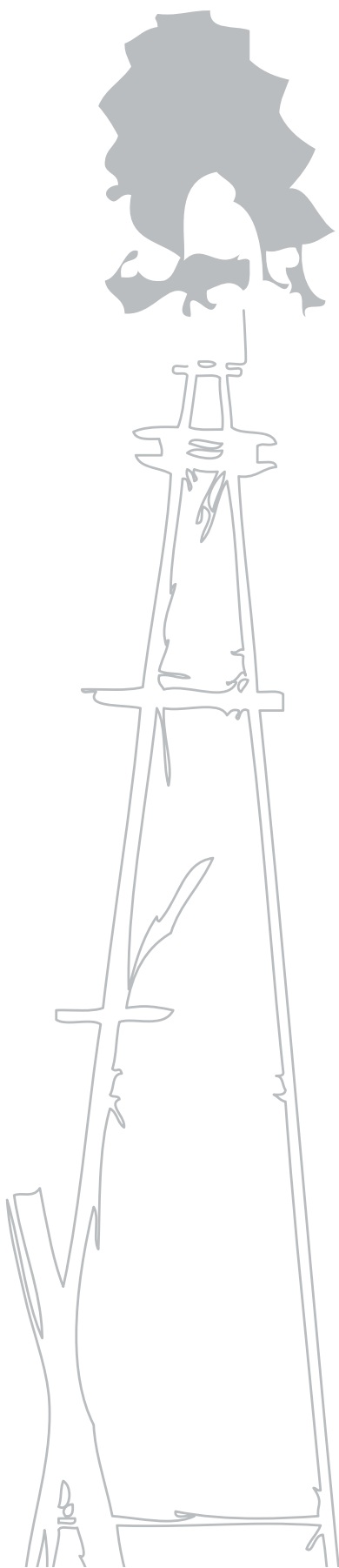




IT'S ABOUT PEOPLE: CHANGING PERSPECTIVES

A Report to Government by an Expert Social Panel

ON DRYNESS



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THE HON. TONY BURKE MP
MINISTER FOR AGRICULTURE, FISHERIES AND FORESTRY
PARLIAMENT HOUSE
CANBERRA ACT 2600

Dear Minister

On behalf of the Expert Social Panel, I present to you a report on the social impacts of drought on Australian farm families, rural businesses and communities. The report is based on a combination of independent research and the personal experience of Australians.

The Panel's process of visiting rural Australia was both a positive and valuable experience and was recognised as a critical statement by the Australian Government of its desire to listen to people.

The Panel heard from more than 1000 people at its 25 public forums, held nine major centre meetings with key stakeholders and received more than 230 written submissions.

The Panel was welcomed into communities and members were often overwhelmed by the generosity and honesty of people who were willing to share their sometimes painful experiences. The public forums gave the Panel a first-hand account of the experiences of farmers, small business operators, social support providers and community members who have been living with dryness over recent years.

The Panel's report is written in direct terms and is sometimes critical of existing government policies and non-government services. We believe the report takes a fresh and comprehensive look at the ongoing challenges facing farm families, rural businesses and communities in living with drought and puts forward practical recommendations for a strong, healthy, vibrant and sustainable rural Australia.

The Panel appreciates the opportunity to undertake this important assessment of the social impacts of drought and trusts the information contained in this report will make a vital and lasting contribution to an improved national drought policy.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'P. C. Kenny', written in a cursive style.

Peter Kenny
Chairman

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EXECUTIVE SUMMARY

There needs to be a new national approach to *living with dryness*, as we prefer to call it, rather than *dealing with drought*. Governments should focus future policy on facilitating the social wellbeing of farm families, rural businesses and communities to improve their capacity to live with dryness. Better social outcomes are most likely to give better economic and environmental outcomes. The new approach reaffirms the fact that Australia will face periods of prolonged dryness in the future and acknowledges that dryness has an adverse impact on the wellbeing of farm families, rural businesses and communities.

This is the first assessment to exclusively examine the social impacts of dryness in a review of government drought policy. The Panel believes people should be the priority (and not the farm property or the respective industry), and propose future policy be *about people: changing perspectives on dryness*.

Importantly, individuals and families want to live in rural Australia and contribute to the nation. These people are full of hope and their determination and initiative must be supported. If governments agree that the social wellbeing of farm families, rural businesses and communities should be a core element of future policy for rural Australia, then there should be an urgent statement of commitment, on behalf of the whole nation, to a strong, healthy, vibrant and sustainable rural Australia.

The Panel is deeply concerned by the extent of distress in drought-affected communities in rural Australia. Too many farm decisions are made under stress and without adequate consideration of the needs of the family and in the absence of prior thought and planning. Family and business are intricately linked for the majority of farm families, but decision-making mostly occurs in separation and often at the expense of each other.

At times the Panel found it difficult to separate the social impacts of dryness from the longer term socio-demographic trends contributing to a decline of some rural populations. However, it was clear from the Panel's assessment that drought has an impact on the wellbeing of farm families, rural businesses and communities. Much of the existing responses attempting to deal with dryness are wearing away at the social fabric and capital of rural Australia and threatening the future viability of some rural communities. It is also clear the existing impacts of underlying structural change in rural communities are more acutely felt during times of stress brought on by dryness.

The Bureau of Meteorology and CSIRO are predicting there is an increased risk of severe drought over the next 20 to 30 years compared to the past 100 years, particularly over southern Australia; and that this increased drought risk will be exacerbated by increasing temperatures. If these predictions are correct, then farm families, rural businesses and communities need to be better prepared. The Panel consider there is a role for governments in helping farm families, rural businesses and communities to realistically expect seasonal variation and therefore plan for the intense risks and rewards that are associated with, and flow on from, primary production.



For all the assistance provided, farm families, rural businesses and communities currently living with dryness in rural Australia do not feel or perceive they are measurably better off. To date, the support for farm families, rural businesses and communities in times of dryness has been implemented within a crisis-framed response. As a consequence, a 'drought industry' of services (as coined by one farmer) has emerged which sometimes duplicates and results in confusion for those being assisted.

The Panel recognises the significant contributions of farm families, rural businesses and communities to its assessment. The Australian Government needs to be aware that in recognising and seeking to understand the social impacts associated with dryness it has begun a dialogue which must continue beyond this report.

The Panel identified the social impacts of dryness on farm families, rural business and communities by:

- *reviewing existing literature; commissioning independent research and surveys;*
- *holding 25 public consultation forums across rural Australia, attracting more than 1000 participants;*
- *meeting with federal, state and territory governments and non-government organisations, and;*
- *receiving more than 230 written submissions.*

The positive response to the consultation process is a significant indication of the importance in which people hold these issues.

This report has been structured around the following themes:

- *observations on values, attitudes and policy;*
- *planning for future dryness;*
- *community;*
- *families, and;*
- *delivering human support services (including education and training; human capital; health and wellbeing).*

The Panel has made some *observations on values, attitudes and policy*, noting that existing policy responses to dryness are not working in all cases. Exceptional Circumstances (EC) policy arrangements were the subject of either strong support or dissatisfaction, depending on eligibility or for a range of other reasons. While those who receive assistance say it is keeping them on the farm, EC policy has created feelings of division and resentment. Stress is undoubtedly being caused by the existing declaration process, in the implementation of different approaches between and across state jurisdictions, in meeting complex criteria, and in completing complex paperwork. The Panel considers



future policy should seek to move people towards an acceptance that future dryness will occur and is not a crisis, and that planning for dryness should be about personal, family, farm and community wellbeing.

The challenge is to design policy to address the social wellbeing needs of farm families, rural businesses and communities in ways which do not inhibit the efficiency of agricultural industries. The intimate connection between the farm as a place of work, as a residence and as part of family tradition has important implications when considering the effectiveness of institutional support in responding to farm families experiencing adjustment stress.

In *Changing Perspectives on Dryness*, the Panel provides an overview of its preferred policy approach. Rather than providing crisis-framed assistance in times of difficulty, government policy should be focused on early intervention to counteract the worst effects of dryness and to provide incentives in better times which encourage commercially and environmentally responsible management under variable seasonal conditions. Future policy should be focused on the investment in, and the planning for, the wellbeing of farm families, rural businesses and communities and this needs to occur prior to periods of dryness.

In the *Community* section, the agriculture sectors are identified as remaining important to many rural and regional towns. When family farms are struggling with events such as dryness, the communities in which people normally spend their money and participate also suffer. Dryness negatively impacts on the ability of members of a rural community to work together for the benefit of the whole community, eroding the capacity of people to engage in community projects or do the voluntary work that keeps rural communities alive. In some places there appears to be a wide range of non-government organisations, volunteers, welfare agencies, community and church-based organisations seeking to help drought affected families. This help can come through distributing food parcels, clothing, pamper packs, and helping with the payment of household bills. This intervention typifies a short-term crisis-framed response, and is not a model that should be employed during periods of prolonged dryness. There are also a variety of community development initiatives being held, such as community socialising events. These events should be supported by government only where they link rural communities to various human service providers and/or facilitate clear referral pathways. Overall, however, they also fall within a crisis-framed response and fail in the long term to address people's ongoing needs.

The Panel found that dryness impacts on how farm *families* function through separation and isolation; increased burdens of responsibility, belt-tightening and contribution of further labour to the farm, particularly by women and children. Issues surrounding succession planning cause great stress during times of dryness because of reduced cash flows and unmet expectations. While many male farmers say they are coping, they may not recognise or understand some of their coping mechanisms are placing great pressure on their families. While arguably tolerable for short periods, this has the potential to erode the composition of families and the development of children.

The Panel observed that some areas appeared to lack drought-specific or focused *human support services*, while other areas appeared to have too many. The Panel believes the current response by governments to fund a variety of providers and individuals, as well as a considerable presence from non-government charity and church organisations, has created a 'drought industry'. At a

fundamental level it appears that government funded, drought-specific or focused human support services for defined periods of time has created an extra layer of services. This extra layer often has limited coordination or is not linked to existing professional networks or referral pathways. Human support services can perform a vital role in the long-term sustainability of rural communities to what are fundamentally ongoing problems. However, governments and non-government organisations must move away from crisis-framed responses to dryness and adopt more long-term sustainable approaches to the delivery of existing human support services in rural communities. A longer-term approach would allow human support services to focus on early intervention and the ongoing wellbeing of farm families, rural businesses and communities.

Dryness reportedly affected people's participation and ability to access **education and training**. The Panel heard that some children and young adults are being denied educational and extracurricular opportunities because of household financial limitations resulting from the dryness. Many schools are reporting a significant drop in student numbers and where these drop below critical mass, the schools and the social services they support, are lost from the community. Tertiary enrolments in agriculture related courses have fallen and there has been a loss of young people to the industry. There is a view that guidelines for government assistance contain barriers to rural youth accessing tertiary education. The Panel heard of the difficulty farmers experience in having their existing skills recognised and in accessing training. To assist farm families plan for dryness, education and training must be available in rural areas and these must be based on sound adult learning principles.

Dryness has meant farm businesses have cut costs, usually through the laying off labour and by spending less in the community, significantly affecting **human capital**. This has a flow-on effect on local businesses and services. It was often reported that within the labour market, particularly younger people are moving away to pursue other employment opportunities outside of agriculture because of dryness. There appears to be an increase, influenced by dryness, in secondary farm household income streams. This often involves someone physically spending time away from the property. These types of arrangements need to be acknowledged by farmers and policy-makers as successes, and not deemed to be failures. Some farm families and financial planners are factoring into their business planning ongoing government support, rather than looking for ways to enable families to become independent.

People reported that dryness has a significant impact on individuals and families and others within rural communities in respect to **health and wellbeing**. Many people expressed concern about the impact felt by school children from drought-affected families. The Panel heard that while there has been a lot of support for men, support for women is less available. Currently there appears to be an ad hoc and expensive approach of bringing in extra mental health resources during times of dryness, which is not as successful as expected. The Panel believes there needs to be greater investment in the capacity of existing primary and allied health care services in rural communities to enable them to be responsive to the physical and mental health impacts of future dryness. Governments must be more effective in encouraging people in rural communities to self-identify their health needs and to be able to seek appropriate support at an early stage.

Details of the Panel's terms of reference and assessment process are outlined in appendices.

CONTEXTUAL OVERVIEW

Australia is a dry continent¹; rainfall therefore, is not a measure of our dryness, but simply a measure of our variation. The Panel heard where 3 millimetres of rainfall in seven months was exceptionally dry in one region at the same time that 200 millimetres in another region was exceptionally dry – and so the variation is large but the impact, particularly on the farm manager, is similar.

The Australian agriculture sector is always in the midst of adjustment². This has brought with it the social and economic stresses normally associated with change. Compounding this, the existing period of dryness is causing widespread distress which has reduced the ability of rural families and communities to cope. It is therefore not surprising that issues which have little to do with drought are being associated in the minds of many rural Australians.

Rural and remote Australia is experiencing some overarching socio-demographic trends which have implications for a wide range of aspects of rural society, including the impacts of dryness.

Agriculture has been a major contributor to Australia's economic development since European settlement but there have been significant changes in rural Australia in the last century. At the end of the 19th century, farming, forestry and fishing accounted for 20 per cent of Australia's gross domestic product. Agriculture and mining combined provided 95 per cent of Australia's exports and jobs for about 30 per cent of Australia's workforce³. By the end of the 20th century, agriculture and mining accounted for just 7.5 per cent of Australia's total output, 6 per cent of its workforce (around 308 000 jobs⁴) and 42 per cent of its exports.

While the agricultural share of Australia's GDP has fallen significantly - from around 14 per cent in the early 1960s to 2 per cent now - agricultural output has increased two and a half times, with many sectors experiencing strong productivity improvements⁵. In fact, productivity growth within the agricultural sector, while showing high variability over the past three decades, has continued on an upward trend⁶.

Australian Bureau of Statistics figures show a decline in farm numbers and an increase in average farm size. The number of farms declined from a peak of more than 200 000 in the mid-1950s to slightly more than 110 000 in 2000. Over the same period the average farm size rose from approximately 2000 hectares to nearly 4000 hectares⁷.

The major factor in these changes is the external environment in which Australian agriculture is required to operate. Domestic markets have always been small, requiring Australian agriculture to be more dependent on exports and maintaining a competitive edge than many other countries. Agriculture provides around one-fifth of Australia's export income.



National economic growth has been associated with a long-term decline in agriculture's terms of trade. Coupled with improvements in the productivity of purchased inputs, this has meant a changing economic environment for farm families, rural businesses and communities. These changes have led to an adjustment of resources out of agriculture and the restructuring of existing farms to capture economies of size and to increase the real income flows.

To cope with all these circumstances, Australian farmers have made extensive use of advances in agricultural science and technology to become among the most efficient and least dependent on government support of any in the world. Government subsidies to primary producers accounted for only 4 per cent of Australian farmers' income in 2001.

Global economic forces are another important stimulus to change in agriculture. Actions of overseas governments to protect or isolate their economies from international events and the increased volatility of residual free markets in agricultural products, coupled with high production risk in agriculture, give rise to intense fluctuations in the global demand for agricultural products.

These forces are likely to continue with the rural sector likely to come under increasing adjustment pressures in the coming decades as a result of climate change and structural changes in the Australian and international economies. These changes will require continued focus by farmers and policy-makers to maintain the competitiveness of agriculture.

Australia as a whole has undergone a dramatic transformation from a rural society to an urban society. A little over a century ago more than 60 per cent of the nation were rural dwellers and lived outside towns⁸.

By 2006 the total population of Australia was 19.9 million persons. More than half of the Australian population lived in major urban centres and cities with populations greater than 1 million people. Only 7 per cent lived in other large urban centres with populations between 25 000 and 1 million and a further 5 per cent lived in urban centres with populations between 100 000 and 250 000. Thirty-three per cent of the population lived in regional centres of up to 100 000 (22 per cent), small towns (2 per cent), and rural areas (9 per cent).

The population of Australia increased by 6.8 per cent in the five years to 2006. 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). The populations of small towns also increased (3.1 per cent), however rural areas experienced a population decrease of 0.9 per cent. In 2007, only 31.5 per cent of Australia's population did not live in a major city and 12 per cent lived in rural areas and small towns of less than 1000⁹.



The average age of the Australian population is increasing, with the number of people in older age groups increasing much faster than the number in younger age groups¹⁰. Illustrating this trend is the fact that young people and young families in particular, are moving from small towns and rural areas to larger urban areas and cities for better access to education and employment prospects. The average age of farmers in 2006 was 52 years¹¹. Mature age people in rural areas continue to work well into their 60s at a rate 10 per cent higher than the rest of the country. Together these factors indicate that the working population of rural areas is ageing¹².

Despite these trends, there is little to suggest a direct connection between the sector's fortunes and its ageing demographic. Such figures may also give a slightly misleading impression of farmer demographics because they do not account for the active participation of younger family members in farm businesses.

Many small inland towns, dependent on agriculture, now have populations on the cusp of viability. Any shocks experienced by the agricultural industry are likely to have a significant impact on these rural communities¹³. These towns undoubtedly suffer in the face of severe dryness.

Agricultural employment has traditionally been characterised by a high proportion of self-employed, family and casual workers. The combination of changed farming practices, the population drift to regional centres and strong competition from other sectors of the economy, particularly mining, means that many agricultural industries are now facing shortages in skilled labour¹⁴. There is strong evidence that dryness leads to loss of employment in agriculture, and flow-on effects to employment in rural communities and businesses in nearby towns, particularly those heavily dependent on agriculture and lacking economic diversity. Agriculture-based small rural communities are struggling under this combined impact.

There are broad patterns of lower access to services already existing in Australia, and dryness may merely add to what is already chronic disadvantage in these areas¹⁵. Rural people are reported to have much lower levels of socio-economic status, and less opportunities and options for the future than people living in urban areas. 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. Male suicide rates are higher in rural Australia^{16,17}. These adverse circumstances tend to be accentuated and extended because of the periods of prolonged dryness, with the situation of Indigenous Australians particularly magnified.

In spite of these disadvantages, rural families generally express higher levels of satisfaction with their family, community and life circumstances than urban people. Australian farm families, rural businesses and communities pride themselves on their resilience and their capacity to cope in a challenging environment. This capacity can be compromised, and their resilience made more fragile by the added burden caused by significant changes in traditional weather patterns.

Australia's recorded rainfall history features several distinctly dry periods of a decade or longer. The mid to late 1920s and the 1930s were a period of generally low rainfall over most of the country, continuing over the eastern states through most of the 1940s. A similar dry spell occurred in the 1960s over central and eastern Australia. During these low rainfall periods, not every year is dry; it is just that

rainfall in most years is below the long-term average, and there are often runs of years with recurrent dryness. The ‘Federation drought’ of the late 1890s through to 1902 is an example of a most damaging type of drought, when one or two very dry years follow several years of generally below-average rainfall. The more recent 1991-95 drought in Queensland, northern New South Wales and parts of central Australia and drought that most parts of Australia have experienced in recent years are further examples of this severity¹⁸.

As part of the Australian Government’s current review of national drought policy, the Bureau of Meteorology and the CSIRO were commissioned to assess the impact of climate change on the nature and frequency of exceptional climatic events. This assessment covered past and future changes in the intensity and frequency of exceptionally high temperatures, low rainfall and low soil moisture. The assessment focused in detail on the extremes that define exceptional circumstance events.

The Bureau of Meteorology and CSIRO concluded there is an increased risk of severe dryness over the next 20-30 years, compared to the past 100 years, particularly over southern Australia. This increased drought risk will be exacerbated by increasing temperatures – so droughts will be hotter in the future¹⁹.

This future scenario does not automatically mean the end of farming, rather that farm families, rural businesses and communities will need to continue to adapt to manage changes in climate. The old adage of ‘three good years, three bad years and four average years’ is likely to shift (with an increase in ‘bad years’). This does not mean there will not be good seasons for primary producers. It does mean that the dry years will be dryer and more frequent and will have a significant impact.

Australian farmers are all too aware of the natural variability of the Australian climate. To date, the agricultural sector has coped with cyclical dryness by using responsible farm management strategies, with relief being available for droughts of unusual length or severity. Some areas of Australia have now been declared as experiencing ‘exceptional circumstances’ for 13 of the past 16 years. As at June 2008, a significant proportion of Australia was declared as experiencing exceptional circumstances because of drought.

Catastrophic events such as earthquake or flood have immediate and identifiable consequences. The nature of prolonged dryness is insidious. Dryness has both a physical and a social component. It represents a time of major upheaval in rural families and for rural communities which unfolds over years and requires a different set of intervention strategies.



OBSERVATIONS ON VALUES, ATTITUDES AND POLICY

BACKGROUND

There are several aspects of family farming which result in farm families experiencing adjustment stress differently from those in other occupations. These relate to:

- *the intimate connection between the farm as a place of work, residence, family tradition and identity;*
- *a desire to pass on the occupation of farming and particular farm assets to the next generation;*
- *being seen to be self-sufficient and independent;*
- *gender roles, and;*
- *attitudes towards alternative occupations and non-farming lifestyles.*

These factors have important implications for considering the adequacy and effectiveness of drought assistance²⁰.

How drought is perceived is key to influencing the effectiveness of national drought policy. Previously, drought was perceived as a specific defined event, an aberration of nature and not part of the ongoing and normal factors that affects agriculture. The inevitable emphasis in such a scenario is on drought as a crisis and the focus is always on defining those circumstances in which government assistance should be provided to farmers facing 'exceptional circumstances'. The underlying policy assumption has been that through government assistance the community can be returned to 'normal' economic and climatic stability²¹.

This assumption confuses variability with cost by treating departures from favourable seasonal conditions as a 'loss' of production and income. Climatic variation is normal in Australia and so are the production and income fluctuations associated with it²².

This perception has consequences for a range of policy decisions of great significance to farmers and rural business operators. A failure to drought proof, for example, is often equated with an inability to control weather, rather than an inability to conduct a rural business under conditions of climatic variability²³.

Governments generally have supported the idea of rural adjustment. However, political pressures and emotive media coverage during prolonged dryness often lead to these adjustment positions being



softened by resorting to emotional language and imagery. In dry situations, climatic, hydrological and biophysical evidence can be overshadowed by the political persuasiveness and immediacy of personal stories of hardship and suffering²⁴.

The constant adjustment problems of the farm families, rural businesses and community sectors have elicited government programs which have largely avoided dealing directly and openly with the social dimensions of their experience. Farmers have a deep aversion to the word 'welfare', and tend not to see their problems as welfare problems, but as consequences of poor economic conditions and policies. Accordingly, adjustment policy has tended to characterise the problem as arising from alleged failures in the farm finance market, and the overwhelming bulk of adjustment support has gone into subsidising the interest payments of the farm business.

Given the nature of farming as a business, and given the overwhelming majority of farms in Australia are family owned and operated, from time to time families will experience significant business and personal stress. The challenge is to design programs which address the social wellbeing needs of farm families, rural businesses and communities more broadly, in ways which do not unnecessarily inhibit the efficiency of the industry. However, given the close relationship between business performance and family wellbeing this is no easy task²⁵. The Panel recognise that while farming can be a great way of life for many, it can also be a health hazard for others. Indeed farming can be both for the same person and this presents challenges for farmers and those endeavouring to provide services.

Rather than providing incentives in times of difficulty to counteract the worst effects of dryness, governments should invest in providing incentives in better times to encourage commercially and environmentally responsible management under variable seasonal conditions.

FINDINGS

Listening to rural Australia has also allowed the Panel to understand that the language of drought support needs to change. Words like 'drought', 'welfare' and 'propping up' have negative connotations for farm families but are often used by governments. In contrast, the Panel found the words of 'dryness' and 'investment' do resonate with farm families.

The Panel believes there is a mismatch between the values and assumptions of policy and those of rural people – and saw examples of this failure in understanding.

These values and assumptions vary in the extent to which they focus on promoting economic efficiency and farming as a business, versus focusing on social wellbeing considerations and farming as a preferred occupation and lifestyle. The business and family affairs of farmers clearly overlap and this situation, in turn, impacts on the health and viability of the social fabric of rural communities.



Recent agricultural adjustment policy has largely assumed that if farmers and their families are not making an adequate living from farming, their rational, ‘business-like’ course of action is to pursue alternative livelihoods. This means rural people are often seen to be battling on despite what appears to be good business judgement. One of the revelations for the Panel was that for many who identified themselves as third and fourth generation farmers at public forums, there is an intrinsic value to farming as a way of life and some are unwilling to accept, or simply to operate within, a business-framed model.



Farming is not like any other small family business. No other business creates the emotional connections that farming does. It's where the business owner and their family live. It's where they raise their children. It's where they connect to their community. It's where their family memories are generated. It's where they care for and raise their stock. It's where they improve the land, planting trees, gardens, dams and landscapes. It is full of highs and low – tough times and good – fire, flood, drought, plague, good seasons and bad. It's not just about generating an income. If it was, there would be a lot less food producers in Australia. So unlike other businesses it's not as easy as saying 'just sell up and move into town'. There is emotional fallout and wide-ranging impacts to deal with which non-farmers may find difficult to understand.

Shire of Strathbogie, Euroa, Victoria

It is clear there has always been an element of 'risk' or 'gamble' associated with farming in Australia, based on the belief there will always be a good season ahead. The Panel identified a level of 'defiant optimism' in farmers determined to continue farming and holding out hope for better seasonal and financial conditions. It was referred to by an attendee at the Panel's Goulburn forum as the 'ostrich syndrome – people believe that if they put their head down and work harder they'll be able to get themselves out of trouble'. The Panel unfortunately heard there are many farm families, rural businesses and communities that are not prepared, or preparing for, prolonged dryness.

There are many farmers who are psychologically attached to their property and policy measures, such as exit assistance, are largely unwanted, nor are incentives to move to another profession. Many farmers are more than willing to continue suffering varying degrees of social deprivation to maintain their generational bond to the property. Some male farmers are clearly putting the land before themselves and their families with a belief that the wellbeing of themselves and families should only be addressed once the wellbeing of the farm is attended. The Panel senses there are lessons for government on how this issue could be progressed if they sought a greater appreciation of those individuals and families who do strike the balance between attachment to the land and alternative incomes.

Drought-induced stress is exacerbated when communities are eroded by the closure of health services and small businesses, they lose employment and feel the consequent drift of populations. Governments sometimes contribute to the erosion of social capital with policies such as those, for example, which result in the closure of schools and hospitals and the loss of bus runs.

Feelings of being misunderstood only add to the negative emotional effects of dryness. Many statements made at the forums embodied the belief that governments, the media and city residents all had a negative attitude towards farmers and failed to understand their difficulties, thus directly affecting farmers' ability to cope with the ongoing impact of dryness.

RECOMMENDATION 1

An improved policy for dryness must focus on preparing for dryness and planning for personal and family wellbeing.

The Panel found rural Australians feel isolated, alienated and disconnected from the rest of the country. However, the people who live there wish to continue to do so. The Panel was welcomed everywhere and the process of visiting rural Australia was also a positive and valuable experience for the communities, and was recognised as a critical statement by the Australian Government of its desire to listen.

RECOMMENDATION 2

Governments must make a high-level statement of commitment to a strong, healthy, vibrant and sustainable rural Australia.

In this context, while programs such as the Australian Government's *Australia's farming future*, provides eligible primary producers with assistance in whole farm planning, business and risk management and in understanding the implications of climate change, these do not advise farm families on looking after their personal and family wellbeing or planning for the future. Unless these programs take the psychology of farm families, rural businesses and communities into account in their design, they will fail to meet the outcomes desired by government.

The Panel believe existing policy responses to dryness are not working as intended. At public forums and in submissions, Exceptional Circumstances (EC) policy arrangements were the subject of either strong support or dissatisfaction, depending on one's eligibility. For all the funding provided, people do not perceive they are measurably better off or report that they feel supported by governments. This is despite some farmers saying they could not survive without EC interest rate subsidies.

EC policy was reported as having created feelings of division and resentment, particularly by farmers who have successfully managed and adapted to prolonged dryness towards those farmers eligible for EC assistance. Many hold the view that farmers are eligible because they have not made the necessary hard decisions; and are therefore critical of EC recipients being 'rewarded for failure'. The criteria for EC income support was also criticised by those who felt disadvantaged as a result of broadening their income base off-farm to better manage income fluctuations. The Panel believes there is circular conflict in that EC income support provides a reason for farm families not to broaden their off-farm income base but, at the same time, the Panel supports assistance for those people who are unable to



Drought relief in my area helps to keep unproductive farms unproductive, by rewarding poor management while at the same time, discriminates against and is of no assistance to good operators. Drought relief fails to encourage better farming practices.

Farmer, Mirboo, Victoria

One of the largest areas of community division has come from inequitable eligibility criteria for accessing of government drought support – am I correct in suggesting around 30 per cent of primary producers are eligible? Anecdotally, most of the locals I come across seem only to be eligible through some ‘creative accounting’! We currently have a very ‘two tiered’ community – those not on Centrelink payments and interest rate subsidies are suffering big time.

Farmer, Condobolin, New South Wales

There should be no discrimination of those who earn off-farm income and look after themselves as opposed to those who make irresponsible and short-sighted decisions and in bad times look for more government contributions.

Farmer, Yerong Creek, New South Wales

support themselves. Rural businesses also protested that despite also suffering the effects of dryness they are largely missing out on assistance and felt farmers were receiving preferential treatment.

The Panel heard how the process for EC declarations, meeting EC criteria, and completing complex paperwork creates stress. Many farmers claimed the process of applying for EC support can seem overwhelming for people already under considerable stress. Some farmers reported that they were angry because they went through the EC process and were told they didn’t qualify or they felt they probably would qualify but were too exhausted to face the process. Farmers are frustrated by what they see as bureaucratic ‘red tape’. EC policy and the criteria and forms for assistance are overly complicated and this has led to an ‘industry of interpreters’ put in place by governments. This suggests that usually competent rural business managers experiencing sustained distress in times of dryness are personally challenged by the application process. An unintended consequence is a further loss of self-esteem and confidence.



I experience severe drought conditions when I mismatch my farm management decisions with the lack of rainfall. Bringing in a rural welfare system will only finance me to make more bad management decisions at the tax payers' expense.

Farmer, Narrabri, New South Wales

Both EC and human service policy responses are crisis oriented, which is not sustainable for governments, service providers and importantly, rural communities. This approach is encouraging the idea that the present dryness is a temporary aberration and avoids the need to take a longer term strategic approach for preparedness. In some cases this is encouraging farmers to erode their resource base to maintain their short-term finances in the expectation they make up ground later on.

