fincher (1999), as well as more broadly-based assistance. However, any affirmative action needs to be supported by appropriate evidence and analysis that provides a convincing case for choice of targets. Applying indicators of the various kinds of social and human capital; social disadvantage; or community vulnerability, vitality, resilience, or adaptability; as discussed earlier in this report, can help identify communities and places that need special help.

Demand for services and the nature of services provided

On the demand side, there are some socio-demographic statistics that provide possible indications of likely future demands for services as the rural population continues to age and as the effects of drought and climate change continue to be felt. Some of the research reviewed here also provides lessons about the kinds of services rural communities want—services that are tailored to local circumstances, embedded in local communities, locally run and managed, and that do not carry a social stigma in the eyes of rural people. The fact that many rural people have an underlying distrust of government and outside ‘experts’ also needs to be remembered (Stehlik *et al.* 1999)—this distrust may be partly overcome if the services are provided by well-known local people who are accepted as being part of the community. The recommendations made by Foskey (2005) about the potential value of involving farming peers or other rural community members who have faced the same situations as those seeking help, are very relevant here.

However, local provision and management raises a dilemma about how to coordinate service delivery over wider scales—for example the regional and state level, particularly in times of widespread drought. It also raises questions about the respective responsibilities of different levels of government in providing services, the range of services they provide, and the roles of government and non-government providers. A number of the authors whose work has been reviewed in this section advocate a community partnership-based model for service delivery, and assign important roles to community organisations. The important roles of volunteers in providing many rural services also need to be remembered, and the fact that chronic drought is likely to take its toll on many of these volunteers (Birchip Cropping Group 2008, BRS 2008a).

Supplying service professionals and their role

On the supply side, if services are to be delivered in a sustainable way, they must have some level of secure staffing, even if volunteers also contribute significantly. This means that potential new service providers must have realistic expectations about rural life, must have appropriate training, and must be able to satisfy their family and lifestyle needs in the rural communities where they work. This has implications both for the education and training of rural service providers and for the strategies that rural communities adopt to attract professionals to their communities and ensure that they stay. More work may well be warranted on the kinds of incentives that might be offered to encourage service professionals to move to currently under-serviced rural and remote locations.

Potential gaps in service provision can be partly resolved if rural service providers have the training and skills, and the latitude from their management, to be able to adopt flexible and integrative approaches to their work, and to be able to take on new roles as circumstances demand. This is the very broad kind of function that Alston (2005) advocates for rural social workers—but which could also apply to some extent to other rural service providers. A willingness and ability among rural service providers to take on a broad range of roles may be an appropriate response to circumstances where resources are limited, and where needs may change dramatically over time—for example in response to drought and the changes it brings to rural people’s circumstances. However, it may well raise difficult questions about training and accreditation and the accountabilities of government staff.

Conclusions

This review has discussed relevant literature with the primary aims of identifying trends and drawing out:

- key findings and key statistics related to the social impact of drought on farm families and rural communities, under the five themes of employment, education and training, people's health, family life, and community development and sustainability
- gaps and areas for improvement in relevant support services.

The report has provided a background to Australia's national drought policy, reviewing major events since 1989; summarised relevant policy critique and analysis; and reviewed some key concepts and themes being applied to drought policy and adaptation to drought.

The policy critique is valuable in that it provides a basis for discussing a range of competing value positions on drought policy—these positions vary in the extent to which they focus on promoting economic efficiency and farming as a *business*, versus focusing on social welfare considerations and farming as a *lifestyle*. Also, there are varying positions on the nature and extent of government interventions that are desirable, including the appropriate kind of government support for farmers and rural communities during drought. A recurring theme in this review is the mismatch between the values and assumptions of policy and those of rural people—and policy makers' and rural people's misunderstandings of one another. Of course, researchers also take value stances, either implicitly or explicitly. Some of the authors cited in this review, particularly those who are themselves members of rural communities, identify strongly with these communities and their plight during drought, and tend to become advocates for them.