Exceptional Circumstances policy arrangements appear to work differently according to farm circumstances. While, for some, the EC payments are a valued assistance in difficult times, for others it is all that is keeping them on the farm. Some farmers gave the impression they had changed their behaviour in order to remain eligible for support. Policy influenced some farmers to delay or avoid decision-making or to make preparedness plans. Once people become reliant on drought assistance, without a longer term plan, it is difficult for them to think or act in a way where they will no longer rely on assistance.

The implementation process required by the existing policy is causing great stress. The different approaches between and across state jurisdictions is confusing to people. This is particularly the case when different state governments apply their own varying thresholds for eligibility within the context of the broader national policy, or apply eligibility criteria at variance with those across a nearby political boundary. Farmers on the receiving end of this arrangement only see that some people seem to be more deserving than others according to the judgement of officials.

It is apparent over the last decade that droughts are becoming more regular and the EC program is ill-equipped to deal with change in climatic circumstances.

Western Australian Farmers' Federation



Current drought policies separate out those prudent operators that take diversified risk management or conservative approaches to farming and consequently do not need to rely on government assistance when difficulties arise. Policy should seek to move people towards an acceptance that dryness is normal and not a crisis and that planning for dryness is about developing strategies for personal, family and farm wellbeing.

RECOMMENDATION 3

Existing and improved policy for dryness should be based on principles that include:

- *integrated development of individual and family wellbeing plans consistent with farm business and natural resource management planning as a mutual responsibility for future public-funded assistance.*
- *a transition strategy so that when current drought declarations are concluded there continues to be government investment to assist farm recovery and planning for future periods of dryness.*

RECOMMENDATION 4

The drought support roles of federal, state and local governments should be clarified and a lead agency or coordinating committee be established across government and within each jurisdiction to ensure proper implementation of dryness-related policy.

RECOMMENDATION 5

People who provide support to farm families, rural businesses and rural communities during times of stress, including those working in government and non-government organisations should be respectful and understanding of the stress facing farm families and rural communities, and in particular ensure they are clear and factual in their communication and do not impose or offer their own value judgements.

PLANNING FOR FUTURE DRYNESS

Decisions on family farms are rarely made on purely financial grounds as farms are always more than just a business. On the farm, financial concerns, personal and community social capital, and land and environment management considerations are equally important. To be effective, policy must be designed accordingly and not captive to any single issue.

Some 98.5 per cent of Australian farm businesses are family owned and operated. ... issues that affect the farm business invariably affect the family unit and vice versa.

National Farmers' Federation

Some farmers have documented (with evident pride) how they and their ancestors have survived worse droughts than the current circumstances, while other farmers appear to continue to view dryness as an aberration from 'normal' seasons.

The value of the terms 'drought' and 'exceptional circumstances' in current policy formulations have been questioned, particularly in parts of Australia already experiencing extended periods of relative dryness. The Bureau of Meteorology and CSIRO report, along with other commentary, has noted that hotter and drier weather is likely to become more frequent across much of Australia.

The Panel heard how financial, emotional and workload stress is impacting on the decision-making of farm families. This is compounded when complex generational, succession planning and structural adjustment decisions are also needed.

One component of social capital, given the high average ages of many working in agriculture, is having succession and exit plans in place. The Panel believes that despite active government promotion for well over two decades, succession planning remains an unresolved issue for many farm families. This observation is backed by research showing low levels of communication between farmers and their children about farm transfer²⁶. Therefore, when succession and exit options become essential during times of dryness, this can become an additional stressor and can make rational decision making difficult.



The Panel was struck by the experiences expressed by older farmers. For many, 'soft landings' are not an option. Some want to stop farming (or, for health reasons, should stop) but the financial and personal barriers are too high. Some are waiting for the next good season to clear debt and sell up. Some have discouraged their children from pursuing a career in farming, while others are saddened that their children are not interested in taking over a farm which has been in the family for many generations. Others want to transfer their property to their children (but without accumulated high debt) or wish to gift the property to their children.

The need for coordinated intervention appears to be becoming critical for many older farmers and their families, and options such as conditional access to aged pensions may need to be explored.

Responses to a 2004-05 Australian Bureau of Agricultural and Resource Economics (ABARE) attitudinal survey²⁷ indicated that more than 80 per cent of farmers are seeking to maintain the long-term productive capacity of the land, even if this means lower profits in some years. Discouragingly, almost 20 per cent are not seeking this.

The biggest impact of the drought on sustainability programs is the capacity of farmers to adapt. There is a willingness to change practices however with limited financial resources available many will delay implementing the changes until conditions improve.

Murrumbidgee Irrigation, Griffith, New South Wales

Nationally, 71.0 per cent of agricultural businesses have reported barriers to the improvement of their management of natural resources²⁸ and identified the most common barriers as:

- *lack of financial resources (78.9 per cent)*
- *lack of time (63.1 per cent)*
- *lack of government incentives (40.0 per cent)*
- *age and/or ill health (22.2 per cent)*



... a glaring shortcoming in government drought policy is the inadequate investment into long range weather forecasting to provide farmers with increased surety in their annual planning processes

Western Australian Farmers' Federation

...relevant R & D is vital for managing dry times

Farmer, Bothwell, Tasmania

The views expressed to the Panel emphasise how important it is that flexible, comprehensive and coordinated planning support services are available to help people to help themselves, with authoritative information and advice able to be tailored to individual circumstances.

The most cost effective intervention governments and peak industry organisations can make is through providing consistent and up-to-date information and tools to assist farm families, rural businesses and communities to manage changing circumstances constructively and, as appropriate, take advantage of available opportunities.

The Panel believes maintaining social capital and individual wellbeing management are critical for ensuring that policy directions for planning for future dryness is realised. Many presentations and submissions suggested that coordination and collaboration among service providers would improve the effectiveness of outcomes, as would matching the provision of government support to a mutual responsibility framework.

The capacity of farm families, rural businesses and communities to plan will be constrained unless government policies and support programs offer clear criteria for access, have long-term application and availability timeframes, or are of specified duration. Knowing what to apply for, and the process of making an application, should be within the capacity of the intended beneficiaries, or if needed, with the assistance of accredited intermediaries where barriers exist.

The preferred approach

The Panel considers the social wellbeing of farm families, rural businesses and communities should be at the core of future policy for rural Australia. Individuals and families want to live in rural Australia and contribute to the national estate. These people are full of hope and their self-reliance and initiative must be supported and encouraged.

Future policy should better focus on encouraging farm families, rural businesses and communities to be prepared for future dryness. The Bureau of Meteorology and CSIRO have predicted there is an increased risk of severe dryness over the next 20 to 30 years compared to the past 100 years, particularly over southern Australia, and that increased dryness risk will be exacerbated by increasing temperatures by as much as one degree Celsius over that period. If the Bureau of Meteorology and CSIRO are correct in their predictions then farm families, rural businesses and communities need to be better prepared. Future policy needs a strong applied research component to interpret the science and to develop an understanding and acceptance of the advice by farmers. The challenge is made even greater by varying expert opinion in the public domain.

Presentations and submissions made to the Panel reinforce the views that there are no easy solutions to addressing increasing dryness and that planning and implementing risk strategies need to be developed farm-by-farm and community-by-community. It is of concern to the Panel that too many decisions involving family and business are implemented without adequate consideration of each other and in the absence of prior thought and planning.

The Panel considers the priority for all levels of government, in collaboration with peak industry organisations and non-government support agencies, must be to extend, coordinate and deliver the information and tools necessary to help farm families, rural businesses and communities to help themselves respond to the challenges of living with future dryness.

To be effective, social wellbeing needs to be planned in a holistic manner. The Panel strongly believes business planning is just one of several factors involved in planning for social wellbeing. Successful farming businesses also plan for and invest in their individual and family's needs. There are a broad range of areas which should be given regular consideration by farm families when planning for wellbeing. For example, farm families could consider developing and regularly updating:

- *family plans, which document the needs and the value of healthy families to the business;*
- *business plans;*
- *personal development plans, including health and learning considerations;*
- *property management plans;*
- *environmental plans;*
- *human resource and workforce management plans; and*
- *farm succession plans.*

This list is not exhaustive, but demonstrates the Panel's belief that operating a successful family farm involves investing in far more than business planning. The strong connection between farm families and the land necessitates holistic planning in which social, environmental and economic considerations are of equal importance.

This theme is the focus of the Panel's thinking, and has also been identified by others. For example, the Australian Centre for Agricultural Health and Safety's publication *Managing the pressures of farming* recognises the value of holistic planning by encouraging farmers to complete several checklists based on business, family and personal considerations.

Governments need to provide the means and encouragement for farm families to consider, develop, document and implement their own overarching wellbeing plans. In addition to planning for dryness, the Panel believes that governments have a role in providing appropriate human services to support



rural Australia before, during and after drought. Similarly, governments have a role in helping to build strong rural communities and in providing access to education, services and support.

RECOMMENDATION 6

To alleviate the stress of future dryness, governments and non-government organisations must move away from crisis-framed responses and:

- *adopt more long-term sustainable approaches based on the delivery of existing human support services, focused on planning for the wellbeing of farm families, rural businesses and rural communities prior to periods of dryness; and*
- *provide incentives to support the development of individual and family wellbeing plans as part of a shift towards better preparedness for dryness.*

The Panel believes there are differing views on the role of governments in supporting people to live with the impacts of dryness. Given there are no mutual responsibilities on those who are currently being supported through dryness, the Panel suspects this enhances the argument of those critical of drought support. In this context, the Panel suggests that for future periods of dryness governments consider a policy which only provides assistance if recipients have developed an appropriate range of plans *before* dryness gets to a point ‘beyond their control’ and/or where governments determine their points of intervention.

In this report the Panel has made a series of recommendations consistent with an improved policy and planning process and which contribute to the capacity of farm families and rural communities to prepare for dryness.



COMMUNITY

BACKGROUND

Dryness 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. A 2000 ABARE study²⁹ indicated there is a clear pattern whereby the greater the reliance of a town's economy on expenditure by farmers, the lower the population growth. Small towns of less than 1000 people which are highly reliant on broadacre farming are most likely to be in decline.

1 SOME KEY STATISTICS FOR RURAL COMMUNITIES

TOPIC	STATISTICS AND NOTES
COMMUNITY PARTICIPATION AND ISOLATION	<p>In 2006, 63.5 per cent of households in rural areas were connected to the internet, second only to people in major urban centres (66.1 per cent), and higher than those in regional centres (54.8 per cent) and small towns (51.3 per cent).</p> <p>In 2006, only 2.8 per cent of rural dwellings did not have a motor vehicle, in contrast to 11.2 per cent of dwellings in major urban centres.</p>
VOLUNTEERING	<p>In 2006, 27.9 per cent of people in rural areas and 26.6 per cent of people in small towns undertook voluntary work, as compared with the national average for the Australian population of 19.8 per cent.</p>
ROLE OF MOTHERS	<p>In 2006, mothers in rural areas had the highest level of participation in the workforce (greater than mothers in regional centres, small towns or major urban centres).</p> <p>In the five years to 2006, the greatest increase in the level of participation by mothers in the workforce occurred in small towns and regional centres – a possible response to the flow-on effects of drought.</p>
IMMIGRATION	<p>In the five years to 2006, the number of people from overseas countries settling into regional centres increased by 39.1 per cent - this increase was also strong in small towns (26.9 per cent) but lower in rural areas (12.5 per cent).</p>
POPULATION AGEING AND DEPENDENCY	<p>The total population of rural and remote Australia decreased between 2001 and 2006, possibly making some community services non-viable.</p> <p>Over these five years, dependency ratios decreased in rural and regional Australia because of a decrease in the number of children – thus accelerating the rate of population ageing overall, and possibly increasing the need for aged-care services.</p>

Source: BRS^{1,2}.

Expenditure by farm families in smaller towns is an important source of income for many small businesses. A farmer may only spend 10 per cent of their total expenditure locally but ABARE calculations show farm expenditure represents as much as one-third of small town economies.

Consequently the impact of dryness on the farm is amplified in small towns. Service industries like retail and wholesale trade, transport and storage, finance and machinery are all affected by farmers' spending patterns.



The consumer dollar has evaporated around Coolah – empty shopfronts, struggling eateries and watering holes. Most distressing is the observation that children are missing out on weekend sports. The downturn has not happened *only* as a result of the drought, but the prolonged drought has worn everyone down and the resources and energy are spent. It is hard to keep up the enthusiasm for doing the community thing.

Farmer, Coolah, New South Wales

The loss of casual employment on farms during dryness flows on to the community where those laid off are forced to seek work elsewhere, often having to permanently leave the community. This can become a vicious circle. Loss of job opportunities in town means people in rural communities have to travel further afield for income, and in turn are taking their spending capacity out of their local community.

Employment opportunities are decreasing rapidly. There are very few employment advertisements in this area and with shops closing all over the area retail is disappearing fast.

Farmer, Waikerie, South Australia

Population loss impacts most in the drop in numbers of children at schools, the loss of young people seeking higher education and employment in cities, and the drift of workers who have lost their jobs. This can lead to a permanent loss of valuable skills to a community.

Bureau of Rural Sciences figures indicate the majority of the population in dryness affected areas are between 35 and 64 years of age. Standards of health in rural communities are poorer than the rest of the community. Community members sometimes have to travel great distances if they wish to access medical, education and entertainment options which are taken for granted in urban Australia. Less leisure time is then spent in the local community.

Social capital is built on social networks of trust, mutual support and understanding; creating the glue that holds a community together. When people are part of social networks, they are more involved in community life, they provide more informal care for others, they do more volunteer work and they are more active in social organisations. People's perception of their community is also important. If farm families perceive their local area as a community of which they are a part, despite distance from neighbours or lack of facilities, then they will behave as if it is a community.

Maintaining social sustainability in these communities has become an issue for all individuals, families, organisations and businesses in many parts of rural Australia.

Of great concern to many rural communities is the loss or decline in sporting clubs. Football, tennis and bowling clubs are suffering a loss of members and a loss of sponsorship. Physical activity is critical to health, wellbeing and productivity, as is connectedness and social inclusion.

Farmers report that dryness significantly impacts on a rural community's ability to work together for the benefit of the whole community. When people focus on their individual or family circumstances they do not have the capacity to engage in community projects or voluntary work which keeps rural communities alive and prosperous.

Shrinking communities have issues with less people running community organisations and these groups become tired and fatigued and eventually clubs and organisations wind up and this further destroys the fabric of small rural communities and farmers become increasingly isolated on their farm.

Rural Financial Counselling Service, Murray Mallee, Victoria

Men and women repeatedly told the Panel they are now too busy to volunteer and could no longer afford the cost associated in relation to fuel and the wear and tear on the car.

The burden of protecting people, property and the natural environment in vulnerable rural regions in Australia falls largely on volunteer services. For example, the Bushfire CRC at the La Trobe University reports the contribution of volunteer firefighters to the Australian economy is considerable. In 2000-01, in Victoria alone, this was estimated at \$480 million in equivalent wages. Most rural fire services have reported declines in the number of volunteers over recent years. Country Fire Authority Victoria volunteer figures for the past 16 years show a decline of 30 per cent in volunteer numbers. Another issue of concern is the general increase in the average age profile of volunteers. In 2003-04, 31 per cent of the volunteers in the Queensland Fire and Rescue Service were over 55 years of age.



Farmers who are working off-farm are not available in the local area for volunteer activities such as the Rural Bush Fire brigade call out, this places increased burden on those who are in the local area to attend all callouts, and make up the crew for the fire vehicle in case of emergencies. This creates extreme stress in the bushfire season where the workload falls into the few remaining people who work in the district.

Farmer, Pilliga, New South Wales

A paper by Hall and Scheltens³⁰ explores how dryness is portrayed by the media and by rural people calling the Australian Government's *Drought Hotline*, which was established in November 2002 through Centrelink to provide advice to distressed rural people. 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 dryness is primarily framed by the media as a crisis, rural people's own stories reveal a complex picture of entrenched and chronic problems which go well beyond drought. These stories indicate chronic rural disadvantage and the authors considered that improved ongoing support services were needed for rural communities, not just for those which focused ad hoc crisis-framed responses to dryness.

The Australian Government has established a Social Inclusion Committee of Cabinet, a Social Inclusion Unit within the Department of the Prime Minister and Cabinet and an Australian Social Inclusion Board. The Social Inclusion program encourages all Australians to play an active role in all facets of Australian life. To achieve this, the government has identified key priorities for social inclusion, such as opportunities in accessing services, securing a job, connecting with family, friends and the community, and equipping people to deal with personal crisis. Basic to social inclusion is the principle that all Australians should have a voice and for those voices to be heard. The Panel considers the issues identified within this report warrant rural Australia being on the government's social inclusion agenda.

RECOMMENDATION 7

The needs of farm families and rural communities in remote and dryness affected areas should be an item for consideration by the Australian Social Inclusion Board. The specific circumstances of Indigenous populations in such communities should be considered a priority by the Board.

OBSERVATIONS

Many people at the Panel's forums spoke of a 'preferred' community which they grew up in, moved into or want to retain. Dryness heightens people's sensitivity to instances of businesses closing, families leaving the district, and of new 'outside' entrants, generating fears for the future fabric of their local community and vital community activities, such as volunteer bush fire brigades.



The drought has had a direct effect on all members of small rural communities as it is not only the farmers that have been affected but for example the contractors who had purchased farming equipment such as expensive air seeders and earthmoving equipment. We know of contractors who have gone bankrupt as the farmers who promised them work could not fulfil their commitments to them due to the drought. We know of small shops that once had booming businesses that are now just empty shelves.

Farmer, Walgett, New South Wales

The decline in and exhaustion of volunteers mentioned to the Panel at almost every forum is symptomatic of the level of stress on members of rural communities. This has a widespread impact on the local rural community and has an individual social cost of a higher degree of isolation from the community.

The Panel repeatedly heard at its forums and through individual submissions that the social capital in Australia's rural communities is in danger of being, or has already been, seriously eroded. As evidence, rural people pointed to the declining number of volunteers willing to participate in community organisations and local sporting groups. Community and sporting groups reported they are struggling to maintain numbers and activities.

People spoke of volunteer exhaustion as the burden falls to fewer and fewer remaining members of the community. This has reportedly caused community assets like libraries and childcare centres to close in some locations while putting great strain on local school and sporting activities.

It was common for the Panel to be told about the flow-on effects of population loss in rural areas and that a loss of young people, in particular, was being exacerbated by dryness. Sporting clubs and teams are struggling to find members, with some even struggling to field a side. It was recalled that local sporting games were once the major point of social interaction in the community. The Panel heard that people could no longer justify both the cost and the time away from the farm and that many people were withdrawing because of drought-induced depression or because they could not afford the cost of socialising.



People retire to regional centres where health and support services for the aged are better. This leaves a void of would be community leaders to organise things for the betterment of the town. And those of us still here are flat out because now we have to work on twice as many committees to keep the town functioning.

Farmer, Minyip, Victoria

The Panel was told of the social cost to women in particular as reduced income during dryness meant they were required to increase their share of the farm work, look after children and also possibly earn off-farm income. With dryness having already restricted cash flow, rising fuel costs have also impacted on the ability of rural people to socialise. Public liability insurance requirements and public health regulations imposed on volunteer groups by governments, were cited as having an impact on the social fabric of communities, and discourage holding functions and social events which are often 'the life blood of rural communities'.

Many people spoke about a variety of socialising events staged by government and non-government organisations (with varying levels of funding support from governments, charity and the private sector). The socialising events targeted at drought-affected people take many forms including: farm family gatherings; barbecues, yoga, concerts, men's shed initiatives, women's pamper days, dinners, field days, and workshops. The New South Wales Government alone has funded more than 2100³¹ social

gathering events in recent years. The Panel was told by the numerous individuals and organisations putting on these events that they are hugely important for promoting social interaction within a stressed population and that they are also used, but not primarily, as a means of reaching clients who would not normally engage with drought-specific human service providers, such as social counsellors.

RECOMMENDATION 8

To effectively prepare communities for the social impacts of future dryness, governments must ensure support of community development initiatives reinforce social changes that will endure. Community development initiatives, such as community socialising events, should have clear objectives aimed at linking farm families and rural communities with various human service providers and/or facilitate clear referral pathways.

There are a range of individuals and non-government welfare or church-based groups that are almost competing with each other to deliver packages of food, clothing or toiletries and to hold community socialising events. Some church-based organisations are providing outreach pastoral care (travelling to properties) in conjunction with giving financial support toward household expenses. Many of these organisations reported they struggled to deliver this aid in the face of resistance from farmers whose real battle is to maintain the viability of their farming enterprises. A number of people informed the Panel that, in their view, many of these groups may have lost sight of their client group.

At many forums the Panel was told that because government drought programs are aimed at farmers rather than all who live within rural communities, some townspeople felt isolated and excluded because they are not receiving government funding such as that provided to farm families. The Panel also heard from a number of small businesses that a number of the food parcels being delivered to farm families were not locally purchased and had the unwelcome effect of denying local businesses much needed turnover when they were feeling the affects of dryness in much the same way as farmers.

RECOMMENDATION 9

In the light of the availability of income support, non-government organisations should carefully consider whether there is a genuine need for food parcels or whether other forms of support would provide enduring benefits.

In some parts of Australia Indigenous communities are being particularly affected. For those people still reliant on hunting bush tucker to supplement their diet, dryness has caused a decline in the amount of bush resources. The Panel heard this has also impacted negatively on the bush tucker businesses. People are therefore moving away from the Indigenous communities on the land and into town, with the resulting separation putting additional strain on families³². Several councils reported the loss of jobs from rural communities and the inability of farm businesses to employ labour have had a negative impact on the wellbeing of Indigenous Australians, who already suffer the worst health and economic standards in Australian society.

FINDINGS

The Panel found it difficult to separate the impact of dryness from the longer term socio-demographic trends contributing to a decline for some rural populations. However, it is clear from the public forums and submissions that rural people see dryness as having a major impact on the social fabric of regional Australia and the health and wellbeing of their communities. The Panel has no doubt that social change is felt more acutely during times of stress brought on by dryness.

Where family farms are struggling, the communities in which they normally spend their money also suffer. The Panel heard of small agriculture-dependant businesses being pushed to the brink and there is a flow-on effect to other local businesses because of reduced spending as a result of dryness.

The economic downturns in rural communities brought about by dryness also affect the ability for local businesses to donate funds to the local agricultural show and community events, making the work of volunteers even harder, although there is little research to quantify this impact.

The loss of health and education services from small rural communities is a further compounding reason for people and their families leaving rural areas.

Social isolation as a result of poverty, depression and the extra labour demands caused by dryness conditions are putting great pressure on the remaining volunteers in towns to hold together the social fabric of their community together. People told the Panel they were simply worn out.

Many rural communities are accustomed to minimal services as a way of life but governments can quickly destroy the social fabric of a town with insensitive decision-making, acutely felt by people already stressed because of dryness. This is particularly the case when taking decisions which impact on the character of communities.

The Panel believes state and territory governments must consider the unintended consequences of withdrawing services and infrastructure during periods of stress, such as dryness. The Panel is supportive of any Australian Government initiatives which will provide incentives to consider the social impact of decisions regarding the provision of rural services and infrastructure (for example, schools, school bus services and local hospitals).

The current welfare service delivery system is designed for the aged, people with disabilities and the unemployed. Discussion and consultation with farm families and communities indicates services and individual workers have tried to modify this existing model of service delivery with mixed success.

In some places there appears to be a wide range of non-government organisations, volunteers, welfare agencies, and community and church-based organisations distributing food parcels, clothing, pamper packs, and helping with the payment of household bills to farm families. Many of these non-government organisations have been doing this type of work for a long time but the difference now is that many of them are doing it on a much larger scale with the backing of government funding. One prominent example in recent years is the Australian Government providing the Country Women's

Association (CWA) with more than \$15 million to distribute as emergency grants to fund community based activities and to meet immediate household needs of rural families in drought affected areas. Rural families receiving other drought assistance were still able to apply for the CWA grants, with the majority of this assistance distributed by the CWA within weeks of application.

The Panel is perplexed as to whether there is an overwhelmingly genuine need for such basic assistance when presumably someone in need of such help would be eligible to obtain income support payments under the Australian Government's Exceptional Circumstances Drought Assistance arrangements. While the CWA assistance proved to be extremely popular, it has been an essentially temporary measure that plainly conflicted with the government's own criteria for income support. It was also not core business for the CWA and put additional stress on their limited volunteer resources.

The feedback from some of the recipients of food parcels suggests they feel embarrassed by the offering and have guilt in accepting. The varying methods of identifying those who receive such assistance versus people who do not can sometimes be of concern. The Panel was told by a number of providers that farmers were broadly reluctant to seek or accept such help and those providers had to find 'creative' ways to dispense assistance so as to not offend. "I just had to do something to help," "Someone's got to do it," "I just wish I could help everyone," were statements by providers of basic assistance which were frequently heard by the Panel. Some providers were obviously burdened by this responsibility and were clearly themselves stressed.

The Panel strongly believes providing food parcels and other goods is a short-term, crisis driven response which is not sustainable, both from a donation/funding outlook and from a sustained human resource perspective. This intervention typifies a short-term disaster response, not a model to be employed during periods of prolonged dryness. It is a short-term fix which has the effect of diverting attention away from the need for a more strategic approach to helping rural communities and people prepare for, and live, with dryness.

RECOMMENDATION 10

Effective and improved policies which support farm families and rural communities to live with dryness should be:

- *delivered by appropriately qualified and supervised individuals, organisations and service providers;*
- *have clear criteria and guidelines and ensure that funding provides scope for rigorous independent evaluation.*

In respect to the variety of socialising events that staged by government and non-government organisations, the Panel deems there to be anecdotal evidence for and against these initiatives. As short-term, one-off initiatives they would undoubtedly provide a single positive impact, especially when many rural community events are declining and/or people could not afford to socialise because of the financial effects of dryness. The Panel consider it would be useful to examine whether there are associated public health benefits for a community in promoting social interaction during periods of prolonged stress.

However, the Panel does consider these socialising initiatives for drought-affected communities are largely artificial and are unlikely to be maintained beyond the current injections of government funding. The Panel believes that as one-off means of reaching clients who do not normally engage with drought-specific human service providers, these events could have merit if they involved coordinated small gatherings (where everyone could be individually spoken to), where they facilitate clear referrals and they did not involve alcohol. The Panel suspects the larger events are often self-promoting and fund-raising exercises and would pose difficulties for drought-specific human service providers to effectively engage with people. Overall, the Panel considers these socialising initiatives to fall within a crisis-framed response and that they lack long-term value in addressing people's ongoing needs.



FAMILIES

BACKGROUND

Impacts of dryness 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*. Farm family-related impacts identified include:

- *dryness 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; and*
- *community networks may be lost as farm families' social interaction decreases – contributing to their feelings of social isolation*

The national 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 which allow people to provide their own accounts of impacts on their families and their lives.

The Panel heard that increased workloads and debt of farm families leads to many young people working long hours both on and off farms, assisting with farm labour tasks, and sometimes missing school as a result. Teachers told the Panel that dryness had a noticeable effect on poverty levels, preventing students from attending excursions or from taking part in representative events for financial reasons.

A study by Stehlik, Lawrence and Gray³³ focused on women's experiences of drought and confirmed that it is experienced differently by men and women. Women's contributions to the economic and social survival of farm families enduring dryness may be accorded secondary status to those of the men who are principally designated as 'the farmers'.

Australian farmers are considerably older than those of people in most other occupations. The increase in farmers' average age is because of both fewer and fewer young men and women entering agriculture, and older farmers are delaying retirement. Older farmers may be reluctant to retire because they see this as an acknowledgement of their ageing which is foreshadowing a loss of the independence central to their life and identity as farmers. This may also be a major factor in their resistance to exit and adjustment programs which encourage 'non-viable' producers to leave



2 SOME KEY STATISTICS FOR RURAL FAMILIES

TOPIC	STATISTICS AND NOTES
RURAL FAMILIES AND HOUSEHOLDS OVERALL	
Family size	Family size in rural areas is generally falling, but still remains larger than in regional centres and cities ³
Numbers of children	Declined across all states and territories over the period 2001-2006, with the greatest rural decline being in Queensland ³
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 ³
One-parent families	Rural areas have the lowest proportion of one-parent families of all areas (also see statistics below for farming families)
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 per cent 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 ³
Motor vehicle ownership	In 2006, only 2.8 per cent of rural dwellings did not have a motor vehicle, as compared with 11.2 per cent of dwellings in major urban centres and cities ³
FARMING FAMILIES	
Number of farming families	The number of Australian farming families declined by 9 per cent from 112 800 in 2001 to 102 600 in 2006 ⁴ . The smallest decrease was 1 per cent in the Northern Territory, and the largest 13 per cent in Queensland
Family types	At the 2006 Census, around half (51 per cent) of farming families were couple families with children – as compared with 45 per cent of families in this category Australia-wide. There was a considerably smaller percentage of one-parent farming families (3 per cent), than one-parent families in Australia overall (16 per cent) ⁴
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 per cent of farming families as compared with 1 per cent 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) ⁴
Average age of farmers	The average age of Australia's farmers has been steadily increasing since 1981 ⁵ , and the median age was 52 years at the 2006 Census ⁴ . The proportion of farmers older than 65 years increased from 15 per cent in 2001 to 18 per cent in 2006; and the proportion of farmers under 35 years decreased from 12 per cent in 2001 to 10 per cent in 2006 ⁴
Women in farming	In 2006, more than half (56 per cent) 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 their occupations of clerical, sales and service workers (32 per cent); education professionals (13 per cent); labourers and related workers (10 per cent); and health professionals (10 per cent) ⁴
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 ⁵
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 per cent – many young rural women move to urban locations following education and a career ⁵

Sources: BRS³, ABS⁴, Barr et al⁵.

agriculture. Not having a family member to which they can pass the farm may also be a contributing factor. In addition, many farmers in older age groups have relatively low levels of formal education which may contribute to a lack of resilience and adaptability in confronting dryness.

OBSERVATIONS

The Panel heard reports of some isolated young families on properties with no access to outreach community health, maternal or child health services. Their change of circumstances had gone unnoticed to the health providers of the region and they appeared to be invisible to the broader community. The Panel also heard consistent evidence that some marriages were breaking down in rural communities under the combined strain of physical separation enforced by the need to earn off-farm income and the debt-burden on the farm. Many couples claimed to be too tired to invest time and energy in maintaining their relationship.

Drought makes it incredibly difficult to plan for the future as each individual is pre-occupied with the day-to-day struggle.

Female farmer, Gilgandra, New South Wales

Women, particularly, complained that their husband's response to drought and debt was to work harder and longer to the point where families were no longer communicating. While the men see themselves as 'resilient', their wives see them as 'stubborn' and unrealistic about their economic situation.



Living with a sick feeling in your belly over the long term does not help any aspect of family life – relationships, harmony and physical health, supporting each other and neighbours and friends.

Female farmer, South Australia

Where properties are a considerable distance from town, off-farm work can mean staying in town during the week and returning to the property at the weekend. I know of some cases where this has led to divorce. One client told how she had obtained off-farm work but would never do it again or recommend it to anyone else due to the effect on the family.

Rural Financial Counsellor, New South Wales

The Panel noted consistent reports about the impact of dryness on children in farm families. These impacts ranged from social isolation because they either could not go to school or because they could not participate in community sporting activities; there were no buses available to take them, or their parents could not leave the farm or could not afford the fuel.

Many forums discussed children working long hours on farms to help out the family, including children as young as six. In some cases, children are missing school altogether when dryness related work on the farm becomes critical.

Children were described as picking up on the financial and emotional stresses in families. This sometimes results in them, particularly boys, leaving school early to earn an income to reduce the pressure on their parents.

Children require a stable nurturing environment to grow, develop and learn. Stressed families and households will, over time, negatively impact on children's ability to do this and to develop their own coping mechanisms for adult life.

Women told of experiencing drought in a different way to their husbands. They feel the need to be emotionally strong to hold the family together and are often working as labourers beside their husbands in the place of hired workers. They also frequently home-school children where distance or the closure of schools has made this necessary. They are taking off-farm employment to bring in additional income or to support their children's education if needed.

Rural women play a significant role in communities affected by drought and ongoing climate change. In these circumstances women in rural communities take on critical roles spanning family, business and community, over and above the already heavy demands made on them.

Local Government and Shires Association of New South Wales

Women frequently talked about a sense of isolation, brought about by the loss of social contacts and the cost of fuel.

RECOMMENDATION 11

To account for the needs of farm families, an improved policy for dryness must consider:

- *the changing demographics of farm families and rural communities*
- *impediments to farm succession to enable effective intergenerational change*
- *the contribution of women and youth to farming and rural communities*

Dryness appears to have exacerbated family succession issues. Many families are in such debt that the older generation cannot afford to retire, making it difficult for a younger generation to return to the farm. Many farms are still under the legal ownership of elderly parents in their 80s and 90s, although the son, and occasionally grandson, runs the farm. Finding money for parents to leave the farm and relocate to an aged-care facility may either increase the debt level of the farm or require a part of the farm be sold off.

Farmers also told the Panel they could not pass the family farm onto their children because of taxation laws surrounding the gifting or transferring of assets, and the effect this can have on social security entitlements, such as the pension. Properties that have suffered from years of dryness often cannot provide for the living costs of two generations. Many farmers say they are reluctant to pass on debts to the children and actively encourage them to not continue in farming.

RECOMMENDATION 12

The Australian Government's Review of Taxation should consider whether existing tax laws present institutional barriers to farm succession, and whether changes could provide improved succession planning incentives for farmers.

The Panel met a lot of young enthusiastic farmers who commonly reported that the ownership of the family farm was still with their parents or involved complex ownership structures. Such family arrangements often cause great stress during times of dryness owing to reduced income flows and unmet succession expectations. The Panel heard that decision-making while under stress was usually not successful, or not done.

FINDINGS

The Panel found the present dryness has had an impact on the functioning of rural families, through enforced long-term separation of family members, psychological impacts on toddlers and school age children, an increased burden of responsibility on women and the divisive issue of succession planning in tightened economic circumstances. This conclusion is contrary to the findings of a study by the Australian Institute of Family Studies outlined in its submission to the Panel.

The Panel formed the view that while many farmers will say they are coping, their coping mechanisms are creating greater pressure on their families.

RECOMMENDATION 13

Government policy should focus on encouraging farm families to properly assess and to access human support services.

Women and children, both on farms and in communities generally, appear to be bearing a large part of the emotional burden of dryness. They are expected, and willing, to step-up to provide support on the farm, the business and in the community. Many of them are exhausted and without social support networks of their own.

Succession planning is a major issue for an ageing farm population. Because of dryness and lack of cash flow, many older farmers feel they cannot afford to retire and pass the farm on to their children. Ideally these decisions should be factored into a farmer's strategic approach to family farm business planning. However, debt and concerns relating to taxation issues are exacerbating an already sensitive issue for many farmers and their children.

RECOMMENDATION 14

Further research is needed into understanding the wellbeing of farm families facing periods of dryness.

HUMAN SUPPORT SERVICES

BACKGROUND

The focus of recent research on services in rural and remote Australia and how service provision may be affected by dryness, has been on how existing services can be improved and made more appropriate and accessible to drought-affected communities, families and individuals. Gaps in services are not often raised.

Lynn³⁴ discusses approaches to rural human services provision in Victoria and attempts made there to offer a generalist approach that integrates individual and community needs by involving partnerships between community and government. This research found that, 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.

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 Lonne³⁵ discusses occupational stress experienced by rural human service providers. They report that social workers, welfare workers and other service providers living and working in small rural communities say 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.

Chenoweth³⁶ argues that living and working in rural communities poses significant challenges for human service providers and they need special preparation for this kind of work. She considers there is evidence 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 live and work in a small community where it may be difficult to separate personal and professional life. To adjust to these differences, more student rural placements may be valuable, together with more integrative education for human service practitioners.

The Panel believe there is a multitude of drought-specific or focused human support services operating in rural communities. Many services are providing support against a crisis framework specific only for dryness, while others provide support at a more general and ongoing level, such as rural financial counsellors. The term ‘human support services’ is used by the Panel to refer to a divergent range of current drought-specific or focused financial/social/family counsellors, chaplains, and advisors (but not limited) who are operating in rural and remote areas, some with government funding and others through non-government backing, in roles covering financial, social, family, relationship, and health issues.

The Panel found it an almost impossible task to fully and, importantly, accurately grasp the wide-range of drought-specific, focused human support services and more general support measures that are operating in rural Australia today. *Drought assistance: A summary of measures provided by Australian, state and territory government* has almost 100 entries. The Department of Infrastructure, Transport, Regional Development and Local Government’s Regional entry point includes more than 2500 links in its regional programs inventory and almost half of these are relevant to human services.

There is considerable diversity among the number and scope of state and territory government initiated programs for dryness. For example, South Australia has 23 drought-specific programs while Western Australia, Northern Territory, Tasmania and the Australian Capital Territory each have three or less. New South Wales, Queensland and the Northern Territory offer transport subsidies. Queensland alone offers electricity tariff relief.

Australian Government initiatives include:

- *\$8 million over 2007-09 to establish 24 Family Support Drought Response teams across Australia to deliver a range of family relationship services to individuals, families and small businesses in communities affected by dryness. These teams are funded to provide family relationship counselling, crisis intervention, dispute resolution, case management and other services aimed at helping people affected by prolonged dryness conditions. This program is administered by the Department of Families, Housing, Community Services and Indigenous Affairs through the funding of non-government local providers.*
- *the Mental Health Support for Drought-Affected Communities measures provide crisis counselling services for individuals and training for clinicians and community leaders. The Department of Health and Ageing is providing \$10.1 million over two years to be delivered by Divisions of General Practice.*
- *an April 2007 dedicated drought-round of grants under the Local Answers program supported 81 projects totalling \$10 million. The Local Answers program is administered by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs.*
- *Centrelink's drought bus provides information on Australian Government assistance available, and links to financial counsellors and social workers, including Beyond Blue: the national depression initiative.*

There are many other organisations and government agencies providing assistance to dryness affected communities, even if they may not be funded directly to do so. For example, a number of non-government organisations are funded through the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs:

- *the general rounds of the Local Answers program which helps disadvantaged communities identify opportunities to develop skills, support children and families and foster proactive communities:*
 - *build effective parenting and relationship skills that strengthen families;*
 - *build skills and opportunities to make families and communities more self-reliant, and;*
 - *assist individuals to get involved in community life through local volunteering, mentoring or training to build leadership skills.*
- *Volunteer Grants program which provides funding for eligible not-for-profit organisations to support their volunteers and encourage volunteering by:*
 - *purchasing small equipment and sporting items to help their existing volunteers and to encourage more people to become volunteers and;*
 - *contributing towards fuel costs incurred in their volunteering work, such as when using their cars to transport others to activities, deliver food and assist people in need.*
- *the broader range of resources available under the Family Relationship Services program, which provides funding to non-government organisations to establish centres to deliver a range of support and specialised services to minimise disruption to family relationships. The abovementioned funding of the Family Support Drought Response teams falls within this program.*

In some locations the Panel was alerted to the considerable presence of a variety of non-government charity and/or church organisations, including the Salvation Army, Aussie Helpers, Red Cross, the Country Women's Association, St Vincent de Paul, Anglicare, Centacare, Uniting Care, YWCA, YMCA, Relationships Australia, and the Royal Flying Doctor Service of Australia.

In addition, there are also a number of self-motivated single operators who are not attached to any organisation or funding source. These individuals, generally, lack professional supervision and qualifications and vary in their levels of quality and the services they deliver. Some local government bodies also had dedicated programs, and often, but not always, with support from other tiers of government.

OBSERVATIONS

There was considerable discussion during the public forums about the role that drought-specific or focused human support services were playing within drought-affected communities. A number of written submissions also discussed the perceived value of various human support services for drought-affected communities.

The Panel heard that funding for drought-specific or focused human support services is sourced from a variety of places, including the Australian, state, territory and local governments, and also non-government organisations such as churches and charities. Despite the multitude of funding sources, the Panel found large variances in the level and quality of the drought-specific or focused human support services being provided. Some areas the Panel visited appeared to lack human support services, while other areas had potentially overlapping services. In the latter examples, the Panel believe the current response by governments has created a 'drought industry', as one farmer called it, of contracted providers that appeared to sometimes overlap but ostensibly attempted to supply similar services to the same target group.

The Panel observed that some drought-specific or focused human support service providers, however well-intentioned, frequently did not appear to have the appropriate training or skills to effectively engage farming individuals or rural communities, particularly in circumstances when independent-oriented farming individuals may not properly understand the social impacts they were experiencing. In such cases the methods varied between 'doorknocking' or 'cold calling' on farms, through to working at improving networks and referral mechanisms with other services within the community.

The Panel heard a number of comments in the public forums and written submissions about the lack of effective networks and referral mechanisms between support service providers.

Two consequences of the lack of coordination between human support services were that:

- *clients may not have been effectively referred to the most appropriate support services; and*
- *some drought-specific or focused support workers advised the Panel they were providing services outside their area of expertise.*

The lack of coordination between government-funded drought-specific or focused human support services was further complicated by the range of similar services also provided by non-government



“There are a range of service providers that currently have programs and activities appropriate to addressing the social and mental wellbeing of drought affected communities; however, there is limited coordination of these services in terms of networking, collaboration and integration.”

General Practice Alliance South Gippsland, Inverloch, Victoria

“Drought funding from state and federal governments has been provided to a range of local organisations in a scattered approach...The uncoordinated approach to funding poses a risk of duplicating services at best and undermining existing initiatives at worst”

Southern Grampians and Glenelg Primary Care Partnership, Hamilton, Victoria

organisations and charities. In many cases, both government-funded and non-government funded service providers appeared to have low awareness of the support each other was offering in local communities. As a reflection of this, many of the forum participants and written submissions expressed a desire for existing human support services to be better coordinated.

The Panel also heard that a number of support workers were only employed on short-term contracts, some for no longer than six to 12 months duration. These funding terms were inclusive of time required by the recipient to recruit and train staff, establish local networks and then deliver a service. This was particularly the case for support workers who were hired under what the Panel views as a crisis-framed approach to providing support for drought-affected areas. These short-term contracts sometimes resulted in:

- support workers having difficulty establishing strong networks within the community and in developing referral services with other support providers;
- support workers continually worrying about their job security and employment prospects for when their contracts expired; and
- a minority of support workers having employed less appropriate methods of reaching potential clients in an effort to have an immediate impact in the community and to engage with potential clients as quickly as possible.

RECOMMENDATION 15

In planning for dryness, improved human support services, must be available and responsive to the needs of farm families and rural people.

The Panel heard that some drought-specific or focused human support service organisations in receipt of government funding to provide drought services have had difficulty in sourcing appropriately trained professionals in the areas requiring assistance. A small number of local providers

even reported that they, in turn, found what they termed ‘other consistent uses’ for the funding or employed people without appropriate qualifications.

While the Panel met many highly professional drought-specific or focused support workers who are providing much needed services to their communities, some of the services that the Panel came across were less than ideal. The different levels of professionalism and effectiveness between those providing drought-specific or focused human support services more often than not reflected their level of skills, training, qualifications, experience and peer support and supervision.

The Panel was also concerned about the strain and occupational stress some of the people delivering drought-specific or focused human support services, and also health workers, appeared to be experiencing. Human support service providers who had greater experience, professional peer support and supervision and established referral networks generally appeared to be coping better than those who were operating, sometimes by choice, ‘on their own’.

RECOMMENDATION 16

The distributors of community assistance and social services, including volunteers, should themselves have access to professional support.

The Panel was impressed by Centrelink’s drought-specific or focused Rural Services Officers, who are respected by their communities, do not appear to carry welfare-associated stigma and are reportedly doing a good job at assisting farmers, rural small business and are linking into existing professional networks.

RECOMMENDATION 17

The outreach mobility of human services to respond to rural people in times of stress, such as future periods of dryness, needs to be improved, with one option being an expansion of the Centrelink Rural Services Officer program.

Within the context of its forums, the Panel heard from attendees who viewed the role of the Rural Financial Counselling Service (RFCS) as a vital support tool in providing guidance and referral advice to rural farm families and small business operators. The Panel broadly support this view and was able to meet many impressive people working as individual rural financial counsellors.

Notwithstanding, the Panel is concerned a number of RFCS providers and individual rural financial counsellors made public statements which indicates there remains significant room for improvement in the administration of the RFCS. Issues which concerned the Panel include:

- *comments that “I am the only one they can talk to”;*
- *inability by some to articulate when, how and to whom they refer clients;*
- *an over-emphasis on their own contractual arrangements;*

- *a disdain for the need to provide monitoring and evaluation reports;*
- *a view by some that their key objective was to obtain government assistance for their clients; and*
- *the appearance that some received little professional supervision.*

The Panel notes this only applies to a small number of the RFCS providers and individual rural financial counsellors but importantly, the people that these comments apply to are strong identities and vocal advocates in their communities. The Panel accepts that it was only able to observe a relatively small number of communities but a theme was consistent.

The Panel understands that the RFCS has been in transition to a case management approach since 1 July 2008. The Panel was concerned by a number of comments received from rural financial counsellors expressing their aversion to moving to these new arrangements and criticising the decision. The Panel supports the move to a case management approach for the RFCS and judges that individual rural financial counsellors have an important role in helping their clients develop options for financial improvement according to their individual situation and then provide a referral and information service. The onus should be on the client to make the best decision which suits their individual needs. With this in mind, the Panel believes it is appropriate an independent formative evaluation of the RFCS occur as soon as practical.

RECOMMENDATION 18

An independent formative evaluation of the Rural Financial Counselling Service must occur as soon as practical to: assess the progress that has been made in delivering a case-management approach; identify the institutional barriers that exist, and; to determine any improvements and adjustments that may be needed.

The Panel believes rural financial counsellors are not ‘counsellors’ nor are trained as such, and therefore immediate consideration should be given to a name change. The Panel also observed that the administration of the RFCS sits uncomfortably within the Australian Government Department of Agriculture Fisheries and Forestry as an agency predominately focused on national-level industry issues versus other human service oriented agencies which deal with individuals as part of their core functions.

RECOMMENDATION 19

The word “counselling” should be removed from the name of the Rural Financial Counselling Service and replaced by a more appropriate title, better fitting the service’s broader role.

FINDINGS

The Panel believes drought-specific or focused human support services are a key resource which can be better harnessed for the ongoing long-term benefit of farm families, rural businesses and communities – not just something that should be put in place during times of dryness.

Human support services have the potential to play a vital role in the long-term sustainability of rural areas. However, in future, such services must move away from crisis-framed responses to dryness and instead move towards more longer term sustainable approaches. Human support service delivery which is focused on short-term interventions at the crisis end is an inadequate piecemeal response to what are fundamentally ongoing problems. At a basic level it appears that governments funding providers to deliver drought-specific or focused human support services for defined periods has caused the creation of an extra ‘layer’ which is often poorly linked to existing professional networks or referral hierarchies.

A longer term approach would allow human support services to focus on early intervention and the ongoing wellbeing of farm families and rural communities. This would improve farmers’ mental and physical health, skills, support networks, and their ability to better prepare and cope with risks to their business and themselves during periods of dryness.

The Panel discovered from its consultations throughout rural Australia that the current spread of human support services is largely uncoordinated and inefficient. A multitude of human support services operate in farming areas and while a variety of providers can foster innovation, they were often reported as uncoordinated and spread poorly. Some regions do not have sufficient human support services and others are seemingly oversupplied, with a vast range of service providers funded by various government and non-government sources offering similar services to the same clients. At a national level these services have few linkages to complementary programs or understanding of ongoing implementation activities. There is a clear need for governments to pursue more streamlined human support service delivery in rural areas with stronger hierarchical leadership in order to facilitate better region-specific coordination and referral pathways. The focus needs to be on how human support services are delivered rather than simply what services are delivered.

Where possible, the Panel believes the co-location of service providers into service hubs for rural centres would be the most desirable way to link human support services and to facilitate more effective referral pathways. This would be particularly useful in ensuring farm families and rural communities had clearer and easier access to the most appropriate support services and would also assist in the earlier identification of referral needs.

RECOMMENDATION 20

Access to government drought assistance and services must be improved by making applications and referral pathways simpler.

The Panel often heard praise for rural financial counsellors during the public forums and in written submissions and how rural financial counsellors were well-known and mostly trusted by their communities. However, the Panel is concerned as to whether there are sufficient services in rural communities for people in need of other forms of counselling. The co-location of rural financial counsellors with other support services, such as social workers, would help to ensure that emotional and mental health issues were recognised early and that clients could be referred easily to co-located service providers with the correct area of expertise.

RECOMMENDATION 21

An urgent audit should be conducted on the extent, experience and qualifications of human support services being implemented on-the-ground in rural Australia (government and non-government).

RECOMMENDATION 22

Following this audit, strategies must be developed to achieve the most appropriate distribution and allocation of resources and linkages between human service providers, including clear hierarchies to facilitate better region-specific coordination and referral pathways. These strategies should also consider:

- *co-locating service providers where possible to form service hubs for rural centres;*
- *providing specific mental health first aid training and health promotion for service providers to better identify, react and refer clients with mental health issues;*
- *establishing minimum standards and appropriate qualifications for human support service providers and their employees, including non-government organisations;*
- *ensuring funding terms for human support services are of an appropriate length to enable effective establishment, delivery and review of the services provided.*



EDUCATION AND TRAINING

BACKGROUND

As part of its review of the social impacts of dryness, the Panel asked the Bureau of Rural Sciences to compare people working in agriculture in drought-affected areas with the Australian population generally. The results show that people in dryness affected areas are less likely than the average Australian to have continued their education on to Years 11 and 12. They also show the adults in drought-affected areas are more likely to have a diploma or certificate from a college or TAFE than a degree or a diploma from a university. In fact, adults working in dryness affected areas are less likely than those from the general Australia population to have any post-school qualifications.

Young people who left school early were less likely to find an apprenticeship or traineeship during dryness. The need to travel long distances for TAFE training was identified as a significant issue, requiring parental support because of cost and a lack of public transport.

In 2006, the Australian Government Department of Education, Science and Training received a report on the impacts of dryness on secondary education access in Australia's rural and remote areas³⁷. This report was critical of the lack of information on the circumstances of children living and being educated in rural and remote Australia. In particular, it found there was a dearth of information about how periods of recurring dryness were affecting the access of young people to education.

Dryness, in addition to ongoing rural restructuring, has had a particular impact in more remote areas. In some Australian country towns, the loss of student numbers as families leave town seeking work has led to closure of schools, leaving communities without any local history of shared school networks. These children are now forced to board in the nearest town at a hostel, or to be home schooled or undertake distance education. This decreases opportunities for frequent, incidental contact centred on school and neighbourhood activities between family members and neighbours. The loss of teachers also impacts on the human and social capital of a community.

Many high schools are reporting a significant drop in student numbers because of rural restructuring and dryness. In Blackall, Queensland, for example, numbers are reported to have dropped by one third over a one year period³⁸. Charleville High School has reported a similar fall. This impacts on teacher numbers and subject offerings. Teachers are frequently forced to teach outside their discipline and have difficulties accessing professional development. Students are forced to take more subjects by distance and families have difficulty funding extra-curricular activities.

In 2007, Drought Assistance for Schools funding was provided as part of a package of measures totalling \$714 million to support farmers, small businesses and communities in rural and regional Australia. This package recognises the financial and social pressures on families and schools located in EC declared areas. This funding is provided directly 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 dryness. It may also be used to assist with the cost of items such as text books, uniforms, subject levies, student attendance at extra curricular activities and other educational activities which directly benefit students.



Our school has had to minimise the number of excursions offered to the children as they require some subsidy from the parents, and reduce the annual school camp to accommodate the requests of parents who could not afford the traditional school camp fees. In recent years of drought, the P and C has addressed the concern of parents who could not afford to send their children on camp, and subsidised the Year 7 transition camp. These excursions and camps are vital part of our children's education and serve to maximise their learning experiences and understanding of the world around them.

Beacon Progress Association, Beacon, Western Australia

Less than 15 years ago, up to 50 per cent of remote students had governesses; now only 7 per cent do³⁹. Home tutors are now overwhelmingly mothers, who are also often replacing hired labour on their properties at a time of increased workloads associated with dryness.

Increased workloads and farm debt lead to young people working long hours, both on and off farms, assisting with farm labour tasks and sometimes missing school as a result.

A mother in Pilliga cited home schooling four children and managing the farm while her partner sought off-farm income created enormous pressure on her. While she felt the need to attend a basic computing class to develop skills to support her children and the management of the farm business, there were few resources such as childcare/alternative school supervision and no-one to manage the farm.

Western Institute of TAFE, Outreach Unit, Coonamble, New South Wales

For many children from remote communities, attending boarding school for their high school years has been both a tradition and a necessity⁴⁰. Parents have seen this as a social as well as an educational necessity. This is clearly expensive. While the difference in cost between public and private schools in any Australian city can be significant, distance adds a completely new dimension. If a family live 20 kilometres out of Bourke there may be several options for schooling their children. If a family live 200 kilometres out of Bourke the choices might be distance education, boarding school or a parent and children needing to relocate to a regional centre where there is access to education and work.

Boarding schools recognise their rural and remote families are under particular stress⁴¹ and have tried to support them through delayed payment schemes, increasing bursaries and scholarships and making staff aware of the rural situation. A study found many parents have opted to pay the fees over a longer time period. This delayed payment can result in a greatly reduced ability to support their young people going on to tertiary levels.

Many families are choosing not to send their children away to boarding school for secondary school as they can't afford the school fees. This means the children then have to travel vast distances daily to the local high school, less time to study and also as they are at home, are called on to be unpaid workers on the property. Not that they resent this, but they are missing out on social skills gained while living in cities.

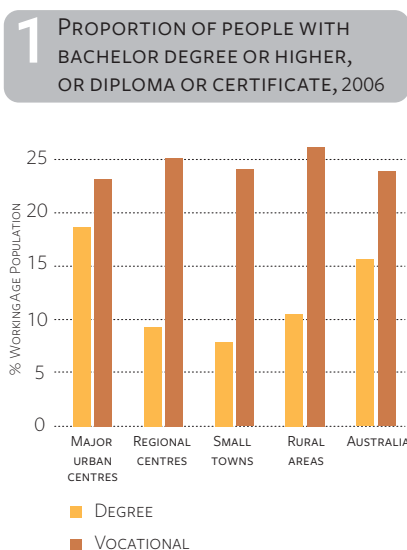
Country Women's Association of New South Wales

Young people at boarding school were reported to be anxious about their parents and about the circumstances at home as a result of dryness and to worry that their parents cannot afford for them to be away⁴².

Some families access the Australian Government's Second Home Allowance which enables, usually, mothers to move to their closest centre with their children. The children attended the local schools and women had the opportunity to work, often providing a much needed second income to the family. This arrangement can lead to long family separations and the isolation of men on drought ravaged farms. Young people in remote areas may also attend hostels, such as those located in Hay and Longreach. The cost of hostel accommodation can be well above the Assistance for Isolated Children allowances, causing significant hardship for families.

Special needs children are reported as having suffered particular disadvantage, especially when they live in a remote area away from services and support. In their study, Alston and Kent⁴³ found there was an urgent need for support programs, respite care and special supports for home tutors to support the education of special needs children.

The rate of improvement in educational attainment 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). In 2006, many more people in Australia had vocational qualifications than a bachelor degree (3 784 000 and 2 477 000, respectively). Nearly one-quarter (23.8 per cent) of the working-age population had vocational qualifications, compared with the much smaller proportion with degrees (15.6 per cent)⁴⁴.



Source: BRS (2008)⁴⁵

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 farm families and farm-hands seeking work off-farm to supplement their income during dryness, with work options being constrained by qualifications targeted at their farming operation. With increasing demands for information technology skills or vocational certification, taking on off-farm work may require gaining further qualifications.

Gaining new qualifications or training may present challenges, especially during dryness, because of difficulties accessing educational or training programs, the cost of the program (especially for those already experiencing financial hardship), time spent away from the community and family, and the ability to take on new knowledge in times of stress.

The 2006 Australian Bureau of Statistics Census of Population and Housing illustrates the situation (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 actively engaged in farming work, including the categories of ‘farmers and farm managers’, ‘farm specialists’ (eg shearers and other contractors), and farm workers (eg farm hands and labourers). For this analysis, ‘non-school qualification’ refers to educational attainments other than those of pre-primary, primary or secondary education and may be attained concurrently with school qualification.

Within the farming population, 23.5 per cent of workers had post-school qualifications compared with 42 per cent of the Australian population generally. Of these, nearly 5 per cent of the farming population held a bachelor degree or post-graduate qualifications. This was less than one-quarter of the level attained in the Australian population (21.9 per cent). Those who held an advanced diploma, diploma or certificate represented 18.5 per cent of the farming population, which was 40 per cent less than the Australian population (30 per cent).

These figures are based on the total population of farmers across Australia and mask important differences between peri-urban farmers of major cities, regional centres and small towns, and those farmers in rural and remote areas. Nevertheless, they serve to highlight that the lower level of education and training within the working farming population has implications for its members’ ability to diversify into off-farm occupations as a risk management strategy.

The Youth Affairs Council of Victoria, in *Talking about the big dry: young people and the impact of drought* states that data collected on post-secondary school students reveals dramatically higher levels of deferral of higher education placements by young people in rural and regional Victoria as compared with those in metropolitan Victoria. It paints a picture of a gradual increase in deferral over the past few years, potentially related to the impact of widespread dryness in the corresponding years.

In the Alston and Kent study, young people themselves 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 dryness, making earning this money difficult or impossible*
- *anecdotal evidence that some give up their university places because of financial pressures*
- *anecdotal evidence that some drop out from university because of financial and emotional pressures*

- *the need to choose shorter courses to relieve the family's financial burden and/or allow younger siblings access*
- *giving up a place at university because of family financial pressures*
- *a huge sense of frustration that university education is no longer available on a merit basis*

A Tertiary Education Roundtable, organised in 2007 by the NSW Farmers Association, was told of a dramatic fall in tertiary enrolments in agriculture related courses. The Australian Farm Institute reported that the demand for undergraduate agriculture places fell 19 per cent from 2001 to 2006. They also reported a decline in the vocational level of enrolments in agriculture. With universities reporting a decrease in enrolments, despite strong demand by employers for agriculture and related graduates, the Association sees the issue as a major threat to rural industries and the communities that thrive on the success of this industry. In the view of the NSW Farmers Association, the length, severity and extent of the current dryness has acted as a deterrent to young people who may have otherwise sought a career in agriculture, with enrolments at an all-time low for many tertiary institutions in NSW.

With increasing demands for information technology skills or vocational certification, accessing off-farm work may require further qualifications. Acquiring these qualifications can be difficult, especially during drought because of the cost of programs and the time spent away from the farm and family.

The absence of childcare facilities in rural communities can be a major obstacle to farm families earning off-farm income and to providing children with respite from stressed families. The Community Child Care Cooperative of NSW reports that childcare services in drought affected areas in that state are struggling to maintain viability in the face of reduced child numbers, reduced capacity to fund raise and difficulty in attracting trained staff. Childcare facilities are also struggling to recruit parents to management committees because this takes time and energy parents can no longer spare. The general decline in volunteer capacity in rural towns is also impacting on schools.

The Australian Government has recently launched a Review of Higher Education in recognition of the need for longer term, system-wide reform to enable higher education to make a major contribution to economic productivity and prosperity⁴⁶. This 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 to develop a long-term vision for higher education into the next decade and beyond⁴⁷.

Observations

The Panel consistently, across all public forums, was told of the great concern rural people hold for the education of their children and of the sacrifices they were prepared to make to ensure their children were well educated.

Lack of childcare centres in rural communities reduces the capacity for women to fully participate either socially or in the workforce.

Centrelink worker



Our community of Wubin lost its primary school at the end of 2007 due to the effects of drought seasons starting in 2002. When it closed, we lost five young families who all made the final decision to move away and change their career and education prospects. This severely affects those left who want to stay and now do not have a school or a bus run that can take any future children to schools further away.

Rural Remote and Regional Women's Network of Western Australia Centrelink

Parents at several of the Panel's forums talked about their concern that staffing numbers in schools were dependent on student numbers and the loss of even a small number of students in a rural school could result in the loss of a valuable teacher. This also often meant the loss of a school bus.

The NSW Farmers Association reports of Year 11 and Year 12 students being expected to learn via video conferencing because time with teachers is so limited under school funding formulas.

RECOMMENDATION 23

State governments must consider the short to medium-term social and economic impacts, when dryness is a contributing factor, when assessing the viability of classes, schools and bus services.

RECOMMENDATION 24

Where school closure is the judicious option, state governments should assist rural families to access other education options for their children.

The Panel repeatedly heard of a greater frequency during periods of dryness of children arriving at school hungry. For example, the school principal at Bothwell in Tasmania has established a 'breakfast club' to ensure students start the day with a good meal. It is unclear whether children are hungry children is because of a lack of income for food or a lack of time parents can spend away from the farm to prepare meals for children.

In submissions and at public forums mothers described the stress of being torn between their responsibility to the farm and their responsibility to their children, when they need to replace hired labour on their properties and to become teachers for their children.