In terms of organising concepts and themes, the review finds that there are a number of main concepts being applied, particularly to help assess or predict responses to drought at the individual, family, community and regional levels, or at a systems level. These include the ideas and approaches used in formal Social Impact Assessment, adaptation, vulnerability, resilience and complex adaptive systems, collaborative learning, and sense of community and sense of place. Some authors develop indicator frameworks to measure these concepts, and also apply associated ideas based on the ideas of the five 'capitals', and particularly social capital and social fabric. All these organising concepts may have value in adding to understanding of social responses to drought, and predicting *who* is likely to be most affected, or *where* impacts are likely to be greatest. In practice, though, few of these indicator frameworks have actually been applied, and so they are proposals for future research and data collection rather than research findings. One exception to this is an index of vulnerability applied by Nelson et al. (2005) that indicates that many Australian farm households dependent on broad-acre agriculture are particularly vulnerable to structural adjustment pressures, including the effects of drought.

Rural and remote Australia is experiencing some overarching socio-demographic trends that have implications for a wide range of aspects of rural society and culture, including the impacts of drought. These include:

- overall population loss
- population ageing, particularly of farmers (whose median age at the 2006 Census was 52 years)
- loss of young people to larger population centres in pursuit of education and career opportunities
- poorer access to a wide range of services and infrastructure than much of the rest of Australia
- higher levels of male suicide than the rest of Australia

- often a limited range of local employment and career opportunities.

On the other hand, rural families and communities have relatively high levels of home and motor vehicle ownership; high levels of labour force participation; and generally express higher levels of satisfaction with their life circumstances than urban people (Hogan *et al.* 2008c). So the picture is a complex and mixed one.

In relation to *employment*, there are some community-based studies that provide good evidence that drought leads to loss of employment in agriculture, and flow-on effects to employment in rural communities and businesses in nearby towns. These impacts are likely to be most severe in rural areas and towns that are heavily dependent on agriculture and lack economic diversity. Also, when there is a high level of dependence on a single agricultural commodity or production system, and there are few alternatives possible, both the impacts on the farm and the local community are likely to be greater than when there is more agricultural diversity.

When *education and training* are considered, it appears there is relatively little research directly examining the effects of drought on education and training. This includes, for example, the effect of drought on rural people's participation in education and training, the need to modify education and training courses to incorporate aspects related to drought or drought adaptation, or the effects drought has on education and training organisations and their staff. Research by Alston and Kent (2006) on the impacts of drought on secondary education access in Australia's rural and remote areas, found that increased workloads and the debt of farming families led to most young people in the study working long hours both on- and off-farm, and sometimes missing school as a result. Teachers indicated that the drought had had a noticeable effect on poverty levels, and lack of money had prevented students from attending excursions or other events for financial reasons. These kinds of impacts could flow through to access at other educational levels, including post-secondary education and training.

In relation to *health*, people in rural and regional Australia generally have poorer access to health care services and experience poorer levels of health than the rest of the Australian population. They may need to travel long distances to access health services, incurring associated time and travel costs. The extent to which their health is directly affected by drought is difficult to assess with any certainty, although rural people themselves certainly report adverse effects on both their physical and mental health (Alston and Kent 2004). One particular area of concern is the possible effect of drought on male suicide rates—which are already higher in rural Australia than elsewhere. There is good evidence that population death rates rise as temperatures increase above 20°C (McMichael *et al.* 2003). Further concerns relate to the effects of higher temperatures on water quality—as potentially dangerous micro-organisms in water multiply faster in warmer conditions.

Research on *family life* points out that drought has a gender-related aspect and is experienced differently by men and women. Drought may have a range of effects on family life, for example by weakening any incentives for young people to stay on-farm or in rural areas, and making it more critical for family members to obtain off-farm work to supplement on-farm income. The overall extent and significance of these effects is difficult to assess, as the relevant studies are generally based on detailed research work in specific locations, using ethnographic methods that allow people to provide their own accounts of impacts on their families and their lives.

In *community development and sustainability*, the research indicates that, in spite of downturns, the agriculture sector remains important to many rural and regional towns, and their sustainability may be threatened by drought. Community and economic diversity increases resilience. Some of the research points to the fact that there is a need to consider what alternative income and employment opportunities exist, both on- and off-farm, in assessing any possible impacts of drought on rural communities. Other work suggests that there are broad patterns of social disadvantage already existing in Australia, and drought may merely add to what is already chronic disadvantage in these areas. The situation of Indigenous Australians in remote Australia is particularly relevant here. This points to the need for ongoing support programs and assistance for disadvantaged areas and disadvantaged communities, not just ones responding to drought.

In relation to *gaps* in research, a wide range of possible areas for further research has been identified in this review. Perhaps some of the most important gaps relate to better understanding the health impacts of drought—covering both mental and physical health. This has important implications for providing more appropriate and accessible health services. Investigations related to the causes of male suicide in rural areas, and how to prevent suicide, are particularly important. There is also a good deal of basic research needed into rural people's use of health services, and into developing a better overall picture of rural mental health and wellbeing. Points have been made in several places in the review about the lack of attention to the effects of drought on Indigenous people and communities, but there may be other population sectors in rural Australia that are also neglected, for example non-English-speaking people from a range of different ethnic backgrounds. Other research gaps noted are the need for further work that investigates the 'lived experiences' of rural people during drought—including how it affects individual and family decision-making; the need for research on how drought affects access and use of services, including health and education services; and how the effects of drought flow-on from farms and farm families to other sectors of rural towns and communities. Many of these gaps need to be filled by systems-oriented research, and challenge researchers to connect the different scales of the social system.

In relation to *Services*, this review summarises some recent research that focuses on rural services and the needs of rural communities. While it has not been possible to look at individual services in great detail, some messages emerge from the review and from comments made under the various themes. It is evident that it is not just *what* services are provided that is important, but *how* they are provided. A number of issues mentioned under the themes, particularly those related to people's mental health, arise partly because rural people may be reluctant to use some services because of personal barriers and social stigmas associated with them, or because they do not see the services as being ones that are locally-tailored or locally-relevant. The literature emphasises the need for services to be embedded in local communities and run by trusted community members, not imposed arbitrarily from outside.

The review also highlights the need to consider both the *demand* and *supply* side of service provision, and recognise that local communities may need to develop strategies to attract and retain service providers and service professionals to their communities. Rather than focusing on gaps in services, or expecting a comprehensive range of services to be provided in every location, some authors advocate the need for service providers (for example social workers) to be able to take on a flexible range of roles as circumstances require, rather than being restricted to narrowly-defined roles. This may require specially-designed skills and training for service professionals working in rural areas – training that recognises the different roles these professionals play in rural situations from the ones they might be required to play in major cities.

The major finding in the literature review (and reinforced in the Research Workshop) is that rural people have lower socio-economic status, opportunities and options for the future than people living in urban areas. These adverse circumstances continue to be accentuated and extended due to the periods of prolonged drought in many rural areas, and these circumstances for this disadvantaged and substantial component (over 10 per cent of the population) receive little funding priority and overall recognition in social research in Australia.

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Appendix 1: Expert Social Panel Issues Paper

DROUGHT POLICY REVIEW EXPERT SOCIAL PANEL

**Assessment of the social impacts of drought and related
government and non-government social support services**

Issues Paper

June 2008

Welcome

I am very pleased that the Hon. Tony Burke MP, Australian Government Minister for Agriculture, Fisheries and Forestry, has appointed me as Chair of the Panel to review the social impacts of drought. I am joined on the Panel by people with a strong grounding in rural and regional issues, coupled with expertise in social sciences, rural health, welfare and community services.

We all know that living in the bush can be tough at the best of times, but what the Panel is really looking at is how drought impacts on the social fabric of our rural families and communities, including education, training, community development and sustainability, employment opportunities, health and well-being.

As a part of the Panel's work, the Minister has asked us to do two things. First, that we assess the social impacts of drought on farm families and rural communities and second, that we identify any gaps and areas for improvement in related Australian, state and territory government and non-government social support services designed to alleviate the social impact of drought on farm families and rural communities.

The best way for the Panel to do this is to hear as many stories as possible from individuals, groups and organisations, so that we can get a wide range of views from across the country. The Panel is also seeking hard evidence to support its findings. I therefore encourage you to submit research and data to support your story and submission.

There are two ways that you can have your say on the social impact of drought. A series of public forums are being held in rural communities across Australia, that I encourage you, your neighbours and your colleagues to attend. Unfortunately, we won't be able to make it to all towns—so if you are unable to attend a forum, please make a written submission to the Panel by Friday 8 August 2008.