Farm families repeatedly reported on the impact of being asset rich and cash poor and having little accessible cash during times of dryness to meet the educational needs of their children although, reportedly, remaining ineligible for government assistance because of the asset test.

Time and money constraints are putting pressures on families and are affecting the quality of education for those students accessing School of the Air. There is not enough money to hire governesses and lack of money to hire external labour means that mothers are required to be out working the property or undertaking off-farm work.

The Uniting Church in Australia Frontier Services, New South Wales

The Panel heard evidence, which is supported by numerous submissions, that high school retention rates have been dropping for boys. These students are taking available work in preference to staying on to finish high school because they were determined to relieve the family of a financial burden and save their parents from the additional financial stress associated with tertiary education.

Kids in schools are very affected. Morawa has a school psychologist who is dealing with five schools. She has recently been allocated another two schools which puts her work load ratio to 1:1800. This is absolutely impossible to meet the kids needs.

Rural Remote and Regional Women's Network of Western Australia

Eligibility for the Youth Allowance and the Living Away from Home Allowance has been identified in submissions and at public forums as a barrier to rural students accessing tertiary education and as a major cause of stress in families. Parents reported sending high school leavers out to find a job for 12 months so as to be deemed 'independent' of their parents and therefore eligible for allowances. There are few jobs in rural and remote communities for young people and often these are in part-time, insecure work, forcing children to travel further from home to work. Many parents reported that, in the process, their children lost their aspiration to move to higher education.

Rural universities play a key role in skill building and capacity development in rural Australia with regional universities also providing many economic benefits to the communities in which they are based. The Panel heard that the financial impacts of prolonged dryness are likely to be contributing to declining undergraduate enrolments in agriculture and other rural-focused courses. This decline suggests that skills shortages and knowledge deficits will emerge as significant constraints to agricultural productivity in the near future. This, in turn, results in fluctuating funding allocations which impact on the capacity of regional universities to maintain their facilities and staff resources. The Panel consider there is a role for governments to take into consideration the impact of drought in influencing fluctuating student numbers and to applying leniency in funding to maintain critical mass.

In 2007, the then House of Representatives Standing Committee on Agriculture, Fisheries and Forestry heard evidence there is a mismatch between existing tertiary agricultural facilities and what can be sustainably funded and maintained, as detailed in its inquiry report into rural skills training and research. In this situation, there is a strong argument for leadership to facilitate quality tertiary educational outcomes through more specialisation and partnerships.

Rural universities and TAFE institutions could be more engaged with industry and government to identify areas in which education institutions can promote innovative ways of dealing with dryness in rural communities. Possible strategies might include:

- *funding rural bonded university places (similar to medicine at some universities);*
- *including rural placements as core elements of relevant degrees, and;*
- *developing university-wide rural strategies to raise awareness of opportunities in rural areas and provide placement assistance to graduating students.*

The South Burnett Community Development program in Queensland submitted that families are reluctant to encourage their young people to undertake rural studies, as they do not want the same hardship for their children as they have experienced during many years of dryness and uncertainty. They cite a study conducted by the Burnett Inland Economic Development Organisation in 2005 which found 100 per cent of rural families involved in the study would not encourage their young people to engage in primary production.

The extended period of dryness has forced many farmers to seek off-farm work to support their families. This can mean separation from their community when work is not available locally or when farmers do not have the qualifications to find jobs.

Numerous submissions and several people at the Panel's forums raised the issue of recognising farmers' existing skills or re-skilling them to better equip them to move to off-farm work. Several submissions pointed to skill recognition and accreditation as a way of increasing self-esteem among farmers severely impacted by the prolonged dryness.

The Northern Agricultural Catchment Council of Western Australia observed male farmers tend to amass a wide variety of skills which are in constant demand. These skills include plant operation, plant maintenance, welding and an array of building skills. In addition, most farmers have long experience in running a small business, managing staff and have an excellent work ethic. Such skills tend not to be formally recognised and may limit both entry and the level of entry into work outside farming. Farmers themselves are sometimes quick to understate their level of skill. Many say that if they were not farmers they do not know what else they could do.



Drought conditions impact significantly on the uptake of education and training for farm, and yet it is imperative that during these difficult times, they stay informed, engaged and connected to new learning and networking opportunities. There is a disjunct between the increasing challenges imposed by drought on farming families, and the growing need to improve business management and diversification skills. In times of crisis, farmers are focused on sustaining and maintaining farm operations rather than education and training opportunities.

Department of Primary Industries and Water, Tasmania

Male farmers expressed reluctance to attend training because of time or money issues. Others just claimed exhaustion. The Murray-Mallee Rural Financial Counselling Service expressed concern that reduced numbers at information or training seminars are interpreted by organisers as a lack of interest or need when there may be contributing physical and mental exhaustion factors. They believe an important aspect of education and training for farmers is to take it to the farm-gate and work with farmers in smaller groups, especially when farmers are affected by dryness and low incomes.

Many farmers expressed concern over the termination of the FarmBis program which was jointly funded by the Australian Government, participating states and the Northern Territory. FarmBis provided assistance for primary producers and rural land managers to undertake approved training activities to build business and natural resource management skills. The attraction of the program was that it was focused on rural re-skilling and delivered at the local level. The federal/state FarmBis program in the Northern Territory, Queensland, Tasmania, South Australia and Western Australia ended on 30 June 2008. The national FarmBis program in New South Wales, Victoria and the Australian Capital Territory ended on 29 February 2008.

Volunteering NSW has developed an online Skills Passport designed to acknowledge prior learning and to facilitate timely employment in a variety of industries specifically catering for temporary and transient local workforces.

Some state governments have initiated 'skills store' concepts in regional centres where farmers can have their current skills assessed and be given advice about vocational training. The issue with these systems is that while the initial advice is often free, the vocational training can be both expensive and a long way from the property.



Network members have observed lower levels of participation in training and professional development, brought about by the drought. The most common barriers to participation and training and professional development reported to Network members are farmers' inability to leave their farms (eg due to hand-feeding; staff shortages; prohibitive petrol and diesel costs); not having the necessary finance to participate; and extremely limited access to childcare.

New South Wales Farmers' Mental Health Network

Vocational programs for all those who live outside metropolitan areas should recognise that distance and isolation are hurdles to accessing educational opportunities and options need to be available taking this into account.

RECOMMENDATION 25

There must be more flexible training delivery methods for adult learning (using adult learning principles), including providing outreach training, for farm families and people in rural communities who find it difficult because of dryness to attend training opportunities. This could be achieved by:

- *vocational education and training programs aimed at assisting farm families with up-skilling or re-skilling, including recognition of prior learning, to broaden opportunities to earn off-farm income;*
- *funding for vocational education institutions to help farm families and people in rural communities more readily access further education opportunities.*
- *careful consideration of the timing and appropriateness and potential effectiveness of delivering education and training programs during times of stress, such as dryness.*

FINDINGS

One of the strongest messages arising from the research literature, the submissions to the Panel and at the public forums is that the social wellbeing of children and teenagers is suffering because of dryness. Young people are being denied educational and extracurricular opportunities because of household financial limitations resulting from dryness. In some cases this has reportedly narrowed children's aspirations for further education and employment options. Education is essential to social and economic wellbeing, as well as to the resilience and future adaptive capacities of communities. This is a significant problem.

Many teachers and parents reported that dryness is having a noticeable effect on rural parents' ability to fund curricular and extracurricular activities for their children, preventing students for financial reasons from attending school excursions, going to school without food or taking part in representative events. The Panel is concerned as to why this need was spoken of so strongly by so many when the Australian Government has provided more than \$17 million, as of 1 July 2008, in dedicated Drought Assistance for Schools funding to help families with these very expenses. Throughout the consultation process, the Panel did not hear anyone identify or acknowledge this significant level of funding, despite its intention to directly benefit students suffering because of dryness.

In the past, children of primary school age in remote areas have had the choice of attending a small local school, boarding in their nearest town at a hostel or being home schooled. The drift of people away from rural and remote areas has resulted in the closure of small schools and the loss of school bus services. The lack of assistance for rural families to gain access to the same quality and choice of education as is available in metropolitan and large regional centres is a concern. This withdrawal of education services needs to be arrested, particularly in drought declared areas.

RECOMMENDATION 26

Further research is needed to better understand how reoccurring stressors such as dryness affect the education outcomes for young people.

Government decision-making can sometimes erode the social capital of rural communities with inflexible policies about student to teacher ratios. When the loss of people from rural communities results in a loss in student numbers, this not only impacts on staffing levels in schools and changes the social structure within a school. Rural schools are often a rich source of community facilities such as libraries, meeting rooms, sports areas, workshops and classrooms – spaces and places for community to become and to be community. These are also major point of social connection for the community through students, parents, teachers and volunteers.

A major issue in rural Australia is the declining opportunity for young people to access tertiary education. Rural families now struggle to find the money to pay for their children's post secondary education. The Panel is concerned that cash poor farmers and rural businessmen, anxious their children take advantage of the Australian Government's Youth Allowance and Living Away From home allowance, are so heavily focused on the eligibility criteria and the associated asset test that this is forcing families to make decisions which may not be in the long-term best interest of their children. This is certainly causing great stress and anxiety for families. In particular, the criteria that deem a young person to be financially independent of their parents is having a perverse outcome as it influences family behaviour to gain government assistance.

The Panel notes the Australian Government has launched a Review of Higher Education to 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 this 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.

RECOMMENDATION 27

The Australian Government's Review of Australian Higher Education must consider the education challenges facing rural Australia and specifically examine whether the nature of farm families income and asset circumstances disadvantages farm families accessing youth allowance assistance.

Older farmers are finding it difficult to get off-farm employment without a certificate even though they have valuable skills. Recognition of prior learning (RPL) should be made more accessible through waiving the relevant fees, establishing a recognised skills 'passport' and including an option to undertake practical demonstrations and not just be tested in written form.

HUMAN CAPITAL

BACKGROUND

Labour force participation in rural areas is 67.5 per cent compared to the Australian average of 64.5 per cent. A corollary of the high participation rates is low unemployment and many rural industries are now under-supplied with both unskilled and skilled workers.

The National Farmers Federation report, 2008 *Labour Shortage Action Plan*, released in March 2008, also noted that many of those affected by job losses were said to have permanently left the industry, with some leaving the community altogether. The NFF and other industry organisations are concerned that when better seasonal conditions return, numbers of skilled workers will be needed. This would generate career and employment opportunities and 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. 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 Economics⁴⁸ reviews the consequences for rural communities of skills shortages in a range of other sectors of rural and regional Australia.

The BTRE 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'. 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 skills shortages will have consequences for productivity.

Employment in agriculture is being affected by the impacts of dryness, changes in the availability of and access to water, trade reform, global markets, productivity improvements, and more reliance upon specialised contractors than local labour. Overall, employment in agriculture, forestry and fishing has fallen by 89 300 to 346 400 in the ten years to February 2008, a 20.5 per cent fall. The pattern of decrease is broadly consistent across the country. In 2006, agriculture accounted for up to 3.1 per cent of total employment in Australia, down from 4.4 per cent in 1996⁴⁹.

The grain, sheep and beef cattle sectors dominate employment, accounting for 43.5 per cent of agriculture employment as at February 2008. Horticulture and fruit growing are second, at 22.9 per cent of employment, and services to agriculture are third at slightly more than 7 per cent.



Of the 17 broad industry groups, agriculture, forestry and fishing has the highest proportion of workers aged 45 years and over (54 per cent), compared with the average for all industries (37.2 per cent). The industry also has the highest share of workers aged 65 years and over (13 per cent) compared with just 2.3 per cent for all industries. The share of younger workers, by contrast, is low for people aged 15 to 24 years (10.3 per cent compared with 17.7 per cent for all industries) and even more so for workers aged 25 to 34 years (14.4 per cent compared with 21.7 per cent).

Farm expenditure can represent more than one-third of economic activity in small towns⁵⁰. When there is a high level of dependence on a single agricultural commodity or production system and few alternatives, the impacts from dryness and other pressures on the farm, small businesses and the local community are likely to be greater.

If the farming sector is undergoing financial hardship, farming families spend less money. This leads to other small businesses in the area experiencing financial hardship.

Gannawarra Shire Council, Kerang, Victoria

Generally, the population of farming regions is declining⁵¹. All of the 20 local government areas in Australia with the fastest population declines during the period 2006 to 2007 were in rural Australia; 14 were in NSW, five in Queensland and one in Western Australia. Bourke in NSW had the largest fall. The Bourke Shire Council advised the Panel the area had lost approximately 1000 people (25 per cent) over the past seven years.

The pressures of dryness can also require family members to seek off-farm employment to supplement income, sometimes at high personal cost.

Drought Force is an Australian Government program delivered through Community Work Coordinators providing farms and communities in exceptional circumstances declared areas with an opportunity to participate in Work for the Dole projects, provided they do not displace existing or potential paid employees.

Drought Force is designed to ease the burden of dryness for farmers and their families and to make sure farms and properties are maintained and able to cope once a drought breaks. Drought Force also encourages people to remain in their local community, retaining and building local skills and supporting the local economy.

An additional incentive is provided under the Australian Apprenticeships Incentives program to encourage primary producers to continue to offer skills development and employment in exceptional circumstances declared areas.

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 industry⁵².

RECOMMENDATION 28

Governments, along with the education and industry sectors, must develop policies and initiatives to address trade and other professional skills shortages in farm families and rural communities. These policies and initiatives must be underpinned by regional-specific research on the location, extent and impact of skill shortages. Policy and initiatives should:

- *recognise that training and education of people in rural settings leads to greater retention of that skill base in rural communities;*
- *recognise the important role rural universities play in educating and training skilled workers for rural areas;*
- *promote rural-bonded scholarships as a means of addressing agriculture and rural trade and other professional skills shortages*

OBSERVATIONS

Securing a strong workforce for the future, in the face of strong competition for available labour in rural communities, is a major challenge for the Australian agriculture and food sector. Labour and skills shortages, as well as recruitment difficulties, are being experienced in a wide range of agriculture industries in rural and regional areas. Shortages exist for core jobs in these industries, such as farm managers and fruit pickers, as well as for support services such as traditional trades.

There is little hard data about what and where labour and skills shortages are occurring. Anecdotal evidence suggests that the extent and impact of shortages is likely to vary widely between industries and regions. Based on pre-drought labour requirements, the National Farmers' Federation anticipates an additional 80 000–100 000 workers are required to fill employment vacancies in Australian agriculture when the sector emerges from this period of dryness.

Coupled with the regional location of jobs in agriculture, attracting and retaining workers in a competitive employment market is challenging. Complicating labour attraction for agriculture is a general perception of the industry having poor working conditions and low wages; long hours outside, sometimes involving heavy work; and lack of professional development. The ongoing drought exacerbates these difficulties, leading to a negative perception of the future viability of agriculture industries and contributing to a significant decline in people employed in agriculture. Having secured employment elsewhere, the agriculture industry may not be able to attract workers back. This is likely to impede recovery from dryness.

Dryness has meant farmers have had to cut costs, usually through the laying off workers and spending less in town. In consequence, local businesses and services are declining, and skilled labour, particularly younger people, are moving to pursue other employment opportunities.

The Panel heard suggestions that governments should intervene to encourage or compel employers to establish (or stay) in rural areas. While some proposals may have merit, generally these decisions are best made at the enterprise level and the priority of government should be to assist communities to respond effectively to the new and emerging pressures.

Increasingly, families are adapting to pressures by seeking alternative dual or multiple family income streams, often involving both partners physically spending time away from the farm. The Panel strongly believes these types of arrangements need to be acknowledged as successes, and not deemed to be failures.

The Drought Force program which encourages unemployed farm workers to undertake on-farm work and help farmers maintain their property during dryness was rarely mentioned in public forums and mentioned in only four submissions; twice favourably and once to say it had too much red tape.

RECOMMENDATION 29

A formative evaluation of the Drought Force program, as well as other employment programs, must be undertaken to better address the functioning of the labour market in the agriculture sector during periods of dryness, and to encourage people to remain in their local community.

A number of parents with young children on a farm raised the issue of their family's need to take off-farm work to maintain income through dryness and that, at times, this placed them in a difficult position regarding child care and their farm work. Parents told of their concern about sometimes putting their own children in unsafe environments by having them stay with the parent that worked the farm. For example, young children spending time within the confines of a tractor cabin or the ute as one of the parents went about the farm work. These parents confirmed they would prefer to dedicate more time to their children or have child care readily available.

FINDINGS

Many have suggested governments should intervene to create employment in rural industries and communities to counteract socio-economic pressures associated with declining and ageing populations. While there are opportunities for governments to improve health and education employment in rural Australia generally, the Panel considers governments are unlikely to be effective in dealing with drought-related employment issues in a segregated manner and the desired changes should be led by industry.

RECOMMENDATION 30

Governments, along with the education and industry sectors, must promote and educate people on the rewards and risks associated with careers in agriculture and other rural industries.

The Panel notes that dryness appears to be straining human resources in health and education, and makes employment related comments in the sections addressing: health; education; services; and values, attitudes and policy.

HEALTH AND WELLBEING

BACKGROUND

Mental health

Mental health is one of Australia's National Health Priority Areas⁵³. According to the Australian Bureau of Statistics (1997), almost one in five Australian adults will experience mental illness at some stage in their lifetime. Mental illness affects people in urban and rural areas, both sexes and all ages, with females accounting for 53 per cent of mental illness in 2003 and males 47 per cent⁵⁴.

Evidence is mixed as to whether rural and remote communities experience a significantly higher incidence of depression than urban areas⁵⁵. However, there are a range of factors faced by people in rural and remote which may contribute to poor mental health outcomes. These include a lack of resources, having to travel long distances to access care, reluctance to admit there is a problem and reluctance to seek care because of the high visibility within a close-knit community. Rural populations also have a significantly lower supply of mental health services compared with capital cities and are disadvantaged in the distribution of specialist services such as psychiatrists and psychologists⁵⁶.

With the exception of several valuable reports which target the impacts of drought on the mental health of specific rural populations^{57, 58, 59, 60, 61, 62, 63} little is known about the specific impacts of chronic long-term dryness on the mental health of farm families and rural communities⁶⁴.

A submission by the Australian Institute of Family Studies provided results from a survey conducted in 2007 of 8000 people living in rural and regional families. This is one of the few quantitative studies containing results about the impacts of drought on the mental health of farm families and rural communities. The results show almost twice the rate of mental health problems in areas where survey respondents perceived they were currently in drought compared with areas where people perceived they had not been in drought during the past three years.

The Panel commissioned the Bureau of Rural Sciences (BRS) to undertake research into the personal wellbeing of people working in agriculture in drought-affected areas. BRS found that, compared against the Australian population, people working in agriculture in drought-affected areas were:

- *approximately 40 per cent more likely to report feeling less satisfied with their future;*
- *approximately 12 to 16 per cent less likely to be satisfied with their life as a whole and their standard of living;*
- *approximately 14 per cent less likely to feel satisfied with their future security; and*
- *approximately 8 per cent less satisfied with their spirituality or religion.*

The Panel questioned how these findings might potentially relate to suicide rates.

Nearly 80 per cent of all suicides in Australia are males, with the highest rates occurring in males between 20 to 34 years⁶⁵. Suicide accounts for approximately 20 per cent of deaths of males in this age

group. Recent studies examining trends in Australian suicide rates have consistently demonstrated male rates are higher in rural and remote areas than in major cities^{66,67,68}. Further, there is 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 millimetres⁶⁹.

Access to mental healthcare services and cultural aspects such as reluctance to seek help, may be significant factors in the higher suicide rates in males in rural areas^{70,71,72,73}. It has been argued men do not seek healthcare 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*⁷⁴.

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 help⁷⁵. These reasons may also apply more generally to males in other age ranges in rural areas, resulting in recommendations being made by some researchers for suicide prevention strategies to include referral access to help through trusted sources, such as rural financial counsellors and agricultural advisors^{76,77,78,79}.

RECOMMENDATION 31

There is an ongoing need to evaluate and enhance existing strategies aimed at overcoming reluctance by farm families to access health services in times of stress.

Physical health

There is considerable variation in health outcomes for rural and regional Australia within each geographical location that is masked by broad statistical patterns⁸⁰. Despite this, it is possible to detect a number of common patterns and to identify common factors affecting the health of people living in rural and remote Australia. Populations in rural and remote Australia generally have poorer access to healthcare services and experience poorer health than people living in major cities^{81,82}. They also have higher levels of mortality, morbidity and health risk factors than those who live in major metropolitan areas^{83,84,85}.

People in rural and remote areas also have different patterns of use of health services⁸⁶. For example, given the shortage of general practitioners and specialists in rural and remote areas, there is a greater tendency for people in these areas to use remote area nurse led clinics or rural hospital emergency departments as a source of primary care than people in major cities. People report postponing their visit to a health service until it is unavoidable, which may lead to poorer health outcomes. People living in rural and remote areas were also more likely to be admitted to hospital for conditions which could have potentially been prevented through the timely provision of non-hospital services and care.

The Australian Institute of Health and Welfare report, *Australian Health 2008*, notes it is difficult to measure or forecast with any precision how climate conditions or environmental hazards affect human health⁸⁷. This is because the links often involve indirect and complex relationships and the effects are often delayed or displaced. In a submission to the *Garnaut Climate Change Review*, Bambrick et al.⁸⁸ also advise it is not yet possible to quantify the extent of the adverse health outcomes (deaths, injuries, infections, stress disorders, etc.) specifically caused by extreme climatic events. The submission suggests this is because methods to separate out the specific impacts of climatic events from co-existing health risk factors have not yet been developed.

The Panel believes its observations are consistent with findings in a report by Alston and Kent⁸⁹ on the social impacts of drought. In contrast to other reports, Alston and Kent present people's perspectives as evidence of the day-to-day impacts of drought on the health and wellbeing of rural Australians. Most of the evidence relates to stress-related health impacts. This includes increased anxiety about future prospects, often leading to depression, poor sleeping patterns, and to increasing suicidal thoughts and actions. Some people reported their loved ones were being treated for high blood pressure since the onset of the drought or were drinking more heavily. It is reasonable to expect that there will be a rise in cardiovascular disease rates as many of the risk factors are experienced by individuals in stressed conditions. There is, however, a time lag from exposure to risk to the on-set of disease, hence the importance of robust primary healthcare services and health promotion activities.

Alston and Kent⁹⁰ also found the drought represented an additional stress in dealing with pre-existing conditions. For some, the drought meant people could not leave the farm because livestock had to be hand-fed. This limited the time available for loved ones to support each other in seeking medical treatment.

However, the decline in farming work through drought can result in less accidents. For example, Coleman et al.⁹¹ suggested a downward trend in the number of fatal tractor run-overs between 1988 and 1995 may have resulted from a reduction in farm work because of continued drought, rather than any changed work practices or protective structures.

OBSERVATIONS

Mental health

It is clear to the Panel that extended dryness has a significant negative impact on the mental health of farm families and others within rural communities. In particular, the Panel heard repeatedly during the public forums and in written submissions that the pressures of drought were leading to an increase in the incidence of depression, anxiety and stress in rural and remote areas.

In some cases the negative impacts of drought on the health of farm families and rural communities has reportedly resulted in an increase in prescription drug consumption and increasing social isolation. For example, a rural pharmacist informed the Panel he had seen, "a substantial increase in the prescribing of most psycho-active drugs during the drought". There were also reports that drought can lead to an increase in alcohol consumption and illicit drug use in rural and remote areas. The Panel also heard of people not filling their chronic disease prescriptions because of financial pressures, illustrating the range of responses by individuals.



“Stress, financial hardship, lowering of self esteem, frustration, loneliness, fear and jealousy are some feelings I have experienced because of the drought”.

Farmer, Walgett, New South Wales

“The sense of spirit and hope has reduced over time. Most telling is the effect that this is now having on the wives of farmers who until recently remained resilient and strong”.

Murrindindi Shire Council, Alexandra, Victoria

“Other natural disasters like fire and flood unite communities as we all draw together to help one another. Drought isolates us through a slow strangulation leaving our moods bad, our self-esteem low and our decision-making difficult”

Farmer, location withheld

Farm families have no respite from witnessing the damage drought causes to their farming business. This has the potential to amplify the impact of drought on the mental health of farm families because the experience is constant.

The increased pressures and sadness caused by drought can permeate beyond farm families to throughout rural communities. Many people at the public forums spoke of drought impacting on their mental health by:

- increasing stresses and anxieties about finances, family and the future;
- increasing feelings of sadness at experiencing stock losses, failed harvests and dying orchards;
- increasing children's anxieties as they witness their parent's growing levels of stress and depression; and
- increasing feelings of isolation as financial constraints and depression result in them withdrawing from community activities and emotionally from family relationships.

People raised concerns about the psychological effects on school children from drought-affected families. Children are keenly exposed to the financial and emotional condition of their parents. A number of school teachers reported this was leading to behavioural problems in school children from drought-affected families. There is also a reported shortage of school psychologists in rural Australia.

The Australian Government primary and secondary school mental health initiatives, called *KidsMatter* and *MindMatters* respectively, are currently limited in their reach to rural schools. The Panel believes it warrants special consideration that these programs are extended to schools in drought affected communities, particularly those rural schools with part-time or no psychologists.

RECOMMENDATION 32

The Australian Government's primary and secondary school mental health initiatives must be extended to schools in dryness affected communities, particularly those rural schools without existing counselling support

Some forum participants told of feeling isolated when one partner needed to pursue off-farm work to improve the family's cash flow, leaving the other partner to work the farm alone. In some cases this situation was seen as permanently separating families. For example, where a farm was located far from town, one partner may move with the children into town during the week to be close to off-farm employment and schooling, while the other partner remained behind to work the farm. Depending on distance, the family may not be reunited for weeks at a time.

The Panel acknowledges this phenomenon is being driven by factors beyond drought and is not unique to the farming sector, with occupations such as truck drivers and fly-in/fly-out miners experiencing this situation as a way of life. However this isolation can exacerbate health problems during times of high stress brought on by the pressures of drought.

The issue of suicide was touched on in several forums and written submissions. Given that suicide rates for males in rural and remote areas are known to be higher than in major cities^{92,93}, the Panel was particularly concerned about the potential impact that drought may be contributing by isolating people and increasing financial stresses.

Physical health

The Panel heard that drought can cause deterioration in the physical health of farm families because of a range of reasons such as:

- *increased workloads because farmers undertake more labour on the farm themselves rather than through employees. Farmer workloads are further increased when one farming partner is left to operate the farm while the other pursues off-farm employment;*
- *increased workloads when farmers are pursuing off-farm employment in addition to operating the farm;*
- *lack of time/financial resources leading to increased risky behaviour in seeking or continuing appropriate treatment for physical health conditions and injuries;*
- *increased physical symptoms of mental health issues relating to increased levels of stress and anxiety.*

FINDINGS

Despite there being a lack of research about the specific impacts of drought on mental and physical health, the Panel recognises a strong link between drought and health outcomes.

RECOMMENDATION 33

To improve existing response strategies, governments must support research on the extent to which dryness and access to primary healthcare in rural Australia impact on the health and wellbeing of people.

Drought overlays other determinants of health such as mastery (control), education, employment, health behaviours (smoking and nutrition), access to primary and allied health-care services and impacts on the ability of individuals to seek help. As such, the Panel believes individuals need to become more health literate, aware of their own health and wellbeing needs, to be supported to focus on their ongoing wellbeing at all times and to understand that during times of dryness, that risk factors are heightened.

On this matter, the Panel is pleased there appears to have been remarkable progress made within rural communities in acknowledging the existence of mental health issues and the impact that periods of added stress can have. However, there are still improvements that can and should be made in assisting people in rural areas to recognise symptoms of health and wellbeing problems with themselves, friends and families and to make it easier for people to seek appropriate help in a timely way. In addition, the Panel notes a large number of recent health initiatives have specifically focused on the needs of rural men. The Panel considers it is also important that women's health needs are recognised and supported.

The Panel strongly believes that if improvements in the wellbeing of farm families and rural communities can be achieved, it will result in healthier and more productive agricultural and rural businesses.

The Panel considers that rural areas need to have their own long-term strategies for building, up-skilling, diversifying and bolstering primary and allied healthcare services rather than the current ad hoc approach of attempting to bring in extra resources during times of drought. This is not to say services employed specifically for drought are not currently assisting; the Panel believe improved levels of primary healthcare services would be more sustainable and better placed to scale up in times of dryness. It believes this would aid health protection, prevention, early intervention strategies and facilitate improved networks and referral pathways.

Access to primary healthcare services was described as very limited in areas where GP services were present but did not bulk bill for services provided.

RECOMMENDATION 34

The current ad hoc approach of bringing in extra health resources during times of dryness should cease and instead the capacity of existing primary and allied health care services in rural communities must be sustainably built upon to enable them to respond to the health and wellbeing of the community and the impacts of future dryness. This includes improving access to affordable services.

“Many people regularly miss being supplied with their regular medications for periods of days or weeks because of the business demands and economic impact of the drought... For example, one middle-aged grazier asked me to advise him which three of his five prescribed PBS medicines (two for blood pressure, two for Type2 diabetes and one for cholesterol) he could most safely stop taking because, at an average cost of more than \$25 each per month (\$125 per month total), he could only afford two of them. He had previously conducted a similar conversation with his doctor. When I explained that it would be unethical of me to provide such advice, he asked me to write down what each medicine was for so he could make up his own mind about which to cease.”

Pharmacist, New South Wales

“For three months, when my partner first re-started milking, he was still working full-time off-farm. He would not tell his boss what he was doing, because he did not want to be put off, as business there was quietening down... He was convinced that all he had to do was work harder. By Christmas I was quite beside myself, watching him push himself harder and harder, working longer and harder hours; never seeing him. My heart ached watching him, knowing there was nothing I could do. At one stage he spilt acid on his hand and the white-tail spider bite he had received the previous year flared up. His hand looked like it was rotting away. Even then, I could not convince him to see a doctor. His mother, a nurse suggested that he should see a doctor, but he did not have time. I had to watch and wait. I prayed. I prayed that he would come home each night, that there would be no accident”

Female farmer, New South Wales

The Panel found there was an absence of adequate communication from governments to farm families and rural communities about what health services can realistically be provided and maintained in local areas. While it is rational that population levels will have a bearing on the services available locally, the absence of a better understanding in this area is causing great stress, which is compounded during times of dryness. Services provided by remote area nurses and nurse practitioners are currently indistinguishable in the national data and are not supported by mainstream primary care support strategies. This compounds the sense that people and families do not have access to adequate primary healthcare services.

RECOMMENDATION 35

Governments must make better efforts to engage with rural communities and the primary health-care sector, to ensure there is no continuing mismatch between needs and capacity of the remote and rural primary healthcare services and local people’s expectations of these services.