For further details on the public forums and assistance with your submission, please telephone 1800 200 876 or visit www.daff.gov.au/droughtpolicyreview.

This review is an important opportunity for you to contribute to future drought policy development. To do that, we need to hear from you.

A handwritten signature in black ink that reads "P. C. Kenny". The signature is written in a cursive style and is positioned on a light blue rectangular background.

Peter Kenny
Chair, Expert Social Panel

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Introduction

As part of its 2007 election commitments for primary industries, the Australian Government indicated that it was time to reconsider the meaning of drought and exceptional circumstances in a changing climate.

Earlier this year, Australian primary industries ministers agreed that the current approaches to drought and exceptional circumstances are no longer the most appropriate in the context of a changing climate. Ministers also agreed that drought policy must be improved to create an environment of self-reliance and preparedness and encourage the adoption of appropriate climate change management practices.

As part of the review of drought policy, there will be three assessments that cover the social, climatic and economic dimensions of drought. The aim of the assessments is to establish a base-line of information from which all governments can move forward and determine appropriate drought policy and program responses to improve drought preparedness and risk management in response to a changing climate.

This paper has been developed as part of the social assessment, which aims to report on the social impacts of drought on farm families and rural communities and examine the social support services available to mitigate the impact of drought for farm families and rural communities.

The Terms of Reference for the social assessment can be found at Appendix B.

The social assessment will not examine the appropriateness, effectiveness or efficiency of government business support measures, such as Exceptional Circumstances Interest Rate Subsidy and Exceptional Circumstances Relief Payments, as they fall within the terms of reference for the economic assessment by the Productivity Commission. For more information on the Productivity Commission's assessment, please visit www.pc.gov.au/inquiry/drought.

The social assessment is being led by an Expert Social Panel that will consult widely with key stakeholders in the rural and regional sector regarding the social impacts of drought. The names and biographies of Panel members can be found at Appendix C. The Panel will obtain the views of interested parties via public forums in regional areas, and will also be calling for written submissions.

The Panel will report to the Minister for Agriculture, Fisheries and Forestry by 30 September 2008.

Social impacts of drought on farm families and rural communities

Regardless of climatic conditions, a community's well-being relies on individuals and families having an opportunity to lead healthy and safe lives, with access to a range of business, health, community and family support services. Equally important is access to good quality education and training, employment and cultural development opportunities. The success of communities also depends upon the ability of people to live well together, develop a positive community identity, and pursue personal and collective goals.

A community's capacity to maintain these ideals whilst dealing with the impacts of prolonged drought can be affected by its ability, organisation, attitude, skills and resources.

The social dimensions of drought are wide-ranging and typically compound problems that may have already existed within the community. For example, if a community is experiencing a shortage of health, education, housing or employment resources, then the effects of drought will place further strain on those limited resources and affect the ability of providers to deliver effective services.

A degree of stress is normal in life and most rural people are experienced in coping with droughts and various other difficulties. However, a prolonged drought represents a time of major change and crisis for many in rural communities.

Research indicates that social impacts as a result of drought on individuals, families and communities may include:

- people being reluctant to get involved in community activities
- a decline in traditional industries
- volunteer stress or burnout, or an inability to even have a volunteering effort
- the need to and or ability to seek off-farm work
- increased financial pressures
- a decline in the health (both physical and mental health) of individuals and their families
- dealing with questions of whether to leave the farm and/or problems associated with succession planning
- a loss of local farm labour
- an inability to leave the property because of the demands of feeding and water regimes
- the local economy impact from a postponement of capital purchases as a result of drought
- a general increase of working hours with little opportunity for recreation and family time.

How individuals, families and communities deal with these challenges depends on the provision of services, infrastructure and the way they improve relationships, a sense of spirit and hope.

Issues for consideration

This issues paper has been developed to seek your views on the social dimensions of the impacts of drought and the provision of related government and non-government social support services for farm families and rural communities during drought.

The Panel recognises the scope of its Terms of Reference (available at Appendix B) is wide-ranging and touches the lives of many people in different ways. Moreover, the Panel also recognises that some social support services in rural and regional communities are not necessarily drought-driven and form part of broader social policy and delivery. However, the Panel is seeking your feedback on the need for or provision of drought specific programs, services, activities, strategies and initiatives available to farm families and rural communities during periods of stress and change caused by drought.

For the purposes of discussion, this paper has grouped the social impact of drought around five key areas: education and training, community development and sustainability, families, employment and professional development, and mental and physical health. A short discussion on each of these now follows in no specific order of priority or importance.

Education and training

In drought, workloads on the farm may increase and income decrease. This can make it more difficult for individuals to afford or attend education and training services.

Education, training and lifelong learning contribute to building healthy regions and a healthy national economy. Education facilitates both personal and community development by enabling people to develop their talents, interact with others and share their knowledge and experiences.

Increasing the level of participation in educational and training activities in rural and regional areas has two distinct benefits. For industry, it ensures that there is an ongoing supply of adequately skilled and productive labour (human capital) and for individuals, it increases job opportunities and social interaction.

Key questions

- *What is your experience of drought and its affect on educational and training services in rural Australia?*
- *In what ways could education and training programs and policies be better adjusted to address the specific impact of drought?*
- *What types of successful initiatives have you or your organisation accessed or developed to overcome the barriers of drought on education and training?*

Community development and sustainability

Social sustainability in rural communities is relevant to all individuals, families, organisations and businesses. It is about maintaining and improving the quality of life for current and future generations.

Strong rural communities are critical to how people live and feel about the future and drought can impact on how successfully a community functions. Drought may contribute to rural depopulation, reduced economic status and the way in which people work together as friends, neighbours and colleagues. This has implications for local services, education and health. Such impacts can also reduce the level of skills, labour and professional services supporting rural industries and the community. Apart from the effects on individual families, drought impacts on the community as social capital (the 'glue' that holds a community together) decreases and cohesion and adaptability diminish.

Key questions

- *What is your experience of drought and its affects on community development and sustainability in rural Australia?*
- *In what ways could community development and sustainability programs and policies be better adjusted to address the impact of drought?*
- *What types of successful initiatives have you or your organisation accessed or developed to overcome the impacts of drought on community development and sustainability?*

Families

A majority of farms in Australia are family owned and operated. An inevitable consequence of drought is that farm families, as well as families within the local community, will experience significant business and personal stress.

Drought results in financial, emotional and physical workload stress which can impact on the well-being of farm families. These issues are compounded when broader welfare, generational, succession planning and structural adjustment decisions also need to be made.

Key questions

- *What is your experience of drought and how it affects families in rural Australia?*
- *In what ways could programs and policies be better adjusted to address the specific impact of drought on families?*
- *What types of successful initiatives have you or your organisation accessed or developed to overcome the barriers of drought on families?*

Employment and professional development

Regardless of drought and climate change, the prospects of employment in agriculture are good and the industry has a vibrant future as it successfully responds to other issues such as improving productivity, innovation, market access, trade and research. Across Australia as a whole, the combined unemployment rate (as of May 2008) is at a near 34 year record low of 4.3 per cent, and demand for labour remains strong.

However, drought and the decline in income associated with it can lead to a reduction in employment in rural areas. Decreased production, yields and water availability can contribute to farmers and workers leaving rural areas to seek employment and career opportunities elsewhere. This problem may sometimes be compounded where other industries are competing for employees. Post-drought the challenge then becomes to attract past employees back to farming.

The pressures of drought can also require farmers or their family members to seek off-farm employment to supplement income. While off-farm employment can be used as a successful farm risk management strategy, it can also bring about increased personal and family pressure through time spent away from the farm and family members as well as reduced leisure time.

Key questions

- *What is your experience of drought and its affects on employment and professional development in rural Australia?*
- *In what ways could employment and skilling programs and policies be better adjusted to address the specific impact of drought?*
- *What types of successful initiatives have you or your organisation accessed or developed to overcome the barriers of drought on employment and professional development?*

Mental and physical health

Healthy and productive communities often have strong social networks and an active calendar of social and charity events. Good health and well-being is ultimately the responsibility of all of us, with individuals, communities, health service providers and government all playing a part.

Rural Australians are well known for their resilience in times of difficulty and uncertainty. However, drought places increased stress on farming families and communities as workloads increase and income decreases. Farmers are generally ageing, working harder and longer and increasingly relying on family members to provide the extra labour needed to cope. This increases the risk of accidents and may affect mental health.