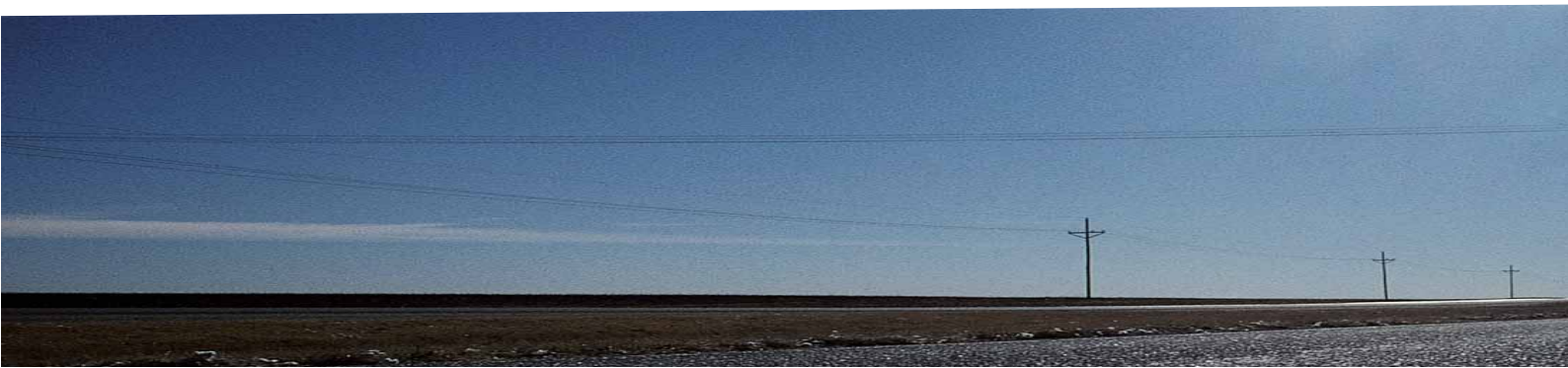
The need to travel long distances to access specialist services can cause further stress. Some women reported that the absence of childcare services inhibited their ability to travel to access medical treatment. In this regard, the Panel believes initiatives such as Patient Assisted Travel Schemes (PATs) are critical for assisting farm families and people in rural communities to access specialist services where they are not available locally.

RECOMMENDATION 36

The Panel supports adopting the recommendations relating to Patient Assisted Travel Schemes outlined in the then Senate Standing Committee on Community Affairs September, 2007 report *Highway to health: better access for rural, regional and remote patients* and that the approval for access to Patient Assisted Travel Schemes be vested in the providing primary healthcare professional.

The stress of drought appears to have affected whole communities in parts of rural Australia. The Panel found that although most people will experience short-term stress at various stages of their lives, the longevity of the current drought is causing sustained distress for some. The Panel believes it is important people understand that stress and depression should not be feared and that it is natural when people have feelings of grief and sadness when they are under financial pressure. What is essential is that people and their families can recognise these issues and are able to identify symptoms and have access to appropriate support at an early stage as sustained symptoms can become more serious.

The Panel believes it is essential there be a move away from the current crisis-framed approach to drought support and instead focus on the ongoing, long-term wellbeing of farm families and rural communities. Strategies to make genuine improvements in the areas of health and wellbeing should form a critical part of future planning for dryness, and must include ways to ensure adequate levels of primary and allied healthcare services across remote and rural Australia.



RECOMMENDATION 37

Existing physical and mental health services must be easily accessible and responsive to the needs of drought affected families. This could be achieved in a number of ways, including:

- *government assistance for mental health and emotional support services for rural communities being examined with a view to improving and the streamlining the on-ground services available, including building stronger linkages and referral capacities between support services;*
- *offering farm families and rural people incentives and tools to enable them to become more self-aware of their own physical and mental health needs and to focus on their ongoing wellbeing at all times;*
- *assisting farm families to understand that during times of dryness the risk factors in determining health are heightened and that people have clear pathways available for them to seek appropriate help, with this preferably being at an early stage;*
- *healthcare services in remote and rural Australia be strengthened to provide health promotion and regular health assessments that include risk factors (eg cardiovascular, stress) known to contribute loss of productivity, quality of life and premature mortality for farm families and people in rural communities;*
- *people who are employed in drought support roles being required to possess mental health literacy, referral and first aid skills, and;*
- *the professionals providing primary healthcare in rural Australia have ready access to support, upskilling, relief and professional networks to enable them to provide quality care.*



RECOMMENDATIONS

Recommendation 1

An improved policy for dryness must focus on preparing for dryness and planning for personal and family wellbeing.

Recommendation 2

Governments must make a high-level statement of commitment to a strong, healthy, vibrant and sustainable rural Australia.

Recommendation 3

Existing and improved policy for dryness should be based on principles that include:

- 3.1 *integrated development of individual and family wellbeing plans consistent with farm business and natural resource management planning as a mutual responsibility for future public-funded assistance.*
- 3.2 *a transition strategy so that when current drought declarations are concluded there continues to be government investment to assist farm recovery and planning for future periods of dryness.*

Recommendation 4

The drought support roles of federal, state and local governments should be clarified and a lead agency or coordinating committee be established across government and within each jurisdiction to ensure proper implementation of dryness-related policy.

Recommendation 5

People who provide support to farm families, rural businesses and rural communities during times of stress, including those working in government and non-government organisations should be respectful and understanding of the stress facing farm families and rural communities, and in particular ensure they are clear and factual in their communication and do not impose or offer their own value judgements.

Recommendation 6

To alleviate the stress of future dryness, governments and non-government organisations must move away from crisis-framed responses and:

- 6.1 *adopt more long-term sustainable approaches based on the delivery of existing human support services, focused on planning for the wellbeing of farm families, rural businesses and rural communities prior to periods of dryness; and*
- 6.2 *provide incentives to support the development of individual and family wellbeing plans as part of a shift towards better preparedness for dryness.*

Recommendation 7

The needs of farm families and rural communities in remote and dryness affected areas should be an item for consideration by the Australian Social Inclusion Board. The specific circumstances of Indigenous populations in such communities should be considered a priority by the Board.

Recommendation 8

To effectively prepare communities for the social impacts of future dryness, governments must ensure support of community development initiatives reinforce social changes that will endure. Community development initiatives, such as community socialising events, should have clear objectives aimed at linking farm families and rural communities with various human service providers and/or facilitate clear referral pathways.

Recommendation 9

In the light of the availability of income support, non-government organisations should carefully consider whether there is a genuine need for food parcels or whether other forms of support would provide enduring benefits.

Recommendation 10

Effective and improved policies which support farm families and rural communities to live with dryness should be:

- 10.1 *delivered by appropriately qualified and supervised individuals, organisations and service providers;*
- 10.2 *have clear criteria and guidelines and ensure that funding provides scope for rigorous independent evaluation.*

Recommendation 11

To account for the needs of farm families, an improved policy for dryness must consider:

- 11.1 *the changing demographics of farm families and rural communities*
- 11.2 *impediments to farm succession to enable effective intergenerational change*
- 11.3 *the contribution of women and youth to farming and rural communities*

Recommendation 12

The Australian Government's Review of Taxation should consider whether existing tax laws present institutional barriers to farm succession, and whether changes could provide improved succession planning incentives for farmers.

Recommendation 13

Government policy should focus on encouraging farm families to properly assess and to access human support services.

Recommendation 14

Further research is needed into understanding the wellbeing of farm families facing periods of dryness.

Recommendation 15

In planning for dryness, improved human support services, must be available and responsive to the needs of farm families and rural people.

Recommendation 16

The distributors of community assistance and social services, including volunteers, should themselves have access to professional support.

Recommendation 17

The outreach mobility of human services to respond to rural people in times of stress, such as future periods of dryness, needs to be improved, with one option being an expansion of the Centrelink Rural Services Officer program.

Recommendation 18

An independent formative evaluation of the Rural Financial Counselling Service must occur as soon as practical to: assess the progress that has been made in delivering a case-management approach; identify the institutional barriers that exist, and; to determine any improvements and adjustments that may be needed.

Recommendation 19

The word “counselling” should be removed from the name of the Rural Financial Counselling Service and replaced by a more appropriate title, better fitting the service’s broader role.

Recommendation 20

Access to government drought assistance and services must be improved by making applications and referral pathways simpler.

Recommendation 21

An urgent audit should be conducted on the extent, experience and qualifications of human support services being implemented on-the-ground in rural Australia (government and non-government).

Recommendation 22

Following this audit, strategies must be developed to achieve the most appropriate distribution and allocation of resources and linkages between human service providers, including clear hierarchies to facilitate better region-specific coordination and referral pathways.

These strategies should also consider:

- 22.1 *co-locating service providers where possible to form service hubs for rural centres;*
- 22.2 *Providing specific mental health first aid training and health promotion for service providers to better identify, react and refer clients with mental health issues;*
- 22.3 *establishing minimum standards and appropriate qualifications for human support service providers and their employees, including non-government organisations;*
- 22.4 *ensuring funding terms for human support services are of an appropriate length to enable effective establishment, delivery and review of the services provided.*

Recommendation 23

State governments must consider the short to medium-term social and economic impacts, when dryness is a contributing factor, when assessing the viability of classes, schools and bus services.

Recommendation 24

Where school closure is the judicious option, state governments should assist rural families to access other education options for their children.

Recommendation 25

There must be more flexible training delivery methods for adult learning (using adult learning principles), including providing outreach training, for farm families and people in rural communities who find it difficult because of dryness to attend training opportunities. This could be achieved by:

- 25.1 *vocational education and training programs aimed at assisting farm families with up-skilling or re-skilling, including recognition of prior learning, to broaden opportunities to earn off-farm income;*
- 25.2 *funding for vocational education institutions to help farm families and people in rural communities more readily access further education opportunities.*
- 25.3 *careful consideration of the timing and appropriateness and potential effectiveness of delivering education and training programs during times of stress, such as dryness.*

Recommendation 26

Further research is needed to better understand how reoccurring stressors such as dryness affect the education outcomes for young people.

Recommendation 27

The Australian Government's Review of Australian Higher Education must consider the education challenges facing rural Australia and specifically examine whether the nature of farm families income and asset circumstances disadvantages farm families accessing youth allowance assistance.

Recommendation 28

Governments, along with the education and industry sectors, must develop policies and initiatives to address trade and other professional skills shortages in farm families and rural communities. These policies and initiatives must be underpinned by regional-specific research on the location, extent and impact of skill shortages.

Policy and initiatives should:

- 28.1 *recognise that training and education of people in rural settings leads to greater retention of that skill base in rural communities;*
- 28.2 *recognise the important role rural universities play in educating and training skilled workers for rural areas;*
- 28.3 *promote rural-bonded scholarships as a means of addressing agriculture and rural trade and other professional skills shortages.*

Recommendation 29

A formative evaluation of the Drought Force program, as well as other employment programs, must be undertaken to better address the functioning of the labour market in the agriculture sector during periods of dryness, and to encourage people to remain in their local community.

Recommendation 30

Governments, along with the education and industry sectors, must promote and educate people on the rewards and risks associated with careers in agriculture and other rural industries.

Recommendation 31

There is an ongoing need to evaluate and enhance existing strategies aimed at overcoming reluctance by farm families to access health services in times of stress.

Recommendation 32

The Australian Government's primary and secondary school mental health initiatives must be extended to schools in dryness affected communities, particularly those rural schools without existing counselling support

Recommendation 33

To improve existing response strategies, governments must support research on the extent to which dryness and access to primary healthcare in rural Australia impact on the health and wellbeing of people.

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The current ad hoc approach of bringing in extra health resources during times of dryness should cease and instead the capacity of existing primary and allied health care services in rural communities must be sustainably built upon to enable them to respond to the health and wellbeing of the community and the impacts of future dryness. This includes improving access to affordable services.

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Existing physical and mental health services must be easily accessible and responsive to the needs of drought affected families. This could be achieved in a number of ways, including:

- 37.1 *government assistance for mental health and emotional support services for rural communities being examined with a view to improving and the streamlining the on-ground services available, including building stronger linkages and referral capacities between support services;*
- 37.2 *offering farm families and rural people incentives and tools to enable them to become more self-aware of their own physical and mental health needs and to focus on their ongoing wellbeing at all times;*
- 37.3 *assisting farm families to understand that during times of dryness the risk factors in determining health are heightened and that people have clear pathways available for them to seek appropriate help, with this preferably being at an early stage;*
- 37.4 *healthcare services in remote and rural Australia be strengthened to provide health promotion and regular health assessments that include risk factors (eg cardiovascular, stress) known to contribute loss of productivity, quality of life and premature mortality for farm families and people in rural communities;*
- 37.5 *people who are employed in drought support roles being required to possess mental health literacy, referral and first aid skills, and;*
- 37.6 *the professionals providing primary healthcare in rural Australia have ready access to support, upskilling, relief and professional networks to enable them to provide quality care.*

GLOSSARY AND ACRONYMS

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BRS	Bureau of Rural Sciences
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
EC	<p>Exceptional Circumstances: EC events are defined as rare and severe events that are outside those that farmer could normally be expected to manage using responsible farm management strategies. To be classified as an EC event, the event:</p> <ul style="list-style-type: none"> • <i>must be rare, that is, it must not have occurred more than once on average in every 20 to 25 years</i> • <i>must result in a rare and severe downturn in farm income over a prolonged period of time (eg greater than 12 months)</i> • <i>must be a discrete event that is not part of long-term structural adjustment processes or normal fluctuations in commodity prices</i>
MP	Member of Parliament
SSP	Social Sciences Program, Bureau of Rural Sciences
CSIRO	Commonwealth Scientific and Industrial Research Organisation
farmer	encompasses male and female farmers unless specifically stated
human support services	includes all government agencies and non-government organisations associated with the delivery of support services
peri-urban	the area immediately adjoining an urban area; between the suburbs and the countryside
rural communities	regional, rural and remote areas of Australia, excluding coastal centres with a population of more than 100 000 people

REFERENCES

- 1 K.Hennessy, R.Fawcett, D.Kirono, F.Mpelasoka, D.Jones, J.Bathols, P.Whetton, M.Staffors Smith, M.Howden, C.Mitchell and N.Plummer, *An Assessment of the Impact of Climate Change on the Nature and Frequency of Exceptional Climate Events*, Bureau of Meteorology and CSIRO, 2008
- 2 Garnaut.R, Garnaut Climate Change Review: Draft Report, June 2008 Available: <http://www.garnautreview.org.au/CA25734E0016A131/pages/all-reports--resources-draft-report>
- 3 Estlake S, An Introduction to the Australian Economy, 3rd edition, January 2006, Available: [http://www.anz.com/business/info_centre/economic_commentary/EncycAmericana\(2006update\).pdf](http://www.anz.com/business/info_centre/economic_commentary/EncycAmericana(2006update).pdf)
- 4 Australian Bureau of Agricultural Resource Economics, *Australian Farm Survey Results 2005-2006 to 2007-2008*, Available: www.abareconomics.com/publications.html/economy/economy.08/fsr-08.pdf
- 5 Productivity Commission, *Inquiry into Drought Support: Issues Paper*, Available: http://www.pc.gov.au/___data/assets/pdf_file/0007/81880/government-drought-support-issues.pdf
- 6 Australian Bureau of Agricultural Resource Economics, *Australian Farm Survey Results 2005-2006 to 2007-2008*, Available: www.abareconomics.com/publications.html/economy/economy.08/fsr-08.pdf
- 7 Estlake S, An Introduction to the Australian Economy, 3rd edition, January 2006, Available: [http://www.anz.com/business/info_centre/economic_commentary/EncycAmericana\(2006update\).pdf](http://www.anz.com/business/info_centre/economic_commentary/EncycAmericana(2006update).pdf)
- 8 CSIRO, *Urban Australia: Where most of us live*, Australian Government , Available: <http://www.cossa.csiro.au/lb/lbbook/urban/yb1.htm>
- 9 CSIRO, *Urban Australia: Where most of us live*, Australian Government , Available: <http://www.cossa.csiro.au/lb/lbbook/urban/yb1.htm>
- 10 Bureau of Rural Sciences, *2008 Social Atlas of Rural and Regional Australia: Country Matters*, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13896> [Accessed 6 August 2008]
- 11 BRS 2008c
- 12 ABS 2008
- 13 BRS 2008c
- 14 Productivity Commission, *Inquiry into Drought Support: Issues Paper*, Available: http://www.pc.gov.au/___data/assets/pdf_file/0007/81880/government-drought-support-issues.pdf
- 15 Aslin H and Russell J, Social Impacts of Drought: Review of Literature for the Expert Social Panel, Bureau of Rural Sciences,
- 16 Berry, H, B Kelly, I Hanigan, J Coates, A McMichael, J Welsh & T Kjellstrom (2008) Submission to the *Garnaut Climate Change Review: 'Rural Mental Health Impacts of Climate Change'*, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/\\$File/03-D%20Mental%20health.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/$File/03-D%20Mental%20health.pdf) [Accessed 23 July 2008]
- 17 Caldwell, T, A Jorm & K Dear , *Suicide and mental health in rural, remote and metropolitan areas in Australia*. in the *Medical Journal of Australia*, 181(7) 2004.
- 18 Bureau of Meteorology, The '*Federation Drought*' 1895-1902, Available: <http://www.bom.gov.au/lam/climate/levelthree/c20thc/drought.htm>

- 19 K.Hennessy, R.Fawcett, D.Kirono, F.Mpelasoka, D.Jones, J.Bathols, P.Whetton, M.Staffors Smith, M.Howden, C.Mitchell and N.Plummer, *An Assessment of the Impact of Climate Change on the Nature and Frequency of Exceptional Climate Events*, Bureau of Meteorology and CSIRO, 2008
- 20 Crosby E, *Welfare and Support Services for farm families, rural businesses and rural communities Families*, Changing Families, Challenging Futures, 6th Australian Institute of Family Studies Conference, Melbourne 1998
- 21 Drought Policy Review Task Force, *National drought policy, final report Volume 1*. Canberra, Australian Government Publishing Service 1990
- 22 ibid
- 23 ibid
- 24 Wahlquist, A (2003) *Media representations and public perceptions of drought*. In: Botterill, LC & M Fisher (Eds.) *Beyond drought: people, policy and perspectives*. Collingwood, Vic.: CSIRO Publishing.
- 25 Elaine Crosby, *Welfare and Support Services for farm families, rural businesses and rural communities Families*, paper given at Changing Families, Challenging Futures, 6th Australian Institute of Family Studies Conference, Melbourne 25-27 November 1998
- 26 Gamble, D, S Blunden, L Kuhn-White, M Voyce & J Loftus (1995) *Transfer of the family farm business in a changing rural society*, RIRDC Research Paper No 95/8.
- 27 Hodges, A. and Goesch, T. 2006, *Australian Farm families, rural businesses and rural communities: Natural Resource Management in 2004-05*, ABARE Research Report 06.12, prepared for the Australian Government Department of Agriculture, Fisheries and Forestry, Canberra, September 2006
- 28 Australian Bureau of Statistics 4620.0 - Natural Resource Management on Australian Farm families, rural businesses and rural communities, 2006-07
- 29 ABARE, 2000, *Country Towns, Impact of farm families, rural businesses and rural communities expenditure on employment and population*
- 30 Hall, G & M Scheltens (2005) *Beyond the drought: towards a broader understanding of rural disadvantage*. *Rural Society*, 15(3): 347-58.
- 31 NSW Department of Primary Industries, Press release, "Popular drought community events provide welcome relief to more than 117,000 families", 4 September 2008
- 32 Pers.com, at Alice Springs Forum to Expert Social Panel, National Review of Drought Policy, 21 July 2008
- 33 Stehlik, D, G Lawrence & I Gray (2000) *Gender and drought: experiences of Australian women in the drought of the 1990s*. *Disasters*, 24: 38-53.
- 34 Lynn, M (2004) *The return of community to rural human services*. *Rural Society*, 14(3): 228-44.
- 35 Green, R & B Lonne (2005) 'Great lifestyle, pity about the job stress': occupational stress in rural human service practice. *Rural Society*, 15(3): 252-66.
- 36 Chenoweth, L (2004) *Educating practitioners for integrative rural practice*. *Rural Society*, 14(3): 276-87.
- 37 Alston, M & J Kent (2006) *The impact of drought on secondary education access in Australia's rural and remote areas*, Available: http://www.dest.gov.au/NR/rdonlyres/4415AD4A-F3AF-40DF-9F10-00F5DE08E855/12764/Impact_Droughtreport23Jan2006.pdf [Accessed 1 August 2008]

- 38 ibid
- 39 ibid
- 40 ibid
- 41 Alston, M (2006) 'I'd like to just walk out of here': Australian women's experience of drought. *Sociologia Ruralis*, 46: 154-70.
- 42 Aliston and Kent (2006).
- 43 ibid
- 44 BRS (2008b) 2008 *Social Atlas of Rural and Regional Australia: Country Matters - Education*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13898> [Accessed 6 August 2008]
- 45 ibid
- 46 DEEWR (2008c) *DEEWR 2008 Budget Statement, Outcome 3: Higher Education*. Department of Education, Employment and Workplace Relations, Commonwealth of Australia.
- 47 ibid
- 48 BTRE (2006) *Skill shortages in Australia's regions*. Bureau of Transport and Regional Economics Working Paper No. 68, Available: <http://www.bitre.gov.au/publications/19/Files/wp68.pdf> [Accessed 31 July 2008]
- 49 BRS (2008c) 2008 *Social Atlas of Rural and Regional Australia: Country Matters - Employment*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13899> [Accessed 6 August 2008]
- 50 ABARE (2000) Country towns: impact of farmers' expenditure on employment and population in Australian towns. *Current Issues*, 4(October): 1-6.
- 51 BRS (2008e) 2008 *Social Atlas of Rural and Regional Australia: Country Matters*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13896> [Accessed 6 August 2008]
- 52 BRS (2008c) 2008 *Social Atlas of Rural and Regional Australia: Country Matters - Employment*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13899> [Accessed 6 August 2008]
- 53 AIHW (1997) *First report on national health priority areas, 1996: Cardiovascular health, cancer control, injury prevention and control, mental health and diabetes mellitus* (AIHW Cat. No. PHE 1). Australian Institute of Health and Welfare, Commonwealth Department of Health and Family Services.
- 54 AIHW (2008b) *Mental Health Services in Australia 2005-2006*. Mental Health Series No. 10, Cat no. HSE 56. Canberra: Australian Institute of Health and Welfare.
- 55 Beyondblue National Depression Initiative (2008) *Research 2001-2007: Targeted research in depression, anxiety and related disorders*, February 2008.
- 56 Centre for Rural Mental Health (2005) *Depression in farmers and farming families, Project Report 2005, Funded by Beyondblue: the National Depression Initiative*. Report prepared by Fiona Judd, Henry Jackson, Caitlin Fraser, Greg Murray and Garry Robins.
- 57 Alston, M (2006) 'I'd like to just walk out of here': Australian women's experience of drought. *Sociologia Ruralis*, 46: 154-70.

- 58 Alston, M & J Kent (2004) *Social impacts of drought - a report to NSW Agriculture*, Available: <http://www.csu.edu.au/research/crsr/ruralsoc/Social%20Impacts%20of%20Drought.pdf> [Accessed 1 August 2008]
- 59 Alston, M & J Kent (2008) The big dry: the link between rural masculinities and poor health outcomes for farming men. *Journal of Sociology*, 44(2): 133-47.
- 60 Centre for Rural Mental Health (2005) *Depression in farmers and farming families, Project Report 2005, Funded by Beyondblue: the National Depression Initiative. Report prepared by Fiona Judd, Henry Jackson, Caitlin Fraser, Greg Murray and Garry Robins.*
- 61 Dean, J & H Stain (2007) The impact of drought on the emotional well-being of children and adolescents in rural and remote New South Wales. *Journal of Rural Health*, 23(4): 356-64
- 62 Sartore, G, B Kelly, HJ Stain, G Albrecht, N Higginbotham (2008) Control, uncertainty, and expectations for the future: a qualitative study of the impact of drought on a rural Australian community. *Rural and Remote Health* 8 (online), 2008:950. Available: <http://www.rrh.org.au/articles/subviewaust.asp?ArticleID=950> [Accessed 22 August 2008]
- 63 Stehlik, D (2003) Australian drought as lived experience: social and community impacts In: Fisher, M & L Botterill (Eds.) *Beyond Drought: People, Policy and Perspectives*. Collingwood: CSIRO Publishing.
- 64 Berry, H, B Kelly, I Hanigan, J Coates, A McMichael, J Welsh & T Kjellstrom (2008) *Submission to the Garnaut Climate Change Review: 'Rural Mental Health Impacts of Climate Change'*, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/\\$File/03-D%20Mental%20health.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/$File/03-D%20Mental%20health.pdf)
- 65 ABS (2005) *Suicides, Australia, 1995-2005*. Australian Bureau of Statistics (3309.0).
- 66 Berry, H, B Kelly, I Hanigan, J Coates, A McMichael, J Welsh & T Kjellstrom (2008) *Submission to the Garnaut Climate Change Review: 'Rural Mental Health Impacts of Climate Change'*, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/\\$File/03-D%20Mental%20health.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/$File/03-D%20Mental%20health.pdf)
- 67 Caldwell, T, A Jorm & K Dear (2004) Suicide and mental health in rural, remote and metropolitan areas in Australia. *Medical Journal of Australia*, 181(7): S10 to fourteen.
- 68 DoHA (2008a) *Department of Health and Ageing 2008 Budget Statement on 'Mental Health - increased mental health services for drought-affected communities'*, Available: [http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/\\$File/hfact19.pdf](http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/$File/hfact19.pdf) [Accessed 5 August 2008]
- 69 Nicholls, N, CD Butler & I Hanigan (2006) Inter-annual rainfall variations and suicide in New South Wales, Australia, 1964-2001. *International Journal of Biometeorology*, 50(3): 139-43.
- 70 Alston, M & J Kent (2008) The big dry: the link between rural masculinities and poor health outcomes for farming men. *Journal of Sociology*, 44(2): 133-47.
- 71 Caldwell, T, A Jorm & K Dear (2004) Suicide and mental health in rural, remote and metropolitan areas in Australia. *Medical Journal of Australia*, 181(7): S10 to fourteen
- 72 Centre for Rural Mental Health (2005) *Depression in farmers and farming families, Project Report 2005, Funded by Beyondblue: the National Depression Initiative. Report prepared by Fiona Judd, Henry Jackson, Caitlin Fraser, Greg Murray and Garry Robins.*

- 73 Sartore, G, B Kelly, HJ Stain, G Albrecht, N Higginbotham (2008) Control, uncertainty, and expectations for the future: a qualitative study of the impact of drought on a rural Australian community. *Rural and Remote Health* 8 (online), 2008:950. Available: <http://www.rrh.org.au/articles/subviewaust.asp?ArticleID=950> [Accessed 22 August 2008]
- 74 Caldwell, T, A Jorm & K Dear (2004) Suicide and mental health in rural, remote and metropolitan areas in Australia. *Medical Journal of Australia*, 181(7): S10 to fourteen
- 75 ibid
- 76 Alston, M & J Kent (2008) The big dry: the link between rural masculinities and poor health outcomes for farming men. *Journal of Sociology*, 44(2): 133-47.
- 77 Caldwell, T, A Jorm & K Dear (2004) Suicide and mental health in rural, remote and metropolitan areas in Australia. *Medical Journal of Australia*, 181(7): S10 to fourteen
- 78 Fuller, J, B Kelly, G Sartore, L Fragar, A Tonna, G Pollard & T Hazell (2007) Use of social network analysis to describe service links for farmers' mental health. *Australian Journal of Rural Health*, 15: 99-106
- 79 Sartore, G, B Kelly, HJ Stain, G Albrecht, N Higginbotham (2008) Control, uncertainty, and expectations for the future: a qualitative study of the impact of drought on a rural Australian community. *Rural and Remote Health* 8 (online), 2008:950. Available: <http://www.rrh.org.au/articles/subviewaust.asp?ArticleID=950> [Accessed 22 August 2008]
- 80 AIHW (2008a) *Australia's health 2008 - The eleventh biennial health report of the Australian Institute of Health and Welfare, June 2006* (Cat. No. AUS 99). Canberra: Australian Institute of Health and Welfare.
- 81 ibid
- 82 Productivity Commission (2005) *Australia's Health Workforce - Research Report, 22 December 2005*. Canberra.
- 83 AIHW (2007) *Rural, regional and remote health: a study on mortality - 2nd edition* (AIHW cat. no. PHE 95), [Accessed 5 August 2008]
- 84 AIHW (2008a) *Australia's health 2008 - The eleventh biennial health report of the Australian Institute of Health and Welfare, June 2006* (Cat. No. AUS 99). Canberra: Australian Institute of Health and Welfare
- 85 AIHW (2008c) *Rural, regional and remote health: indicators of health status and determinants of health, March 2008* (Rural Health Series no. 9, Cat no. PHE 97). Canberra: Australian Institute of Health and Welfare
- 86 AIHW (2008a) *Australia's health 2008 - The eleventh biennial health report of the Australian Institute of Health and Welfare, June 2006* (Cat. No. AUS 99). Canberra: Australian Institute of Health and Welfare
- 87 ibid
- 88 Bambrick, H, K Dear, R Woodruff, I Hanigan & A McMichael (2008) *Submission to the Garnaut Climate Change Review: 'The impacts of climate change on three health outcomes: temperature-related mortality and hospitalisations, salmonellosis and other bacterial gastroenteritis, and population at risk from Dengue', joint submission prepared by School of Medicine, University of Western Sydney and National Centre for Epidemiology and Population Health, Australian National University, June 2008*, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-AThreehealthoutcomes/\\$File/03-A%20Three%20health%20outcomes.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-AThreehealthoutcomes/$File/03-A%20Three%20health%20outcomes.pdf) [Accessed 23 July 2008]

- 89 Alston, M & J Kent (2004) *Social impacts of drought - a report to NSW Agriculture*, Available: <http://www.csu.edu.au/research/csr/ruralsoc/Social%20Impacts%20of%20Drought.pdf> [Accessed 1 August 2008]
- 90 ibid
- 91 Coleman R, L Fragar, C Morton & K Winter (1996) *Profile of the health and safety of Australian farmers, farm families and farm workers*, RIRDC Funded national Farm Injury Data Collection Project. Available: http://www.aghealth.org.au/tiny_mce_fm/uploaded/Research%20Reports/profile_aus_farmers_families_workers_96.pdf [Accessed 25 August 2008]
- 92 Caldwell, T, A Jorm & K Dear (2004) Suicide and mental health in rural, remote and metropolitan areas in Australia. *Medical Journal of Australia*, 181(7): S10 to fourteen
- 93 Centre for Rural Mental Health (2005) *Depression in farmers and farming families, Project Report 2005, Funded by Beyondblue: the National Depression Initiative. Report prepared by Fiona Judd, Henry Jackson, Caitlin Fraser, Greg Murray and Garry Robins.*

TABLES

- 1 BRS (2008d) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Social Fabric*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13900> [Accessed 6 August 2008]
- 2 BRS (2008e) *2008 Social Atlas of Rural and Regional Australia: Country Matters*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13896> [Accessed 6 August 2008]
- 3 BRS (2008c) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Employment*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13899> [Accessed 6 August 2008]
- 4 ABS (2008a) *Agriculture in focus: farming families, Australia, 2006 (Cat.No. 7104.0.55.001)*. Available: <http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/7104.0.55.001Main%20Features12006?opendocument&tabname=Summary&prodno=7104.0.55.001&issue=2006&num=&view=> [Accessed 2008a]
- 5 Barr, N, K Karunaratne & R Wilkinson (2005) *Australia's farmers: past, present and future*. Canberra, ACT: Land and Water Australia

BIBLIOGRAPHY

- ABARE (2000) *Country towns: impact of farmers' expenditure on employment and population in Australian towns*. Current Issues, 4(October): 1-6.
- ABS (1997) *Mental health and wellbeing: Profile of adults, Australia*. Canberra: Australian Bureau of Statistics.
- ABS (2005) *Suicides, Australia, 1995-2005*. Australian Bureau of Statistics (3309.0).
- ABS (2008a) *Agriculture in focus: farming families, Australia, 2006* (Cat.No. 7104.0.55.001). Available: [http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts_7104.0.55.001Main%20Features12006?opendocumentandtabname=Summaryandprodno=7104.0.55.001andissue=2006andnum=andview=\[Accessed 2008a\]](http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts_7104.0.55.001Main%20Features12006?opendocumentandtabname=Summaryandprodno=7104.0.55.001andissue=2006andnum=andview=[Accessed 2008a])
- ABS (2008b) *Housing and services in remote Aboriginal and Torres Strait Islander communities*. Australian Social Trends, 4102.0: 1-10.
- ABS (2008c) National Regional Profile (an interactive website of the Australian Bureau of Statistics), Available: <http://www.abs.gov.au/AUSSTATS/abs@.nsf/webpages/National+Regional+Profile> [Accessed 31 July 2008]
- Agricultural Council of Australia and New Zealand (1992) National Drought Policy, Resolution 1c. Meeting Number 138, Mackay, 24 July 1992.
- AIHW (1997) First report on national health priority areas, 1996: *Cardiovascular health, cancer control, injury prevention and control, mental health and diabetes mellitus* (AIHW Cat. No. PHE 1). Australian Institute of Health and Welfare, Commonwealth Department of Health and Family Services.
- AIHW (2004) *Rural, regional and remote health - A guide to remoteness classifications*, March 2004 (AIHW Cat. No. PHE 53). Rural Health Series. Canberra: Australian Institute of Health and Welfare.
- AIHW (2007) *Rural, regional and remote health: a study on mortality* - 2nd edition (AIHW cat. no. PHE 95), [Accessed 5 August 2008]
- AIHW (2008a) *Australia's health 2008* - The eleventh biennial health report of the Australian Institute of Health and Welfare, June 2006 (Cat. No. AUS 99). Canberra: Australian Institute of Health and Welfare.
- AIHW (2008b) *Mental Health Services in Australia 2005-2006*. Mental Health Series No. 10, Cat no. HSE 56. Canberra: Australian Institute of Health and Welfare.
- AIHW (2008c) *Rural, regional and remote health: indicators of health status and determinants of health*, March 2008 (Rural Health Series no. 9, Cat no. PHE 97). Canberra: Australian Institute of Health and Welfare.
- AIHW: Begg S, V T, B B, S C, S L and L A (2007) *The burden of disease and injury in Australia, 2003* - Cat. no. PHE 82. Canberra: Australian Institute of Health and Welfare.
- Alston, M (2004) *Coping with crisis: human services in times of drought*. Rural Society, 14(3).
- Alston, M (2005) *Forging a new paradigm for Australian rural social work practice*. Rural Society, 15(3): 276-83.