Key questions

- *What is your experience of drought and its affects on mental and physical health in individuals or services in rural Australia?*
- *In what ways could mental or physical health programs and policies be better adjusted to address the specific impact of drought?*
- *What types of successful initiatives have you or your organisation accessed or developed to overcome the barriers of drought on mental and physical health?*

How to make a submission to the Panel

The Expert Social Panel wants to hear how drought has had an impact on the social well-being of rural communities and farm families. Wherever possible, the Panel would like to substantiate its consultation findings with research, data and any other supporting information.

While it is up to individuals and organisations to decide what to include in your submission, the Panel requests that longer submissions include a concise summary of key points. It is also suggested that individuals and organisations consider using the key questions posed in this paper as a potential guide to formulating the content of your submission.

Please provide the following detail when making your submission:

Individual submissions:

Name:	
Address:	
Have you also attended an Expert Social Panel public consultation forum?	Yes / No If yes, where was it _____

Submissions lodged on behalf of organisations:

Name:	
Organisation:	
Position in organisation:	
Organisation address:	
Have you also attended an Expert Social Panel public consultation forum?	Yes / No If yes, where was it _____

Post to: Secretariat
Expert Social Panel
Drought Policy Review
GPO Box 858
CANBERRA ACT 2601

Fax to: 02 6272 3027

Email to: droughtpolicyreview@daff.gov.au

The closing date for submissions is close of business **Friday, 8 August 2008**.

Written submissions will, at the discretion of the Panel, be published on the Department of Agriculture, Fisheries and Forestry website. Please indicate when lodging your submission if you do not want your submission published.

For further advice on how to lodge your submission call the Panel Secretariat on **1800 200 876**.

Appendix B

Terms of Reference

Assessment of the social impacts of drought

Background

Government assistance for drought events is guided by the current National Drought Policy (NDP). Under the NDP, drought assistance or support is intended to be a short term measure to help farmers prepare for, manage and recover from drought. The objectives of the NDP are to:

- encourage primary producers and other sections of rural Australia to adopt self-reliant approaches for managing a changing climate
- maintain and protect Australia's agricultural and environmental resource base during periods of extreme climate stress; and
- ensure early recovery of agricultural and rural industries, consistent with long-term sustainable levels.

Although self-reliance is a key objective, the NDP also recognises that there are rare and severe events that are beyond the ability of even the most prudent farmer to manage. The Commonwealth Government provides support to farmers and rural communities under the Exceptional Circumstances (EC) arrangements and other drought programs. The state and territory governments also participate in the NDP and provide support measures of their own.

To be classified as an EC event, the event must be rare, that is, it must not have occurred more than once on average in every 20 to 25 years. Australia is experiencing a drought that has been unprecedented in its geographic extent, length and severity. Some areas have been drought declared for 13 of the last 16 years, leading to some recipients receiving EC assistance since 2002.

Climate change will bring with it significant challenges for Australian agriculture. Climate change is expected to increase the frequency, severity and length of drought periods in future. It will also have impacts on rural communities that are dependent on primary industries.

Australian primary industries ministers have agreed that current approaches to drought and EC are no longer the most appropriate in the context of a changing climate. They agreed that drought policy must be improved to create an environment of self-reliance and preparedness, and encourage the adoption of appropriate climate change management practices.

To improve drought policy, ministers agreed to consider:

- relevant social dimensions and policy responses to drought and Exceptional Circumstances
- the provision of accessible social welfare support, including eligibility criteria
- the effectiveness of business support payments
- the effectiveness of financial risk management strategies, including Farm Management Deposits
- the effectiveness of preparedness policies; and
- cost-benefit analysis of state and federal drought assistance.

This assessment, by an expert panel, will analyse the social dimensions of the impacts of drought and the range of current government and non-government social support services available to farm families and rural communities during periods of stress and change. It will also take into consideration the cultural and social issues that may impact on the capacity of farm families and

rural communities to improve self-reliance and preparedness and better manage change.

This assessment, as part of a review of drought policy, will support the Productivity Commission's inquiry into the appropriateness of current government drought business support and income support measures. The Commission's inquiry will also be supported by an assessment by the Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organisation of what a changing climate means for drought in Australia and the appropriateness of using the concept of exceptional climatic circumstances to trigger the availability of assistance measures.