- Alston, M (2006) *'I'd like to just walk out of here': Australian women's experience of drought*. *Sociologia Ruralis*, 46: 154-70.
- Alston, M and J Kent (2004) *Social impacts of drought - a report to NSW Agriculture*, Available: <http://www.csu.edu.au/research/csr/ruralsoc/Social%20Impacts%20of%20Drought.pdf> [Accessed 1 August 2008]
- Alston, M and J Kent (2006) *The impact of drought on secondary education access in Australia's rural and remote areas*, Available: http://www.dest.gov.au/NR/rdonlyres/4415AD4A-F3AF-40DF-9F10-00F5DE08E855/12764/Impact_Droughtreport23Jan2006.pdf [Accessed 1 August 2008]
- Alston, M and J Kent (2008) *The big dry: the link between rural masculinities and poor health outcomes for farming men*. *Journal of Sociology*, 44(2): 133-47.
- Alston, M and K Witney-Soanes (2008) *Social impacts of drought in the Murray Darling Basin*. Report prepared for Department of Infrastructure, Transport, Regional Development and Local Government, Institute of Land, Water and Society, Wagga Wagga.
- ANTA (2003) *Australia's National Strategy for Vocational Education and Training 2004-2010*. Australian National Training Authority, Available: http://www.dest.gov.au/NR/rdonlyres/98206EC7-3B9A-4A58-991F-4F28010BF825/16445/national_strategy.pdf [Accessed 1 August 2008]
- ANTA (2004) *Strengthening communities and regions: ideas for action - a discussion paper*. Australian National Training Authority, Available: <http://www.dest.gov.au/NR/rdonlyres/D4176A1D-4029-4854-B7DA-C3162E56DA87/12064/strengtheningcommunitiesandregionsideasforactionDR.pdf> [Accessed 1 August 2008]
- Ash, A, R Nelson, M Howden and S Crimp (2008) *Australian agriculture adapting to climate change: balancing incremental innovation and transformational change*. Outlook 2008. Canberra, ABARE.
- Ashfield, J (2007) *Taking care of yourself and your family: a resource book for good mental health*. Peacock Publications for Beyondblue, the National Depression Initiative.
- Australian Government (2008a) Australian Social Inclusion Board, 21 May 2008, Available: http://www.pmc.gov.au/social_inclusion.cfm [Accessed 30 June 2008]
- Australian Government (2008b) *Employment outlook for Agriculture, Forestry and Fishing*, July 2008. SkillsInfo, Australian Government.
- Australian Health Ministers' Conference (2008) *National Action Plan on Mental Health 2006-2011*, Progress report 2006-2007, prepared under the auspices of the Mental Health Standing Committee of the Australian Health Minister's Advisory Council and endorsed by Australian Health Ministers, February 2008. In: Governments, CoA (Ed.).
- Bambrick, H, K Dear, R Woodruff, I Hanigan and A McMichael (2008) Submission to the Garnaut Climate Change Review: *The impacts of climate change on three health outcomes: temperature-related mortality and hospitalisations, salmonellosis and other bacterial gastroenteritis, and population at risk from Dengue*, joint submission prepared by School of Medicine, University of Western Sydney and National Centre for Epidemiology and Population Health, Australian National University, June 2008, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-AThreehealthoutcomes/\\$File/03-A%20Three%20health%20outcomes.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-AThreehealthoutcomes/$File/03-A%20Three%20health%20outcomes.pdf) [Accessed 23 July 2008]

- Barr, N, K Karunaratne and R Wilkinson (2005) *Australia's farmers: past, present and future*. Canberra, ACT: Land and Water Australia.
- Berry, H, B Kelly, I Hanigan, J Coates, A McMichael, J Welsh and T Kjellstrom (2008) Submission to the Garnaut Climate Change Review: *Rural Mental Health Impacts of Climate Change*, Available: [http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/\\$File/03-D%20Mental%20health.pdf](http://www.garnautreview.org.au/CA25734E0016A131/WebObj/03-DMentalhealth/$File/03-D%20Mental%20health.pdf) [Accessed 23 July 2008]
- Beyondblue National Depression Initiative (2008) *Research 2001-2007: Targeted research in depression, anxiety and related disorders*, February 2008.
- BITRE (2008) Regional economic growth - BITRE's taxable income database (an interactive database). Bureau of Infrastructure, Transport and Regional Economics, Available: <http://www.btre.gov.au/Info.aspx?ResourceId=617andNodeId=13> [Accessed 31 July 2008]
- Black, A, J Duff, S Saggars, P Baines, A Jennings and P Bowen (2000) *Rural communities and rural social issues: priorities for research*. Canberra: Rural Industries Research and Development Corporation.
- Botterill, L (2000) *Policy approaches to farm exit: some factors influencing the efficacy of Commonwealth programs*. Canberra: School of Social Sciences, Australian National University.
- Botterill, L (2003a) *Beyond drought in Australia: the way forward*. In: Botterill, LC and M Fisher (Eds.) *Beyond Drought: People, Policy and Perspectives*, Collingwood, Victoria: CSIRO Publishing.
- Botterill, L and M Fisher (Eds.) (2003) *Beyond drought: people, policy and perspectives*: CSIRO Publishing.
- Botterill, LC (2001) *Rural policy assumptions and policy failure: the case of the re-establishment grant*. Australian Journal of Public Administration, 60(4): 9-16.
- Botterill, LC (2003b) *Uncertain climate: the recent history of drought policy in Australia*. Australian Journal of Politics and History, 49(1): 61-74.
- Botterill, LC (2004) *Valuing agriculture: balancing competing objectives in the policy process*. Journal of Public Policy, 24(2): 199-218.
- Bowes J and R Grace (Eds) *Children, families and communities: contexts and consequences*, Melbourne, Oxford University Press [in press].
- BRS (2008a) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Drought*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13901> [Accessed 6 August 2008]
- BRS (2008b) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Education*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13898> [Accessed 6 August 2008]
- BRS (2008c) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Employment*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13899> [Accessed 6 August 2008]
- BRS (2008d) *2008 Social Atlas of Rural and Regional Australia: Country Matters - Social Fabric*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13900> [Accessed 6 August 2008]

- BRS (2008e) *2008 Social Atlas of Rural and Regional Australia: Country Matters*. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13896> [Accessed 6 August 2008]
- BRS (n.d.) *Australia's national drought policy*, Available: <http://pandora.nla.gov.au/pan/34200/20030417-0000/www.affa.gov.au/content/output82b3.html> [Accessed 28 July 2008]
- BTRE (2003) *Government Interventions in pursuit of regional development: learning from experience*. Bureau of Transport and Regional Economics Working Paper 55, Available: <http://www.bitre.gov.au/publications/06/Files/wp55.pdf> [Accessed 31 July 2008]
- BTRE (2006) *Skill shortages in Australia's regions*. Bureau of Transport and Regional Economics Working Paper No. 68, Available: <http://www.bitre.gov.au/publications/19/Files/wp68.pdf> [Accessed 31 July 2008]
- Burke, T (2008a) Expert Panel to review social impacts of drought. Media release. Office of the Minister of Agriculture, Fisheries and Forestry.
- Burke, T (2008b) Media Release of the Minister for Agriculture, Fisheries and Forestry, Tony Burke, on the 'Details of national review of drought policy', June 2008, Available: http://www.maff.gov.au/media/media_releases/june_2008/details_of_national_review_of_drought_policy_released [Accessed 29 July 2008]
- Burnside, D (2007) *The relationship between community vitality, viability and health, and natural resources and their management - Final Report*, prepared for the National Land and Water Resources Audit, Canberra, Available: [http://www.nlwra.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/102/47.pdf&siteID=9&str_title=URS15%20-%20CVVH%20Literature%20Review%20-%20Final%20Report%20\(pdf\).pdf](http://www.nlwra.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/102/47.pdf&siteID=9&str_title=URS15%20-%20CVVH%20Literature%20Review%20-%20Final%20Report%20(pdf).pdf) [Accessed 23 July 2008]
- Caldwell, T, A Jorm and K Dear (2004) *Suicide and mental health in rural, remote and metropolitan areas in Australia*. Medical Journal of Australia, 181(7): S10 to fourteen.
- Centre for Rural Mental Health (2005) *Depression in farmers and farming families, Project Report 2005*, Funded by Beyondblue: the National Depression Initiative. Report prepared by Fiona Judd, Henry Jackson, Caitlin Fraser, Greg Murray and Garry Robins.
- Chapman, L and J Greenville (2002) *Profiling rural Australia: impact of changes in the agriculture sector on rural towns*. Australian Commodities, 9(1): 234-49.
- Cheers, B, R Darracott and B Lonne (2005) *Domains of rural social work practice*. Rural Society, 15(3): 234-50.
- Cheney, H, J Willetts and E Wilson (2004) *It's more than the money: the relationship between social values and demographic change in sustaining a rural general practitioner workforce*. Rural Society, 14(3): 256-74.
- Chenoweth, L (2004) *Educating practitioners for integrative rural practice*. Rural Society, 14(3): 276-87.
- Coleman R, L Fragar, C Morton and K Winter (1996) Profile of the health and safety of Australian farmers, farm families and farm workers, RIRDC Funded national Farm Injury Data Collection Project. Available: http://www.aghealth.org.au/tinymce_fm/uploaded/Research%20Reports/profile_aus_farmers_families_workers_96.pdf [Accessed 25 August 2008]

- Crosby, E (1998) Succession and inheritance on Australian farms. Paper presented at Changing families, challenging futures: 6th Australian Institute of Family Studies Conference, Melbourne 25-27 November 1998. Available <http://www.aifs.gov.au/institute/afrc6papers/crosby2.html> [Accessed 7 September 2008]
- Crosby, E (1998) Welfare and support services for farm families. Paper presented at Changing families, challenging futures: 6th Australian Institute of Family Studies Conference, Melbourne 25-27 November 1998. Available <http://www.aifs.gov.au/institute/afrc6papers/crosby.html> [Accessed 7 September 2008]
- DAFF (2008a) Background - Exceptional Circumstances [Website of the Department of Agriculture, Fisheries and Forestry], Available: <http://www.daff.gov.au/agriculture-food/drought/ec/background> [Accessed 29 July 2008]
- DAFF (2008b) *Information handbook - Exceptional Circumstances. Guide to the policy and assistance measures provided under Exceptional Circumstances arrangements*, Department of Agriculture, Fisheries and Forestry, February 2008, Available: http://www.daff.gov.au/__data/assets/pdf_file/0013/150322/ec-handbook.pdf [Accessed 25 July 2008]
- Dean, J and H Stain (2007) *The impact of drought on the emotional wellbeing of children and adolescents in rural and remote New South Wales*. Journal of Rural Health, 23(4): 356-64
- DEEWR (2008a) 2007-08 Drought Assistance for Schools measure funding, Available: http://www.dest.gov.au/sectors/school_education/programmes_funding/programme_categories/rural_and_regional_assistance/das/eligible_schools_funding_amounts.htm [Accessed 14 August 2008]
- DEEWR (2008b) *DEEWR 2008 Budget Statement, Outcome 2: School education*. Department of Education, Employment and Workplace Relations, Commonwealth of Australia.
- DEEWR (2008c) *DEEWR 2008 Budget Statement, Outcome 3: Higher Education*. Department of Education, Employment and Workplace Relations, Commonwealth of Australia.
- DEEWR (2008d) *DEEWR 2008 Budget Statement, Outcome 7: Labour Market Assistance - Individuals have access to income support and socially inclusive labour market programs which further economic development*. Department of Education, Employment and Workplace Relations, Commonwealth of Australia.
- DEEWR (2008e) *DEEWR 2008 Budget Statement, Outcome 8: Workforce participation - Policies and strategies are developed to assist disadvantaged Australians to increase their skills and workforce participation through enhanced employment services and employer engagement*. Department of Education, Employment and Workplace Relations, Commonwealth of Australia.
- DEEWR (2008f) Drought Assistance for Schools, Available: <http://www.dest.gov.au/NR/rdonlyres/9D974659-8846-4E82-B17C-1E3FA367983B/20497/DroughtAssistanceGuidelinesforGovernmentSchools26F.pdf> [Accessed 14 August 2008]
- Department of Transport and Regional Services (2005) *Drought impacts beyond the farm gate: Two regional case studies*. Canberra: Department of Transport and Regional Services.

- DEST (2004) Review of the higher education equity programme (HEEP) - Department of Education, Science and Training discussion paper examining the current position of disadvantaged students, , Available: <http://www.dest.gov.au/NR/rdonlyres/2CE01D3E-5CC4-43CE-ABA1-E7D43E446B3B/2389/discussion.pdf> [Accessed 1 August 2008]
- DETYA (1999) Equity in higher education (Department of Education, Training and Youth Affairs Occasional papers series 99A), Available: http://www.dest.gov.au/archive/highered/occpaper/99A/equityhe_all.pdf [Accessed 1 August 2008]
- Diniz, F (2006) Inclusive education: Cross cultural perspectives. Inclusion, participation and democracy: What is the purpose? : Springer, Netherlands.
- DoHA (2008a) Department of Health and Ageing 2008 Budget Statement on 'Mental Health - increased mental health services for drought-affected communities', Available: [http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/\\$File/hfact19.pdf](http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/$File/hfact19.pdf) [Accessed 5 August 2008]
- DoHA (2008b) Department of Health and Ageing 2008 Budget Statement, Outcome 11: Mental Health- Improved mental health care for all Australians, [Accessed 6 August 2008]
- DoHA (2008c) Department of Health and Ageing: budget statement on 'Mental health - increased mental health services for drought-affected communities', Available: [http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/\\$File/hfact19.pdf](http://www.health.gov.au/internet/budget/publishing.nsf/Content/D3F5EFBD4B4B7819CA2572D40013B28E/$File/hfact19.pdf) [Accessed 5 August 2008]
- DoHA (2008d) Health topic quickview: rural health services - [A collection of rural health services-related information on the Department of Health and Ageing website], Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/portal-Rural%20health%20services> [Accessed 4 August 2008]
- DoHA (2008e) Programs: Mental Health Services in Rural and Remote Areas program [Website of the Department of Health and Ageing], Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-rural> [Accessed 4 August 2008]
- DoHA (2008f) Programs: Mental Health Support for Drought Affected Communities [Website of the Department of Health and Ageing], Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/mental-drought> [Accessed 4 August 2008]
- DoHA (2008g) *Report on the Audit of Health Workforce in Rural and Regional Australia*, prepared by the Department of Health and Ageing, April 2008, Available: [http://www.health.gov.au/internet/main/publishing.nsf/Content/4F3A981914316A11CA257434008189EC/\\$File/ruraud.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/4F3A981914316A11CA257434008189EC/$File/ruraud.pdf) [Accessed 4 August 2008]
- Drought Review Panel (2004) Consultations on national drought policy - preparing for the future, Available: http://pandora.nla.gov.au/pan/41566/20040427-0000/www.affa.gov.au/corporate_docs/publications/pdf/innovation/drought/drought_report_complete.pdf [Accessed 25 July 2008]
- Edwards, B, M Gray and B Hunter (2008) *Social and economic impacts of drought on farm families and rural communities*. Report prepared for Australian Institute of Family Services.

- Employment and Skills Council - NBEET (1994) *Cultivating the human factor: employment and skills in Australia's rural industries: small business employment and skills supplementary report*. This report complements and supplements the Employment and Skills Formation Council's (ESFC) "The Shape of Things to Come". Available: http://www.dest.gov.au/NR/rdonlyres/0561B1CE-D119-4B41-ACC2-6A834783B9A5/3945/94_35.pdf [Accessed 1 August 2008]
- Expert Social Panel (2008) *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, Available: http://www.daff.gov.au/__data/assets/pdf_file/0004/710644/social_panels_issues_paper.pdf [Accessed 2 July 2008]
- Feldman, DL (2008) *Barriers to adaptive management: lessons from the Apalachicola-Chattahoochee-Flint Compact*. Society and Natural Resources, 21: 512-25.
- Fincher, R (1999) *New geographies of disadvantage: implications for service delivery*. Australian Journal of Public Administration, 58(3): 55-60.
- Foskey, R (2005) *Older farmers and retirement*. Canberra, ACT: Rural Industries Research and Development Corporation.
- Fuller, J, B Kelly, G Sartore, L Fragar, A Tonna, G Pollard and T Hazell (2007) *Use of social network analysis to describe service links for farmers' mental health*. Australian Journal of Rural Health, 15: 99-106.
- Funnell, B (2004) *On being bold and brave when neither comes naturally*. CRUcial Times. Brisbane: Community Resource Unit, Disability Services.
- Gamble, D, S Blunden, L Kuhn-White, M Voyce and J Loftus (1995) *Transfer of the family farm business in a changing rural society*, RIRDC Research Paper No 95/8.
- Garlick, S (2000) *Engaging universities and regions: knowledge contribution to regional economic development in Australia*, A report prepared for the Department of Education, Training and Youth Affairs, Available: http://www.dest.gov.au/archive/highered/eippubs/eip00_15/00_15.pdf [Accessed 1 August 2008]
- Government of Ireland (2007) *National Action Plan for Social Inclusion 2007-2016*, Available: <http://www.socialinclusion.ie/documents/NAPinclusionReportPDF.pdf> [Accessed 12 June 2008]
- Green, R and R Gregory (2004) *Rural and remote social welfare practice: differences and similarities in the Australian context*. Rural Society, 14(3): 245-55.
- Green, R and B Lonne (2005) *'Great lifestyle, pity about the job stress': occupational stress in rural human service practice*. Rural Society, 15(3): 252-66.
- Hall, G and M Scheltens (2005) *Beyond the drought: towards a broader understanding of rural disadvantage*. Rural Society, 15(3): 347-58.
- Higgins, V (2001) *Calculating climate: 'advanced liberalism' and the governing of risk in Australian drought policy*. Journal of Sociology, 37(3): 299-316.
- Higgins, V and S Lockie (2001) *Getting big and getting out: government policy, self-reliance and farm adjustment*. In: Lockie, S and L Bourke (Eds.) *Rurality bites: the social and environmental transformation of rural Australia*. Sydney: Pluto Press.

- Hogan, A, M Hanslip, R Kancans and B Maguire (2008a) *Climate risk and adaptation among primary producers: topline results focusing on primary producers reporting the effects of adverse seasonal conditions*. Canberra: Bureau of Rural Sciences.
- Hogan, A, B Maguire and P Stakelum (2008b) *The social wellbeing of rural Australians: a comparative analysis of farmers and people working in agriculture in drought-affected areas and the Australian population using the Personal Wellbeing Index*. Canberra: Bureau of Rural Sciences.
- Hogan, A, C Polidano and P Stakelum (2008c) *The social wellbeing of rural Australians: an analysis of the household, income and labour dynamics in Australia (HILDA) study*. Canberra: Bureau of Rural Sciences.
- Holmes, J (2006) *Impulses towards a multifunctional transition in rural Australia: gaps in the research agenda*. Journal of Rural Studies, 22: 142-60.
- IPCC (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge, UK: Cambridge University Press.
- James, R, J Wyn, G Baldwin, G Hepworth and others (1999) *Rural and isolated school students and their higher education choices: a re-examination of student location, socioeconomic background, and educational advantage and disadvantage*, Report no. 62 prepared for the Higher Education Council, National Board of Employment, Education and Training, Available: http://www.dest.gov.au/NR/rdonlyres/140EAEEA-EF88-4A12-A5BB-5973E7AA7751/3959/99_11.pdf [Accessed 1 August 2008]
- Jones, RG (2001) *Identifying higher education students from low socio-economic status backgrounds and regional and remote areas*, Available: http://www.dest.gov.au/archive/highered/eippubs/eipo2_4/index.htm [Accessed 1 August 2008]
- Lindblom, CE (1959) *The science of 'muddling through'*. Public Administration Review, 19: 79-82.
- Lynn, M (2004) *The return of community to rural human services*. Rural Society, 14(3): 228-44.
- Maguire, B and S Cartwright (2008) *Assessing a community's capacity to manage change: a resilience approach to social assessment*. Canberra: Bureau of Rural Sciences.
- McLennan, J and Birch, A 2005, *Recruiting and Retaining Australia's Volunteer Firefighters*, Bushfire CRC, La Trobe University.
- McMichael, A, R Woodruff, P Whetton, K Hennessy, N Nicholls, S Hales, A Woodward and T Kjellstrom (2003) *Human health and climate change in Oceania: A risk assessment*, 2002. Department of Communications, Information Technology and the Arts.
- Mlcek, S (2005) *Paucity management addresses the limit - situations of human services delivery in rural Australia*. Rural Society, 15(3): 297-311.
- Nelson, R, PR Brown, T Darbas, P Kokic and K Cody (2007) *The potential to map the adaptive capacity of Australian land managers for NRM policy using ABS data*. Canberra: CSIRO, Australian Bureau of Agricultural and Resource Economics, prepared for the National Land and Water Resources Audit.
- Nelson, R, P Kokic, L Elliston and J King (2005) *Structural adjustment: a vulnerability index for Australian broadacre agriculture*. Australian Commodities, 12(1): 171-9.
- NFF (2008a) 2008 Labour Shortage Action Plan, National Farmers' Federation, March 2008.

- NFF (2008b) Annual Review, 2007-2008. Barton: National Farmers Federation
- Nicholls, N, CD Butler and I Hanigan (2006) *Inter-annual rainfall variations and suicide in New South Wales, Australia, 1964-2001*. International Journal of Biometeorology, 50(3): 139-43.
- NSW Department of Health (2008) NSW Drought Mental Health Assistance Package, February 2008, Available: http://www.health.nsw.gov.au/pubs/2008/pdf/drought_package.pdf [Accessed 5 August 2008]
- Paton, S and C Cuckson (2004) *Meeting the needs of rural families in times of crisis*. Rural Society, 14(3): 288-99.
- PIMC (2008) Communique of the Primary Industries Ministerial Council - Meeting held in Melbourne, 17 April 2008, Available: http://www.daff.gov.au/__data/assets/pdf_file/0007/625624/pimc-13.pdf [Accessed 25 July 2008]
- PMSEIC Independent Working Group (2007) *Climate change in Australia: regional impacts and adaptation - managing the risk for Australia*, Report prepared for the Prime Minister's Science, Engineering and Innovation Council, June 2007, Available: <http://www.dest.gov.au/NR/rdonlyres/CE5D024E-8F58-499F-9EEB-D2D638E7A345/17397/ClimateChangeinAustraliaireport.pdf> [Accessed 1 August 2008]
- Posselt, H (2000) *Socio-economic disadvantage across urban, rural and remote areas*. In: Australian Population Association 10th Biennial Conference. Melbourne.
- Pretty, G, B Bishop, A Fisher and C Sonn (2006) *Psychological sense of community and its relevance to wellbeing and everyday life in Australia*. Melbourne: The Australian Psychological Society Ltd.
- Productivity Commission (2005) *Australia's Health Workforce - Research Report*, 22 December 2005. Canberra.
- Productivity Commission (2008) *Inquiry into government drought support*. Productivity Commission Issues Paper. Canberra: Productivity Commission.
- Rodriguez, VB, M Watson and C Mues (2006) *National Farmer Survey 2006*. A report by the Australian Bureau of Agriculture and Resource Economics to the Rural Policy and Innovation Division of the Department of Agriculture, Fisheries and Forestry, Oct 2006, Available: http://www.daff.gov.au/__data/assets/pdf_file/0003/186942/national_farmer_survey_2006.pdf [Accessed 30 July 2008]
- Sartore, G, B Hoolahan, A Tonna, B Kelly and H Stain (2005) *Wisdom from the drought: recommendations from a consultative conference*. Australian Journal of Rural Health, 13(5): 315-20.
- Sartore, G, B Kelly and H Stain (2007) *Drought and its effect on mental health*. Australian Family Physician, 36(12): 990-3.
- Sartore, G, B Kelly, HJ Stain, G Albrecht, N Higginbotham (2008) *Control, uncertainty, and expectations for the future: a qualitative study of the impact of drought on a rural Australian community*. Rural and Remote Health 8 (online), 2008:950. Available: <http://www.rrh.org.au/articles/subviewaust.asp?ArticleID=950> [Accessed 22 August 2008]
- Senate Standing Committee on Rural and Regional Affairs (1992) *A national drought policy: appropriate government responses to the recommendations of the Drought Policy Review Task Force - final report*. Canberra: Parliament of the Commonwealth of Australia.

- Slootweg, R, F Vanclay and M van Schooten (2001) *Function evaluation as a framework for the integration of social and environmental impact assessment*. Impact Assessment and Project Appraisal, 19(1): 19-28.
- Spanswick, S, G Roth, T Drew and P Jones (2007) *The impact of drought on small business - a pilot study on Wee Waa* (summary only). Cotton Catchment Communities CRC.
- Stafford Smith, M (2003) *Linking environments, decision-making and policy in handling climatic variability*. In: Botterill, LC and M Fisher (Eds.) *Beyond drought: people, policy and perspectives*. Collingwood, Vic.: CSIRO Publishing.
- Steffen, W, J Sims and J Walcott (2006) *Farming profitably in a changing climate: a risk-management approach*. Canberra: Bureau of Rural Sciences.
- Stehlik, D (2003) *Australian drought as lived experience: social and community impacts*. In: Fisher, M and L Botterill (Eds.) *Beyond Drought: People, Policy and Perspectives*. Collingwood: CSIRO Publishing.
- Stehlik, D (2004) *Guest editorial: towards a 21st century form of practice in rural communities*. Rural Society, 14(3): 208-9.
- Stehlik, D, I Gray and G Lawrence (1999) *Drought in the 1990s: Australian farm families' experiences*. Canberra: Rural Industries Research and Development Corporation.
- Stehlik, D, G Lawrence and I Gray (2000) *Gender and drought: experiences of Australian women in the drought of the 1990s*. Disasters, 24: 38-53.
- Stewart, J (2006) *Value conflict and policy change*. Review of Policy Research, 23(1): 183-95.
- Thacher, D and M Rein (2004) *Managing value conflict in public policy*. Governance: an International Journal of Policy, Administration, and Institutions, 17(4): 457-86.
- The Australian Centre for Agricultural Health and Safety (2007) *Managing the Pressures of Farming Manual*, Fourth Edition.
- Tichagwa, W (1994) *The effects of drought on the condition of women*. Focus on Gender, 2(1): 20-5.
- Tonts, M and A Black (2002) *Changing farm business structures and the sustainability of rural communities and regions: issues for research*. Sustaining Regions, 1(2): 17-23.
- Truss, W (2000) *Agriculture - Advancing Australia*, Statement by the Honourable Warren Truss MP, Minister for Agriculture, Fisheries and Forestry, 9 May 2000, [Accessed 28 July 2008]
- Vanclay, F (2002) *Conceptualising social impacts*. Environmental Impact Assessment Review, 22: 183-211.
- Wahlquist, A (2003) *Media representations and public perceptions of drought*. In: Botterill, LC and M Fisher (Eds.) *Beyond drought: people, policy and perspectives*. Collingwood, Vic.: CSIRO Publishing.
- Walker, B and D Salt (2006) *Resilience thinking: sustaining ecosystems and people in a changing world*, Washington D.C.: Island Press.
- Watson, AS (2000) *Australian agriculture: persistent myths and current realities and/or current myths and persistent realities*. In: *Australian values - rural policies*. Organised by the Rural Industries Research and Development Corporation, Synapse Consulting and the University of Queensland. Canberra, ACT.
- Webb, T, J Cary and P Geldens (2002) *Leaving the land: a study of Western Division grazing families in transition*. Canberra, ACT: Rural Industries Research and Development Corporation.