Scope of the assessment

This assessment will report on:

1. The social dimensions of the impacts of drought on farm families and rural communities.
2. The objectives, extent and range of Commonwealth, state and territory governments' and non-government social support services, including counselling and advisory services, available to farm families and rural communities during periods of stress and change such as drought.
3. Gaps in the application of Commonwealth, state and territory governments' and non-government social support services for mitigating the impacts of stress and change such as drought on farm families and rural communities.
4. Possible social support services for mitigating the impacts of stress and change such as drought on farm families and rural communities.

This assessment will not examine the appropriateness, effectiveness or efficiency of government drought business support and income support measures.

Nature of the assessment

Extensive public consultation, throughout rural Australia, will be a key aspect of the expert panel's work. The panel will consult government and non-government agencies, including those with social and community responsibilities.

In undertaking this assessment, the panel will draw on existing research and may consult social researchers. The panel will have the capacity to engage analytical support as it sees fit. The Department of Agriculture, Fisheries and Forestry will provide secretariat services to the panel. The panel will provide a final report to the Minister for Agriculture, Fisheries and Forestry in September 2008. The panel's report will be released by the government.

Appendix C

The Panel

Name	Position	Biography
Mr Peter Kenny	Chair	President AgForce Queensland, board member of the National Farmers' Federation, cattle producer in Queensland.
Ms Sabina Knight	Panel member	Senior Lecturer Remote Health Practice, Council of Remote Area Nurses of Australia (CRANA) research fellow. Alice Springs NT
Professor Daniela Stehlik	Panel member	Foundation Chair in Stronger Communities at Curtin University of Technology, inaugural Director of the Alcoa Research Centre for Stronger Communities. Perth. Western Australia.
Mr Mal Peters	Panel member	Principal of a family farming enterprise in northern NSW, board member of the Australian Farm Institute, former President of NSW Farmers Association.
Mr Barry Wakelin	Panel member	Former member for the electorate of Grey, South Australia for 14 years, former Chairman for the Standing Committee on Aboriginal and Torres Strait Islander Affairs.
Ms Sue West	Panel member	Chair, Anglicare. Western New South Wales, former Senator for New South Wales, has a farming background.
Mrs Lesley Young	Panel member	National President Country Women's Association of Australia, mixed farming operator in Tasmania, former Chairperson Rural Financial Counselling Service Tasmania.

Appendix D

Examples of government drought social support services

Australian Government
Health Care Cards
Youth Allowance and Austudy means test concessions
Country Women's Association (CWA) Emergency drought aid fund 2006-2008
Rural financial counselling service
Declared drought area incentives
Access to JobSearch support
Early access to Intensive Support (job search training)
<i>Drought Force</i>
Flexible arrangements for Newstart allowance
Social and emotional counselling through Family Relationships Services Program
Local Answers
Just ask – a national rural mental health information service
Regional Health Services

New South Wales
Assistance for farm families
Drought household payments
Mental health services

Queensland
Crisis care services
Queensland DPI&F drought hotline
Farm financial counsellors
Rural family support service

South Australia
Drought link hotline and website
Financial mediation
Mental health support printed information
Additional rural financial counselling support

Community support grants
Concessions and remissions for drought affected families
School expense initiatives
Farmer peer support network
Early intervention and education for rural teachers and parents
Drought relief rural community counsellors
Increased capacity of specialist drought relief rural psychiatric resources
Labour market transition program
Young farmer package
Regional drought coordinators

Victoria
State funded rural financial counsellors
Drought apprenticeship retention
Additional extension for decision support
Business transitioning program
Catchment Management Authority drought employment program 2007-08
Counselling services
Drought relief for community sport and recreation program
Drought relief for tourism marketing campaigns
Emergency volunteer support framework
Local government drought coordinator program
Mental health and early intervention teams
Planning for change
Rural skills connect
Small towns development fund
Synthetic surfaces program

Western Australia
Dry season and natural disaster hotline
2007 Dry season assistance scheme – Community and social support services grants

For more information on each service, please view the Drought Assistance Guide at:
www.daff.gov.au/agriculture-food/drought/assistance

Appendix 2: Exceptional Circumstances (EC) and Interim Assistance (IA) Boundaries (July 2008)