- Western, J, R McCrea and R Stimson (2007) *Quality of life and social inclusion*. International Review of Sociology, 17(3): 525-37.
- Western Research Institute (2006) *The impact of the current drought on the Bourke economy and community*. Prepared for the Department of Transport and Regional Services. Bathurst: Charles Sturt University.
- White, D and B O'Meagher (1995) *Coping with exceptional droughts in Australia*. Drought Network News, (June, 1995).
- Wilson, L (2006) *Developing a Model for the Measurement of Social Inclusion and Social Capital in Regional Australia*. Journal Social Indicators Research, 75(3): 335-60.



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A review of this kind cannot be conducted effectively without the assistance of a wide range of individuals and organisations. The Drought Policy Review, Social Expert Panel, ‘the Panel’, wishes to thank all who attended the public forums and who provided written submissions. Forum participants and authors of the submissions may be assured their views have been taken into account in compiling this report.

The contribution of various academics and representatives from industry organisations, government agencies, non-government organisations and community groups is appreciated. The views, recommendations and information provided were extremely valuable and enabled the Panel to undertake an informed and comprehensive review.

The Panel acknowledges the assistance provided by Centrelink National Support Officers and Rural Services Officers who attended the public forums and assisted with visit arrangements and the excellent support from the Australian Government Department of Agriculture, Fisheries and Forestry, Social Assessment Secretariat.

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 there are rare and severe events beyond the ability of even the most prudent farmer to manage. The Australian 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 10 years. Australia is experiencing a drought unprecedented in its geographic extent, length and severity. Some areas have been drought declared for of the past years, leading to some receiving EC assistance since 2002.

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

Australian primary industries ministers have agreed that, in the context of a changing climate, current approaches to drought and EC are no longer the most appropriate. They agree that drought policy must be improved to create an environment of self-reliance and preparedness, and to 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 to 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 the Commonwealth Scientific and Industrial Research Organisation of what a changing climate means for drought in Australia and the appropriateness examining using the concept of exceptional climatic circumstances to trigger the availability of assistance measures.

SCOPE OF THE ASSESSMENT

This assessment will report on:

- *The social dimensions of the impacts of drought on farm families and rural communities.*
- *The objectives, extent and range of Australian Government, 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.*
- *Gaps in the application of Australian Government, 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.*
- *Possible additional 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 appropriate. 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 and the Panel's report will be released by the Australian Government.

THE PANEL

THE MEMBERS OF THE PANEL

MR PETER KENNY (CHAIR)

Mr Peter Kenny was elected President of AgForce in October 2004. In this capacity, Peter chairs the AgForce State Council and State executive committee. In, he was elected to the board of the National Farmers' Federation, and has been a councillor and the secretary of the Cattlemen's Union of Australia. He is a keen advocate for adopting 'big picture' approaches to agripolitics and has driven projects such as the *Every family needs a farmer* campaign and the *Blueprint for the bush*. He has always been closely associated with the land and has owned and managed properties in different industries including cattle, dairying, orchards, lucerne and piggeries.

MS SABINA KNIGHT

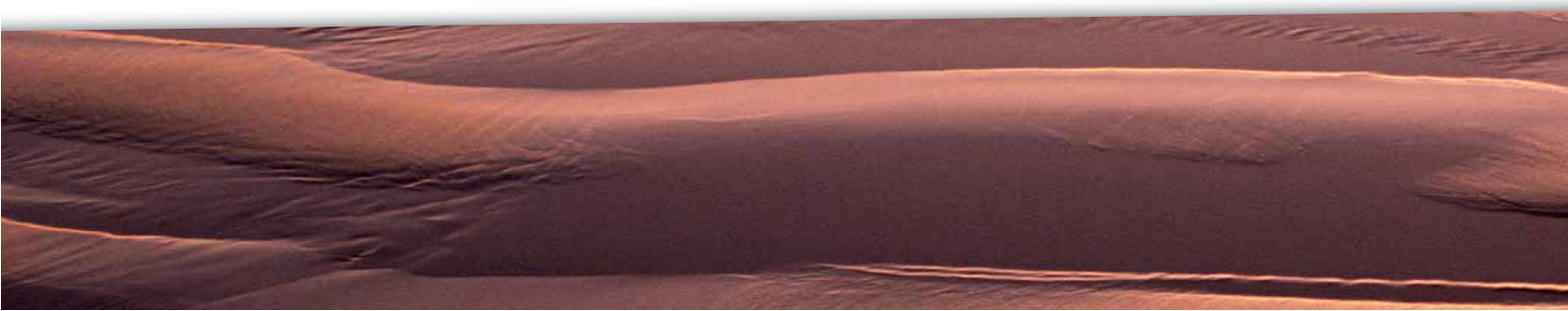
Ms Sabina Knight is an Associate Professor in Remote Health Practice, a recent Council of Remote Area Nurses of Australia (CRANA) research fellow, and is an advocate for remote and rural health. She is a foundation member and past president of CRANA, and the foundation deputy chair and then chair of the National Rural Health Alliance (NRHA). She has been awarded the Louis Ariotti Award for excellence and leadership in rural health, and the CRANA Aurora Award for leadership and outstanding contribution to remote health. She is a Fellow of the Australian Rural Leadership Foundation and the Royal College of Nursing Australia. She is a member of the Regional Women's Advisory Council, the Northern Territory Health Minister's Advisory Council, a director of the board of the Rural Health Education Foundation and is a commissioner on the National Health and Hospital Reform Commission.

MR MAL PETERS

Mr Mal Peters owns and operates a 13 500 acre wool, cattle and grain property in northern New South Wales with his wife. He is the Director of the Australian Farm Institute, the NSW Rural Assistance Authority and the Border Rivers Catchment Management Authority. He is also a member of the NSW Ministerial Agricultural Advisory Committee, and a former President of the NSW Farmers' Association. He is a passionate defender of the rural way of life and a strong advocate for developing innovative strategies to grow rural Australia.

PROFESSOR DANIELA STEHLIK

Professor Daniela Stehlik is Foundation Chair of the Research Centre for Stronger Communities, Curtin University of Technology. As inaugural director, she leads a team of social scientists working in sustainability and conservation, strengths-based practice models and place and community resiliency. In the late 1990s, she was a member of a team that conducted the first study of the impact of drought on farm families in Australia. She is particularly interested in the generative capacity of women's energy and enthusiasm as an important component of community resiliency.



MR BARRY WAKELIN

Mr Barry Wakelin is the former Federal Member for the electorate of Grey, a position he held for approximately 15 years, and the former Chairman of the House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs. He has strong links with rural communities, having been a farmer, shearer and bank clerk in rural South Australia before he entered politics. He is actively interested in the long-term success and sustainability of Australia's agriculture industry.

MS SUE WEST

Ms Sue West is a former Senator for New South Wales, who held the position of Deputy President of the Senate from May to August. She grew up on the family farm in central NSW and is a registered nurse having worked in both city and rural areas. She the Chair of Anglicare Western NSW and is a Member of the Board of the Australian Centre for Christianity and Culture. She is also a member of the Greater Western Health Advisory Heath Council, the Ministerial Advisory Council on Hearing, the Regional Communities Consultative Council and the Anglican Provincial Community Services Commission NSW.

MRS LESLEY YOUNG

Mrs Lesley Young is the National President of the Country Women's Association of Australia, having been an active member of the association for more than 35 years. She is a mixed farming operator in Tasmania in partnership with her husband. She was an inaugural member of the Tasmanian Women in Agriculture executive, and is the former Chairman of the Board of Rural Financial Counselling Service Tasmania. She understands the difficulties of being isolated, and has been actively involved in trying to improve the conditions of women in remote areas, as well as for women and families in all rural communities.



SOCIAL EXPERT PANEL (from left to right)

LESLEY YOUNG, BARRY WAKELIN, DANIELA STEHLIK,
PETER KENNY (CHAIR), SABINA KNIGHT, MAL PETERS, SUE WEST



BACKGROUND AND ASSESSMENT PROCESS

BACKGROUND

Dryness has affected the farm families, rural businesses and rural communities across Australia for most of this decade.

On 23 April 2008, following discussions with state and territory ministers, the Federal Minister for Agriculture, Fisheries and Forestry, the Hon. Tony Burke MP, announced the details of a comprehensive national review of drought policy to help prepare farmers, rural businesses and local communities for climate change.

On 2 June 2008, Minister Burke appointed an Expert Social Panel, the authors of this report, to assess the social impacts of dryness on farm families, rural businesses and rural communities and to identify areas where improvements could be made.

The Panel was asked to report, from a social perspective, on how dryness has contributed to and/or exacerbated mental and physical health and family relationship issues of farm families, rural businesses and rural communities. Specifically the Panel was asked comment on individuals' ability to access education and training, employment opportunities and the cohesion and functioning of local communities. The Panel was also asked to look at options for mitigating the impacts of stress and change and to identify gaps in government and non-government social support services designed to help people cope with dryness.

ASSESSMENT PROCESS

The Bureau of Rural Sciences (BRS) was engaged to provide the Panel with social research findings to use in assessing the social impacts of dryness on farm families, rural businesses and rural communities. Information comprised three surveys on the social wellbeing of rural Australians, a literature review revealing a range of concepts and frameworks to help understand the impacts of dryness and how rural people and communities respond to it and a Social Research Workshop attended by 23 academic experts on the social aspects of dryness and drought policy from around Australia.

The following process was chosen to capture the widest sample of views possible in the time available.

The Panel embarked on 25 regional consultation forums across rural Australia, which commenced on 21 July 2008 and concluded on 27 August 2008. The forums attracted more than 1000 participants, allowing the Panel to hear the views of primary producers, small business owners and rural people generally.

The Chairman of the Panel opened each forum by seeking a word or phrase from the audience which represented how people felt about this period of ongoing dryness. Words like desperate, stressed, frustrated, depressed and tired were familiar phrases expressed.

Initially attendees who on arrival had registered to provide an oral submission to the Panel were heard. Local government representatives, counsellors, outreach workers and small business operators typically set the scene by providing views of how communities have adapted to a decline in income, an increase in debt, a shortage of labour, dwindling education numbers, the overall deterioration of mental, physical and emotional health of people and the flow-on effects this has had on the farm and right across the community.

On hearing these initial discussions, the Chairman of the Panel invited participation from attendees who had not spoken. It was at this time that a majority of the forum attendees chose to speak. The forums became very emotional at times. The Panel believe this process allowed rural people, for what might have been the first time, to publicly reveal how they are truly coping. Many neighbours admitted they had no true idea before then about how each other was feeling or coping with the dryness.

The Panel also conducted nine meetings with key stakeholders and interested parties in capital cities and major regional centres. Participation from state and Australian Government agencies, industry representatives and non-government organisations provided insight to program funding and services available at a regional level and/or their organisation's representative views.

The Panel also received more than 230 written submissions over a period of less than six weeks. This extraordinary response was a powerful statement of the level of interest on the part of communities and key stakeholders. Submissions came from all parts of the community, social and professional spectrum, including a variety of individuals within farming and rural communities, from state and local governments, service providers, health care professionals, financial institutions, non-profit, charitable and national organisations, councils and peak bodies.

Submissions for which permission has been given are available at the website www.daff.gov.au/droughtpolicyreview

PUBLIC FORUMS

Northern Territory

MONDAY 21 JULY
Alice Springs

Crowne Plaza Alice Springs

Approximately

7 attendees

New South Wales

THURSDAY 24 JULY 2008
Inverell

RSL Club

45 attendees

FRIDAY 25 JULY 2008
Bourke

Bourke Bowling Club

43 attendees

MONDAY 18 AUGUST 2008
Gilgandra

Gilgandra Services Club

50 attendees

TUESDAY 19 AUGUST 2008
Forbes

Forbes Services Memorial Club

50 attendees

THURSDAY 21 AUGUST 2008
Griffith

Catholic Club Yoogali

60 attendees

FRIDAY 22 AUGUST 2008
Goulburn

Goulburn Workers Club

75 attendees

Western Australia

MONDAY 28 JULY 2008
Esperance

Esperance Bay Yacht Club

15 attendees

TUESDAY 29 JULY 2008
Morawa

Morawa Town Hall

32 attendees

WEDNESDAY 30 JULY 2008
Wongan Hills

Wongan Hills Hotel

18 attendees

WEDNESDAY 30 JULY 2008
Merredin

Regional Community and Leisure Centre

28 attendees

Victoria

MONDAY 4 AUGUST 2008
Shepparton

Shepparton Club

99 attendees

TUESDAY 5 AUGUST 2008
Birchip

Birchip Leisure Centre

75 attendees

MONDAY 25 AUGUST 2008
Colac

Colac Bowling Club

34 attendees

TUESDAY 26 AUGUST 2008
Mildura

Mildura Settlers Club

37 attendees



Tasmania

WEDNESDAY 6 AUGUST 2008
Bothwell

Castle Hotel

53 attendees

Queensland

MONDAY 11 AUGUST 2008
Gatton

Bowling Club

20 attendees

MONDAY 11 AUGUST 2008
Dalby

Dalby RSL Club – ANZAC Room

25 attendees

TUESDAY 12 AUGUST 2008
Charleville

Racecourse Complex

30 attendees

WEDNESDAY 13 AUGUST 2008
Longreach

the Longreach Civic Centre

27 attendees

WEDNESDAY 13 AUGUST 2008
Emerald

Emerald Town Hall

40 attendees

South Australia

MONDAY 25 AUGUST 2008
Keith

Keith Football Club

55 attendees

TUESDAY 26 AUGUST 2008
Gawler

Arms Hotel

46 attendees

WEDNESDAY 27 AUGUST 2008
Orroroo

Blacksmith's Chatter – Blacksmith's Shed

37 attendees

WEDNESDAY 27 AUGUST 2008
Wudinna

Wudinna Community Club

39 attendees



LIST OF INDIVIDUALS AND ORGANISATIONS CONSULTED BY THE PANEL

AgForce
 Aussie Helpers
 Australian Bureau of Agricultural and Resource Economics (ABARE)
 Australian General Practice Network
 Beyond Blue
 Bureau of Rural Sciences
 CANEGROWERS
 Central Land Council
 Central West Gippsland Division of General Practice Drought Community Support Worker
 Centralian Land Management Association
 Centrelink
 Commonwealth Scientific and Industrial Research Organisation (CSIRO)
 Country Womens' Association
 Department of Agriculture and Food-Western Australia
 Department of Agriculture, Fisheries and Forestry
 Department of Education, Employment and Workplace Relations
 Department of Families, Housing, Community Services and Indigenous Affairs
 Department of Health and Ageing
 Department of Health-South Australia
 Department of Human Services
 Department of Infrastructure, Transport, Regional Development and Local Government
 Department of Primary Industries – New South Wales
 Department of Primary Industries and Fisheries-Queensland
 Department of Primary Industries and Resources-South Australia
 Department of Primary Industries and Water — Tasmania
 Department of Primary Industry, Fisheries and Mines – Northern Territory
 Lyn Fragar, Associate Professor, University of Sydney

Frontier Services
Growcom
Hindmarsh Shire Council
Horticulture Australia Council
Isolated Children's Parents' Association
Lee Kernaghan
Lifeline
Mensline Australia
National Farmers Federation
New South Wales Farmers Association
Northern Territory Cattlemen's Association
Productivity Commission
Queensland Dairyfarmers' Organisation
Queensland Farmers Federation
Relationships Australia
Royal Flying Doctor Service
Rural Finance Corporation of Victoria
Rural Youth Organisation of Tasmania Inc
Salvation Army
South Australia Farmers Federation
St Vincent De Paul Society Australia
Sustainable Farm Families
Tasmanian Farmers and Graziers Association
Tasmanian Institute of Agricultural Research
Victorian Farmers Federation
Victorian Government Department of Primary Industries
Western Australian Farmers Federation
Women in Agriculture



LIST OF SUBMISSIONS

National organisations

Australian Dairy Industry Council
 Australian General Practice Network
 Australian Institute of Family Studies
 Australian Land Management Group
 Australian Processing Tomato Research Council
 Australian Redcross
 Beyondblue
 Carers Australia
 Centrelink
 Crisis Support Services
 Horticulture Australia Council
 Horticulture Australia Ltd
 Isolated Children's Parents Association of Australia
 Motor Association of Australia
 National Farmers Federation
 National Rural Advisory Council
 Ricegrowers' Association of Australia Inc
 Rural Education Forum Australia
 Rural Social Workers Action Group
 Uniting Care in Australia - Frontier Services
 Uniting Church in Australia
 Westpac Banking Corporation

Queensland

Agforce Queensland	Brisbane
Allen, D and T	Mitchell
Brown, K	Not Given
Centacare South Burnett	Kingaroy
Centre for Rural and Remote Mental Health	Cairns
Freeman, L	Gladstone
Growcom	Fortitude Valley
Groves, W	Not Given
Lemon, R	Brisbane
Liz Cunningham MP - Member for Gladstone	Gladstone
Neilson, K	Boulia
Queensland Farmers Federation	Brisbane
Queensland Government	Brisbane
Schmidt, K	Cunnamulla
Standen, K	Burpengary
Meadows	

New South Wales

Ash, E	Forestville
Ash, S	Forestville
Baker, B	Wagga Wagga
Balranald Regional Action Group	Balranald
Beer, J	Bourke
Benalla Rotary Club	Benalla

Benalla Rural City Council	Benalla
Biddle, A	Glen Innes
Bigga Drought Support Group	Bigga
Bogan Shire Council	Nyngan
Bourke Rural Financial Counselling Service	Bourke
Bourke Shire Council	Bourke
Busby, R	Jacks Creek
Cash, A	Pilliga
Cavanagh, J	Bourke
Clancy, T	Bourke
Community Child Care Co-Operative	Marrickville
Contact Inc	Millers Point
Coonamble Shire Council	Coonamble
Cooney, N	Bugaldie
Copeland, A	Dunedoo
Corowa Shire Council	Corowa
Counsellors and Psychotherapists Association of NSW	Sydney
Country Women's Association of NSW	Potts Point
Cowles-Kosef, M	Coonamble
Crothers, P	Bourke
Dawe, K	Nyngan
Day, G	Ardlethan
Dean, J	Wagga Wagga
Downey, R	Pilliga
Dr Mike Kelly AM MP - Member for Eden Monaro	Not Given
Ellis, S and Martin, S	Wakool
Evers, J	Young
Franklin, N	Brindabella
Galvin, M	Yeronga Creek
Gilgandra Shire Council	Gilgandra
Grady, G	Queanbeyan
Greater Southern Area Health Service	Queanbeyan
Liverpool Plains Land Management Committee	Gunnedah
Local Government Association of NSW and Shires Association of NSW	Not Given
Lord, C	Dubbo
Lukins, T	Condobolin
Mackenzie, S	Walgett
Mann, L	Shepparton
McDowell, R	Pilliga
McKeown, M	Longview
Miller, D	Howlong
Moore, B	Inverell
Murrumbidgee Irrigation	Griffith
Northern Region Rural Financial Counselling Service	
Local Advisory Committee	Inverell
NSW Farmers Association	Sydney
NSW Farmers Association Oxley/Booligal Branch	Hay
NSW Farmers Mental Health Network	Sydney
New South Wales Government	Sydney
Oldfield, J	Bourke
Overeem, J	Tamworth
Pastoralist's Association of West Darling	Broken Hill
Priestley, C and C	Walgett
Richard, C	Coolah



Riverina Citrus
 Roach, C
 Rogers, H and G
 Rural Financial Counselling Service of NSW Northern Region
 St Mary's Central School, Parents and Friends Association
 Staggs, J
 Tomlinson, E
 Uebergang, J
 Wallace, P
 Wise, G
 Women's Health Goulburn
 YWCA NSW

Griffith
 Tamworth
 Booligal
 Inverell
 Wellington
 Gilgandra
 Narrabri
 Moree
 Albury
 Bourke
 Goulburn
 Sydney

Australian Capital Territory

McMichael, Prof.T

Acton

Victoria

Albury Wodonga Regional General Practice Network
 Alpine Shire Council
 Anglicare Victoria
 Argiro, C
 Barker, T
 Bate, Y
 Bennett, N
 Buchanan, A
 Campaspe Drought Network
 City of Greater Bendigo Council
 Congues, J
 Davis, M
 Department of Justice - Emergency Services Commissioner
 Donald
 Donald Chamber of Commerce and Industry
 Family Care - Drought Support Program
 Fenton, M and C
 Fraser, B
 Gannawarra Shire Council
 Gibson, W
 Goulburn Murray Hume Agcare
 Gow, C
 General Practice Alliance South Gippsland
 Greater Shepparton City Council
 Heintze, C
 Hindmarsh Shire Council
 Honeysuckle and Spring Creek Landcare Group
 Horsham Rural City Council
 Hudson, R and A
 Integrated Primary Mental Health Service
 Kendell, G
 Kerang Presbyterian Inland Mission
 Kilsyth Presbyterian Inland Mission
 Kirk, P
 Loddon Murray Community Leadership Program
 Mallee Sustainable Farming Inc

Wodonga
 Bright
 Collingwood
 Yelta
 Yarraville
 Red Cliffs
 Quambatook
 Mirboo
 Echuca
 Bendigo
 Nathalia
 Dergholm
 Melbourne
 Donald
 Donald
 Shepparton
 Kerang
 Tallangatta
 Gannawarra
 Donald
 Wodonga
 Not Given
 Inverloch
 Shepparton
 Minyip
 Nhill
 Tallangatta
 Horsham
 Merbein South
 Wangaratta
 Kerang
 Kerang
 Kilsyth
 Tallangatta
 Castlemaine
 Mildura

Mallee Track Health and Community Service	Ouyen
Mildura Rural City Council	Mildura
Moira Shire Council	Cobram
Murray Dairy	Kyabram
Murrindindi Shire Council	Alexandra
Nelson, P	Kyabram
Nichols Presbyterian Inland Mission	Nichols
North Central Local Learning and Employment Network	Charlton
North East Victorian Division of General Practice	Benalla
Northern Grampians Shire Council	Stawell
Quambatook Tractor Pullers Association	Quambatook
Raleigh, I	Tatura
RMCG	Melbourne
Rotary District – Drought Relief Committee	Ballarat
Rotary International District	Melbourne
Rural City of Wangaratta	Wangaratta
Smith, F	Not Given
Solly, P	Rainbow
Southern Grampians and Glenelg Primary Care Partnership	Hamilton
Southern Mallee Primary Care Partnership	Swan Hill
Spicer, L	Kyabram
Strathbogie Shire Council	Euroa
Sunraysia Citrus Growers Inc	Mildura
Sunraysia Rural Financial Counselling Service - Murray Mallee	Mildura
Swan Hill Municipality	Swan Hill
Turpin, R	Echuca
Upper Hume Primary Care Partnership	Wodonga
Victorian Farmers Federation	Merbein South
Victorian Relief Foodbank	Yarraville
Wells, B	Boho South
Welsh, L	Calivil
West Wimmera Shire Council	Horsham
Wimmera Development Association Inc	Horsham
Wimmera Uniting Care	Horsham
Zanker, M	Not Given
<i>Tasmania</i>	
Archer, A	Bothwell
Bealey, G	Launceston
Clark, H	Baden
Edgell, H	Bothwell
Fowler, D	Bothwell
Tasmanian Department of Primary Industries and Water	Hobart
Tasmanian Women in Agriculture	
<i>Northern Territory</i>	
Webster, H	Parap

South Australia

Alexandrina Council
 Altus, S
 Armstrong, S
 Baldock, H
 District Council of Orroroo Carrieton
 District Council of Tumby Bay
 Eyre Peninsula Drought Task Force
 Eyre Peninsula Local Government Association
 Faulkner, D
 Halsey, Dr J
 Johns, G
 Jones, G
 King, D
 Koch, M
 Kuerschner, G
 Morgan, B
 Murraylands Regional Tourist Association
 Piper, A and K
 Rangelands Drought Task Force
 Richards, M
 Roe, A
 Rural City of Murray Bridge
 Scholz, E
 South Australian Farmers Federation
 South Australian Government
 Staehr, J
 Warwick, R

Goolwa
 Tarlee
 Waikerie
 Kimba
 Orroroo
 Tumby Bay
 Cleve
 Port Lincoln
 Minlaton
 Adelaide
 Streaky Bay
 Not Given
 Adelaide
 Booleroo Centre
 Orroroo
 Jamestown
 Murray Bridge
 Port Lincoln
 Clare
 Minlaton
 Naracoorte
 Murray Bridge
 Wudinna
 Adelaide
 Adelaide
 Barmera
 Carrieton

Western Australia

Beacon Progress Association
 Brown, D
 Brown, G
 Country Women's Association of WA
 Falconer, F and D
 Maddock, G and J
 Northern Agriculture Catchment Council
 Rural Remote and Regional Women's Network
 Smith, B
 Tatasciore, L
 Western Australian Department of Agriculture and Food
 Western Australian Farmers Federation

Beacon
 Burracoppin
 North Burracoppin
 Perth
 Coorow
 Moorine Rock
 Perenjori
 South Perth
 Merredin
 Murchison
 South Perth
 Perth

Unknown Origin

Burgis, M
 Klinge, D
 McMaster, E
 O'Mally, P
 Robinson, D
 Robson Thomas, S
 Slater, C

TIMETABLE OF NEWSPAPER ADVERTISEMENTS

<i>Forum location</i>	<i>State</i>	<i>Publication</i>	<i>Date</i>
Esperance	WA	Esperance Express	25-Jul
Morowa	WA	The Geraldton Guardian	25-Jul
			28-Jul
Shepparton	VIC	Shepparton News	25-Jul
			1-Aug
Birchip	VIC	Donald Buloke Times	29-Jul
			1-Aug
Bothwell	TAS	Hobart Mercury	30-Jul
			2-Aug
Gatton	QLD	Gatton Star	6-Aug
Dalby	QLD	Dalby Herald	8-Aug
Charleville	QLD	Charleville Western Times	7-Aug
Longreach	QLD	Longreach Leader	1-Aug
			8-Aug
Emerald	QLD	Central Queensland News	6-Aug
			8-Aug
Gilgandra	NSW	Gilgandra Weekly	5-Aug
			12-Aug
Forbes	NSW	Forbes Advocate	14-Aug
			16-Aug
Griffith	NSW	Griffith Area News	15-Aug
			18-Aug
Goulburn	NSW	Goulburn Post	13-Aug
			20-Aug
Colac	VIC	Colac Herald	18-Aug
			20-Aug
Keith	SA	Bordertown Chronicle	14-Aug
			21-Aug
Mildura	VIC	The Sunraysia Daily	18-Aug
			23-Aug
Gawler	SA	Gawler Bunyip	13-Aug
			20-Aug
Orroroo	SA	The Transcontinental	13-Aug
			20-Aug
Wudinna	SA	West Coast Sentinel	14-Aug
			21-Aug
Wudinna	SA	Eyre Peninsula Tribune	21-Aug
<i>Call for submissions</i>	<i>State</i>	<i>Publication</i>	<i>Date</i>
	NAT	Australian	26-Jul
	NSW	The Land	31-Jul
	VIC	Weekly Times	31-Jul
	VIC	Stock and Land	31-Jul
	QLD	Queensland Country Life	31-Jul
	SA	Stock Journal	31-Jul
	WA	Farm Weekly	31-Jul
	TAS	Tasmanian Country	1-Aug



CLIMATE RISK AND ADAPTATION AMONG PRIMARY PRODUCERS:

TOPLINE RESULTS FOCUSING ON PRIMARY PRODUCERS REPORTING THE EFFECTS OF ADVERSE SEASONAL CONDITIONS

*REPORT PREPARED FOR THE DROUGHT REVIEW BRANCH, AUSTRALIAN GOVERNMENT DEPARTMENT
OF AGRICULTURE, FISHERIES AND FORESTRY*

Anthony Hogan, Michael Hanslip, Robert Kancans, Jacqui Russell and Brigit Maguire

September 2008

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KEY FINDINGS

Background

This report is one of three prepared by the Social Sciences Program (SSP), Bureau of Rural Sciences (BRS), to support investigations of the social impacts of drought as part of the National Review of Drought Policy.

The report is based on a survey of 3300 primary producers conducted by the SSP in mid 2008 on issues around climate change and industry adaptation. It compares primary producers who reported that they have been affected by adverse seasonal conditions (i.e., drought or frost) with those who report they have not been affected.

On-farm risk management

Primary producers who reported that they were affected by adverse seasonal conditions (i.e., drought or frost) reported a higher number of on-farm risk factors than those who were not affected by adverse conditions.

Landuse factors

Dryland croppers (84 per cent) were more likely than other agricultural sectors to report they were affected by adverse weather conditions such as drought or frost and appear most affected by adverse weather conditions.

Viability

Primary producers reporting the effects of adverse seasonal conditions are more likely to report that the financial viability of their properties and business was being threatened.

Size matters

‘Size of farm business’ (based on annual gross turnover) has a significant influence on farm business profit. Those with an annual gross turnover of less than \$400 000 are less likely to report an annual farm business profit. Lifestyle property owners are more likely to have on-farm incomes of less than \$100 000.



LIST OF ACRONYMS

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BRS	Bureau of Rural Sciences
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
EC	<p>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:</p> <ul style="list-style-type: none"> • <i>must be rare, that is it must not have occurred more than once on average in every 20 to 25 years</i> • <i>must result in a rare and severe downturn in farm income over a prolonged period of time (e.g. greater than 12 months)</i> • <i>must be a discrete event that is not part of long-term structural adjustment processes or normal fluctuations in commodity prices</i>
MP	Member of Parliament
SSP	Social Sciences Program, Bureau of Rural Sciences

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BACKGROUND

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 (The Hon. Tony Burke MP 2008a). This review follows on from the Primary Industries Ministerial Forum in Cairns earlier in 2008, where ministers agreed that current approaches to drought and Exceptional Circumstances (EC) might no longer be the most appropriate in the context of a changing climate (PIMC 2008, The Hon. Tony Burke MP 2008b). Ministers saw that drought policy needed to be improved to create an environment of self-reliance and preparedness, and to encourage the adoption of appropriate climate change management practices.

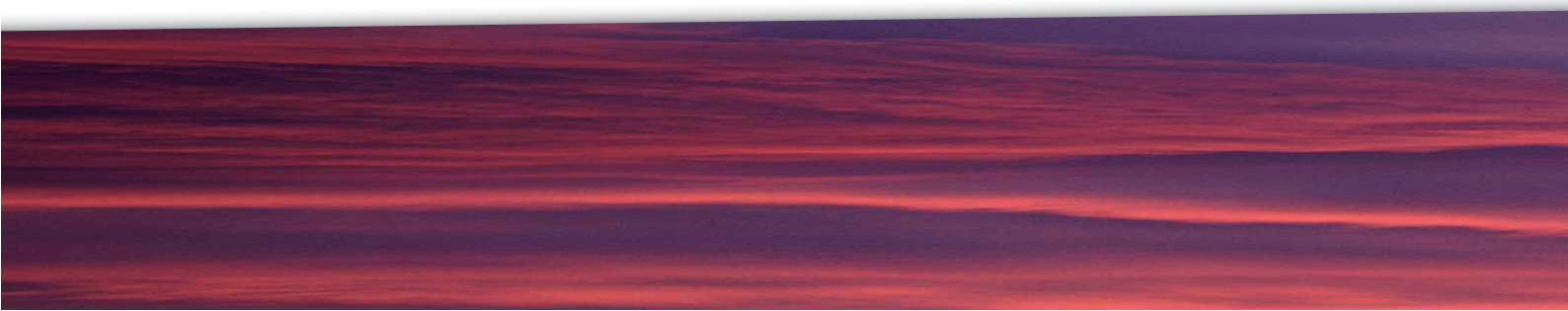
As part of the review process the Minister for Agriculture, Fisheries and Forestry appointed a seven member Expert Social Panel (2008) to:

- *assess the social impact of drought on farm families and rural communities*
- *identify gaps and areas for improvement in Australian, state and territory government social support services that are designed to mitigate the impact of drought on farm families and rural communities.*

To support the work of the Expert Social Panel, the SSP was asked by the Drought Review Branch to:

- *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 change and industry adaptation survey of farmers*
- *provide an analysis of the Quality of Life survey of farmers and farm workers in drought areas (compared with the total Australian community) using the recognised Deakin Wellbeing Index (based on a national Newspoll survey conducted in mid July 2008) (Hogan et al. 2008a)*
- *provide an analysis of the social circumstances of rural people and communities (compared with urban communities) based on previously unanalysed dimensions from the Household Income and Labour Dynamics in Australia (HILDA) survey (Hogan et al. 2008b).*

This report responds to the first of these requests. It draws on data from a broader study conducted by the SSP in mid 2008 concerned with primary producer perceptions of climate risk and adaptation.



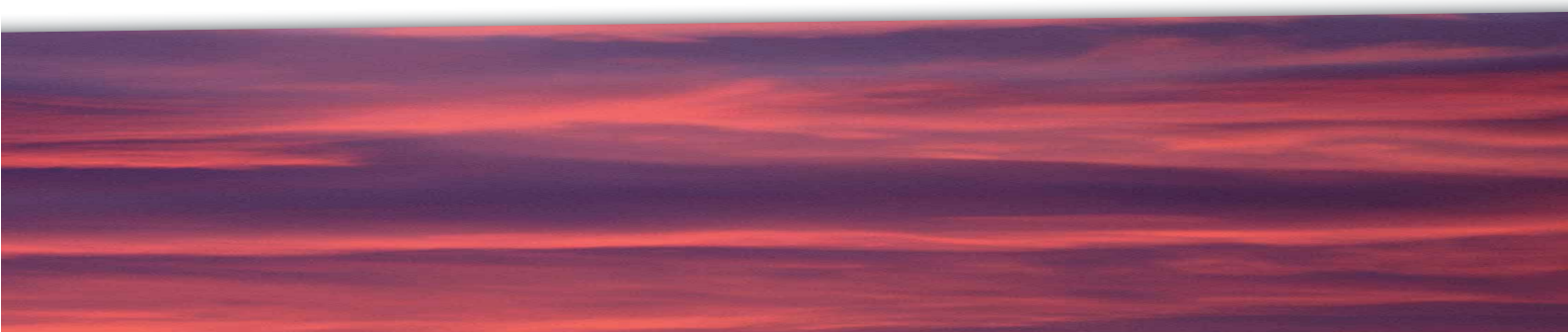
METHOD

Results presented in this report are based on the responses of 3300 primary producers who participated in the 2008 Bureau of Rural Sciences' quantitative study on climate risk and adaptation. These producers had an estimated value of agricultural output of \$5000 per year or more. The data are the result of a postal survey undertaken by the SSP in 2008. A valid response rate of approximately 51% was obtained. The trends reported in this paper are based on preliminary data. This report provides a thematic representation of trends in the dataset which are subject to confirmation in the study's final report. Statistical differences are reported at the 0.05 level. Since a large number of comparisons are reported in this preliminary report, it is possible that some results will be significant as a result of chance alone.

The survey contained 126 questions on a range of topics such as on-farm risks, self efficacy and social capital. These data are reported as summary scales. Readers interested in the analysis behind the development of these scales are referred to Appendix A of this report.

For the purposes of this analysis, respondents' were classified into one of two groups, depending on whether or not they reported adverse seasonal conditions (such as frost or drought) as being a risk factor on their property.

A profile of producer perceptions of their financial viability in the context of the size of their enterprise (business profitability) has been constructed from the SSP survey data. These analyses are supplemented with data available from the Australian Bureau of Agricultural and Resource Economics (ABARE) on business profitability.



TOPLINE RESULTS

Survey respondents were asked to report the extent to which a series of issues were a problem for them in managing their property. Risk factors included low commodity prices, high input costs, physical risks (such as water and soil quality) and personal health. An index of risk was developed from these items (for more details please refer to Appendix A). The index can be understood on a 1 to 5 scale where a score of 1 means no risks and 5 means a very high level of risk on this property. Respondents' average scores for the risk index are presented in Table 1. A statistically significant difference (*) in the level of risk can be seen between those reporting adverse weather conditions on their property and those not. Notably, those reporting such events also have a higher risk index.

1 AN INDEX OF ON-FARM RISK

	Adverse weather conditions	No adverse conditions
Risk index	3.2*	2.6

Respondents were asked to indicate activities they were considering or actually doing to manage risk on their property using a rate scaling of 1 to 4 where 1 means not doing now and don't plan to, 2 means not doing now and considering, 3 means doing now as part of seasonal risk management, and 4 means doing now as part of long-term management.

Mean scores are presented in Table 2 and statistical differences (*) noted. The results suggest that those affected by adverse seasonal conditions are more likely to be taking strategic action than those not affected. It is noted, however, that mean scores generally fall within the range of contemplating action rather than taking action.

2 USE OF RISK MANAGEMENT ACTIVITIES BY PRIMARY PRODUCERS

Activity	Adverse weather conditions	No adverse conditions
Use operational management plan	2.70 *	2.40
Improve financial situation	2.52 *	2.21
Develop risk management strategies for natural hazards	2.50 *	2.26
Develop business management plan	2.41 *	2.17
Scale back operations	2.37 *	1.97
Add new technologies	2.34 *	2.11
Undertake succession planning	2.23	2.15
Undertake training to improve on-farm income	2.01 *	1.81
Diversify into other forms of production	1.84 *	1.74
Intensify or expand current operations	1.82	1.76
Undertake training to improve off-farm income	1.81 *	1.62
Sell or lease part of property	1.64	1.62
Exit the industry	1.53	1.49

3 PROPORTION OF RESPONDENTS REPORTING ADVERSE WEATHER CONDITIONS BY INDUSTRY

Industry sector	Adverse weather conditions %	No adverse conditions %
Dryland cropping (e.g. cereals and legumes)	84	16
Dairy	76	24
Livestock	75	25
Intensive agricultural purposes (e.g. feedlots, piggery and poultry sheds)	73	27
Irrigated crops (e.g. vegetables, horticulture, fruit, nuts, rice, cotton, grapevines and nurseries)	71	29
Forestry plantation	68	32

Respondents were asked to indicate the main areas of primary production on their property and to report whether they were affected by adverse weather conditions (Table 3). Dryland croppers were more likely than other agricultural sectors to report they were affected by adverse weather conditions such as drought or frost (84 per cent).

Respondents were asked to report their perceptions regarding climate change and climate variability using a rating scale of 1 to 5 where 1 means that the statement is false, 2 that the statement is probably false, 3 neither true nor false, 4 probably true, and 5 true (see Table 4). Mean scores are presented and statistical differences (*) noted.

Table 4 shows that the financial viability of primary producers who reported adverse weather conditions such as drought is perceived by these respondents to be more at risk than for those producers not working in such conditions.

4 PERCEPTIONS OF CLIMATE CHANGE AND CLIMATE VARIABILITY

Issue	Adverse weather conditions	No adverse conditions
Changes in weather patterns are part of a natural cycle	4.2	4.2
Changes in weather patterns are hurting my business	4.2 *	2.8
The community has a moral responsibility to reduce greenhouse gas emissions	4.1	4.1
Climate change is both man-made and natural	4.1	4.0
Climate patterns really are changing	3.9 *	3.7
Some farming practices generate greenhouse gas emissions	3.8	3.8
I have a responsibility to reduce greenhouse gas emissions	3.8	3.8
Carbon emissions worsen the effects of natural climate cycles	3.7	3.6
It's the government's responsibility to legislate to reduce greenhouse gas emissions	3.5	3.4
Greenhouse gas emissions cause climate change	3.4	3.4
Climate change is threatening the viability of my property	3.3 *	2.5
The increased intensity of droughts, storms and floods is a result of climate change	3.3 *	3.2
Normal weather patterns will soon return	3.2	3.2
Enough is known about climate change to justify action	3.2	3.1
There is no such thing as climate change	2.4	2.4

5 PRIMARY PRODUCER PERCEPTIONS ON WHETHER ENVIRONMENTAL EVENTS MAY BE CAUSED BY CLIMATE CHANGE

Events	Adverse weather conditions	No adverse conditions
The melting of icebergs and glaciers	3.5*	3.3
Local changes in weather (e.g. less rain; more dust storms; warmer local average temperatures)	3.4*	3.2
Reduced availability of water on my property	3.4*	2.9
Extreme weather events (e.g. major floods, heat waves)	3.3*	3.1
Shift in seasons (e.g. earlier/late frosts)	3.3*	3.1
Rising sea levels	3.3	3.3

Table 5 reports respondents' perceptions of weather events using a 1 to 5 scale where 1 meant strongly disagree and 5 meant strongly agree. A middle score of 3 was used to indicate that the respondent was unsure about their response to an item. These items are listed in Table 5. Mean scores are presented below and statistical differences (*) noted. Table 5 shows that primary producers affected by adverse

weather conditions were more likely to agree that all of the items listed in Table 5, except rising sea levels, were caused by or made worse by climate change. The reduced availability of water on my property was the variable with the greatest difference between the two groups.

6 INDICATORS OF SOCIAL CAPITAL AND SELF-EFFICACY

Issue	Adverse weather conditions %	No adverse conditions %
Social Capital	3.9	3.9
Self-efficacy	3.6*	3.7

* Statistically significant differences.

Survey respondents were asked to report on their capacity to manage a series of challenges. Their responses to these items have been computed into scales on social capital and self

efficacy (for more details on the development of these scales please refer to Appendix A) where higher scores (between 1 and 5) reflect better outcomes. Table 6 indicates that both groups report positive scores on social capital and self efficacy and that there are few, if any, substantive differences between them. However, a small but statistically significant difference is evident between respondents on self-efficacy, with respondents adversely affected by weather conditions reporting a lower score.

Respondents were asked if they had used or participated in any of a series of government programs or activities in the past 12 months. Percentages are presented in Table 7 and statistically significant differences (*) noted. The table shows that those reporting the impact of adverse seasonal conditions were more likely to be receiving government assistance through drought relief programs.

Respondents were asked to rate on a scale of 1 (not helpful) to 5 (most helpful) the extent to which a range of possible government programs might be helpful to them in managing the impacts of climate and weather. In Table 8, mean scores are presented for responses and statistically significant



differences (*) noted. The table shows that those reporting the impact of adverse seasonal conditions indicated a higher desire for government assistance than those not reporting adverse conditions.

7 USE OF OR PARTICIPATION IN VARIOUS PROGRAMS, PERCENTAGE OF RESPONDENTS

Issue	Adverse weather conditions	No adverse conditions
	%	%
Agricultural extension programs (professional advice on farming practices)	50 *	42
Landcare program/ Caring for Our Country	39	36
Exceptional Circumstances Relief Payment	32 *	13
Exceptional Circumstances interest rate subsidy	29 *	12
Non-government groups e.g. MLA, AWI, Greening Australia, World Wildlife Fund	28	28
Industry programs	24 *	20
Regional NRM/CMA programs	19 *	12
Professional advice and planning through Exceptional Circumstance program	19 *	9
Rural financial counselling	13 *	5
Irrigation Management Grant	11 *	4

8 TYPES OF GOVERNMENT ASSISTANCE THAT MIGHT BE HELPFUL

Issue	Adverse weather conditions	No adverse conditions
Provide me with direct financial assistance to manage current problems (e.g. Exceptional Circumstances assistance for drought)	4.1 *	3.3
Provide me with direct financial assistance to enable me to invest in the property's long-term future (e.g. farm infrastructure, succession planning)	4.0 *	3.4
Provide me with an incentive to purchase more fuel efficient machinery	3.9 *	3.6
Provide me with research results on current issues (e.g. drought resistant crops)	3.9 *	3.5
Provide resources to support local groups (e.g. water and Landcare)	3.7 *	3.6
Enable me to access advice and support for farm and natural resource management	3.7 *	3.4
Enable me to develop more sustainable farming practices	3.7 *	3.4
Provide me with direct financial assistance to enable me to seek advice and/or training for managing climate risk	3.6 *	3.5
Provide me with training on managing climate change	3.4 *	3.0
Provide me with information on water allocations and availability	2.8 *	2.6
Improve/better manage my water trading arrangements	2.5 *	2.3

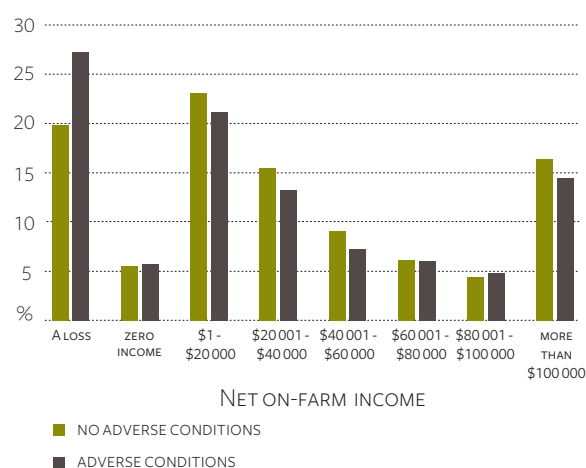


ANALYSIS OF FARMERS' INCOME AND THEIR PERCEPTIONS OF VIABILITY

The Expert Social Panel asked whether the size of an enterprise affects its financial viability. Although this question fell outside the scope of the study of primary producer climate perceptions and adaptation, it was possible to undertake a limited analysis of this question using SSP data. This analysis is presented and is supplemented by analysis of ABARE farm survey data.

The SSP has conducted seven landholder surveys since 2002 (Byron et al. 2004a, b, 2006a, b, Hanslip et al. 2008a, Hanslip et al. 2008b, Kancans et al. 2008). To enable comparability between

1 NET ON-FARM INCOME, FINANCIAL YEAR ENDING 30 JUNE 2007



these landholder surveys and the survey of primary producer perceptions of, and adaptation to, climate change, income groupings for the current SSP survey were drawn from the landholder surveys. In the landholder surveys, income groups were broken down into \$20 000 income groups with the top group being '\$100 000 and above'. Figure 1 reports net on-farm income by those affected by adverse seasonal conditions (e.g. drought, frost) and those not affected by adverse seasonal conditions. Producers affected by adverse seasonal conditions were more highly represented (33 per cent versus 26 per cent) among those reporting a loss or zero income.

Producers were also asked whether they perceived their property to be financially viable based on their performance over the previous five years. Producers affected by adverse seasonal conditions were more likely to report (43 per cent versus 37 per cent) that they did not consider themselves to be viable. Further analysis was conducted to compare producers with on-farm income of less than \$100 000 and those with an on-farm income of more than \$100 000. The results of this analysis show that those with an income of less than \$100 000 were:

- *More likely to:*
 - have smaller properties
 - have livestock on their properties
 - say their property was primarily a lifestyle property.
- *Less likely to:*
 - have dryland cropping on their properties
 - have irrigated crops on their properties
 - have dairying on their properties
 - have intensive agriculture on their properties
 - say their property was primarily a business.

- *As likely to have:*
 - *irrigation on their properties*
 - *forestry on their properties.*

Respondents were also asked to indicate whether their average primary production income over the past five years was:

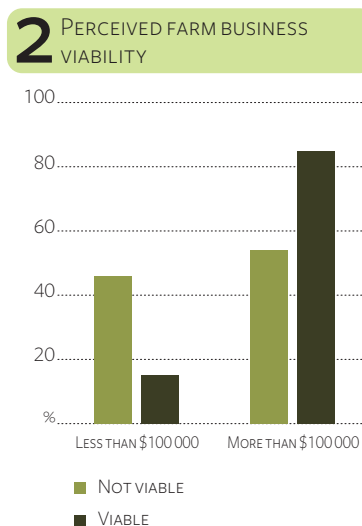
- *definitely not enough to keep the farm viable*
- *not quite enough to keep the farm viable*
- *enough to break even on the farm*
- *just enough to keep the farm viable*
- *more than enough to keep the farm viable.*

Respondents whose on-farm income was above \$100 000 were more likely to indicate that their production income was enough to keep their farm viable (Figure 2).

Those who indicated that their property was not viable (definitely not enough to keep the farm viable and not quite enough to keep the farm viable) were:

- *More likely to:*
 - *have smaller properties*
 - *have livestock on their properties*
 - *say their property was primarily a lifestyle property.*
- *Less likely to:*
 - *have dryland cropping on their properties*
 - *have dairying on their properties*
 - *have intensive agriculture on their properties.*
- *As likely to:*
 - *have irrigated crops on their properties*
 - *have forestry on their properties*
 - *have irrigation on their properties.*

Of those respondents who indicated that their property was not viable, 35 per cent had a total income (on-farm and off-farm income) of less than \$100 000 for 2005-06.



FARM BUSINESS PROFITABILITY AND VIABILITY

To support the response to the question by the Expert Social Panel about whether the size of an enterprise affects the financial viability of farms, the following sections present farm profitability data derived from ABARE farm surveys for broadacre agricultural enterprises across Australia for financial years ending 30 June, between 2002 and 2007.

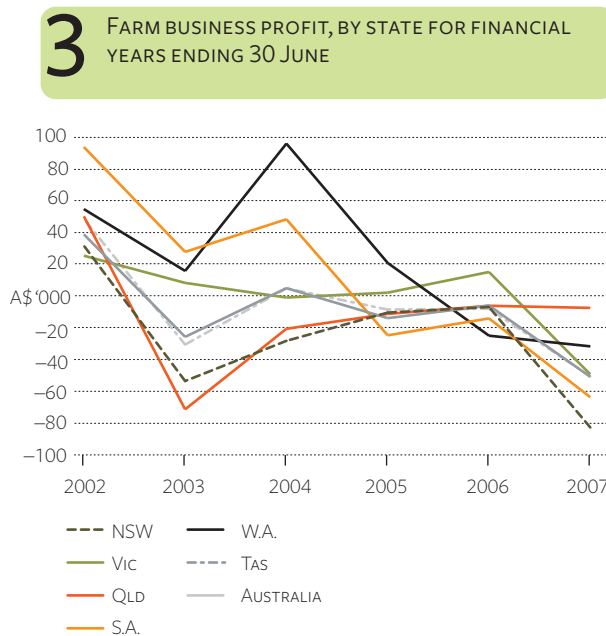
Broadacre is defined as 'all cropping and livestock' activities and is comprised of the following Australian and New Zealand Standard Industrial Classification (ANZSIC) industries:

- *Wheat and other crops industry (ANZSIC Class 121) – farms engaged mainly in growing cereal grains, coarse grains, oilseeds and/or pulses*
- *Mixed livestock–crops industry (ANZSIC Class 122) – farms engaged mainly in running sheep or beef cattle and growing cereal grains, coarse grains, oilseeds and/or pulses*
- *Sheep industry (ANZSIC Class 124) – farms engaged mainly in running sheep*
- *Beef industry (ANZSIC Class 125) – farms engaged mainly in running beef cattle*
- *Sheep–beef industry (ANZSIC Class 123) – farms engaged mainly in running both sheep and beef cattle.*

Excluded from the data are agricultural establishments coded to Nursery and Floriculture production (011); Mushroom and Vegetable Growing (012); Fruit and Tree Nut Growing (013); Other Crop Growing (015), which includes Sugar and Cotton; Poultry Farming (017); Deer Farming (018); and Other Livestock farming (019), which includes pig farming. Based on 2005–06 estimates, 42 per cent of farming businesses fall into these categories (ABS 2008).

FARM BUSINESS PROFIT

Figure 3 presents farm business profit of Australian agricultural businesses (farms) by



state for the financial years ending 30 June, between 2002 and 2007. Farm business profits fell sharply between 2002 and 2003 and have generally fallen across Australia over the past two financial years.

Note: All estimates are farm averages. All financial estimates are expressed in 2006-07 dollars. Farm business profit equals farm cash income plus build-up in trading stocks, less depreciation expense, less the imputed value of the owner manager, partner(s) and family labour.

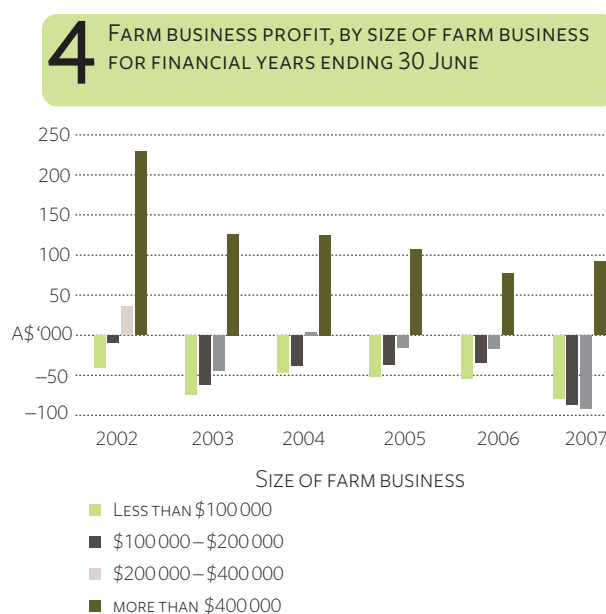
FARM BUSINESS PROFIT BY SIZE OF BUSINESS

Figure 4 presents a cross-tabulation of 'size of farm business', which is determined by the value of 'gross turnover' (total cash receipts plus build-up of trading stocks), and 'farm business profit' (net farm cash income plus build-up in trading stocks, less depreciation expense, less the imputed value of the owner manager, partner(s) and family labour), to provide an estimate of 'farm business profit' at varying levels of 'size of farm business' over time in Australia.

The sizes of farming businesses have been categorised as: less than \$100 000; \$100 000 to \$200 000; \$200 000 to \$400 000; and more than \$400,000. Figure 4 indicates that the size of farming businesses

is strongly related to farm business profit. Farms in the greater than \$400 000 category have a higher 'farm business profit' than those in the smaller farm business size categories. These results indicate that larger farms may be able to achieve greater efficiencies than smaller ones and that such efficiencies affect 'farm business profit'.

* 'Size of farm business' is defined as gross turnover, which is total cash receipts plus build up of trading stocks. All estimates are per farm averages. All financial estimates are expressed in 2006-07 dollars. Farm business profit equals farm cash income plus build-up in trading stocks, less depreciation expense, less the imputed value of the owner manager, partner(s) and family labour.



REFERENCES

- ABS (2008) Business Demographics 2005-2006, Unpublished data. Canberra: Australian Bureau of Statistics.
- Byron, I, A Curtis and J MacKay (2004a) Providing social data to underpin catchment planning in the Glenelg Hopkins region. Canberra: Bureau of Rural Sciences.
- Byron, I, A Curtis and J MacKay (2004b) Providing social data to underpin catchment planning in the Queensland Murray Darling region. Canberra: Bureau of Rural Sciences.
- Byron, I, A Curtis and J MacKay (2006a) Benchmarking community attitudes towards natural resource management in the Lachlan Catchment. Canberra: Bureau of Rural Sciences.
- Byron, I, A Curtis and J MacKay (2006b) Providing social and economic data to support regional natural resource management in the Burnett Mary. Canberra: Bureau of Rural Sciences.
- Expert Social Panel (2008) 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, Available: http://www.daff.gov.au/__data/assets/pdf_file/0004/710644/social_panels_issues_paper.pdf [Accessed 2 July 2008]
- Hanslip, M, R Kancans, B Maguire and I Byron (2008a) Improving outcomes for landholders in the South West NRM region - Survey 2006. Canberra: Bureau of Rural Sciences.
- Hanslip, M, B Maguire and I Byron (2008b) Understanding natural resource management from a landholder's perspective - Northern and Yorke Landholder Survey 2006. Canberra: Bureau of Rural Sciences.
- Hogan, A, B Maguire, J Russell and P Stakelum (2008a) The social wellbeing of rural Australians: A comparative analysis of farmers and people working in agriculture in drought-affected areas and the Australian population using the Deakin Personal Wellbeing Index, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.
- Hogan, A, C Polidano, J Russell and P Stakelum (2008b) The social wellbeing of rural Australians: an analysis of the Household, Income and Labour Dynamics in Australia (HILDA) study, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.
- Kancans, R, M Hanslip and I Byron (2008) Understanding Natural Resource Management from a landholder's perspective in the Southern Region of Tasmania: Results of the 2006 Landholder Survey. Canberra: Bureau of Rural Sciences.
- PIMC (2008) Communique of the Primary Industries Ministerial Council - Meeting held in Melbourne, 17 April 2008, Available: http://www.daff.gov.au/__data/assets/pdf_file/0007/625624/pimc-13.pdf [Accessed 25 July 2008]
- The Hon. Tony Burke MP (2008a) Expert Panel to review social impacts of drought. Media release. Office of the Minister of Agriculture, Fisheries and Forestry.
- The Hon. Tony Burke MP (2008b) Primary Industries Ministerial Forum Communique, Cairns, 28-29 February 2008, Available: http://www.maff.gov.au/media/media_releases/february_2008/primary_industries_ministerial_forum_communique [Accessed 2 September 2008]

APPENDIX A

SCALE DEVELOPMENT AND ANALYSIS

Much of the work of social scientists is to identify and report on social attitudes, motivations, values and behaviours. While behaviours (e.g. voting behaviour) and social indicators (e.g. annual income) can be independently observed, attitudes and motivations are things that exist inside peoples' heads and as such, are more difficult to observe and report on. A number of analytical techniques were reported in this study. Techniques such as reliability analysis and factor analysis are commonly used in social science research to assess the extent to which larger numbers of survey items work well together to assess higher level constructs. These analyses are important to ensure that the data reported are statistically reliable and robust. In this section, typical methods used to assess the quality of social surveys are reported. This summary is intended to aid the reader in understanding how the analysis of data in this paper has been approached by the research team.

Constructs

It is rare that an attitude, value or motivation (henceforth referred to as attitudes) is determined by just one thing. Typically in survey work, attitudes are measured as constructs, higher level concepts made up of a variety of factors that go together to form an overall whole. The construct is usually informed by a theoretical framework that the researchers have brought to bear on the project. Extensive psychometric work goes into the development of a reliable survey instrument including qualitative research, cognitive testing, survey piloting, construct testing and cross validation of survey results. Given this amount of work, researchers are reluctant to change an item in a validated survey without repeating this series of studies.

Background on psychometric analysis

In this paper a number of statistical tests were applied to the survey data to ensure that the variables behaved properly in psychometric terms. The psychometric tests applied to the data are briefly discussed below.

Factor analysis

Factor analysis is a statistical method that is used to reduce a large number of survey items about a particular attitude or behaviour into a few underlying new variables or factors. The way it does this is to look for covariance across the responses; that is, by identifying questions for which the answer patterning is the same. An important research factor for farmers managing climate change is that they actively plan to manage their on-farm risks. This idea or factor could be made up of a larger number of different attitudes or behaviours such as succession planning, use of an operational management plan and development of a business management plan. Factor analysis brings common variables such as these together in the dataset and reduces them to a single new variable (or factor) while losing as little of the response detail as possible. This new variable can then be used to more easily examine the question since one can focus on just one item (e.g. actively plan to manage their on-farm risks) rather than needing to think about a lot of variables all at the same time. In social sciences a factor score of

30 per cent – 40 per cent of variance explained is acceptable, but ideally one would like to see factor scores of 70 per cent. The higher score indicates that less information has been lost in bringing the items together and that together, these items explain much of what is going on with the behaviours of interest.

Reliability analysis

Reliability analysis tests whether or not the survey items work together to make a coherent scale. If they do, an analyst may calculate a summary scale variable and use this instead of the larger number of survey items used in the original study. Once again, this makes reporting the data simpler and more coherent.

While there are some similarities between reliability analysis and factor analysis, reliability analysis can produce much more finely focused on assessing one central theme from a set of items, whereas than factor analysis can deal with multiple themes at the one time. Reliability analysis is concerned to ensure that respondents respond to survey questions in a similar way such that a set of items could be said to make up a consistent scale. Reliability analysis tests these items to see if they go well together as a scale and if they do, an analyst can compute a summary variable for the scale that is made up of these variables (by using the average for each item for example). When the new scale variable is produced it retains the survey's original scale (for example scores of 1 to 5 where 1 means strongly disagree and 5 means strongly agree). A common statistic produced by this routine is called the Cronbach Alpha. Like factor analysis, one looks for a score of around 70 per cent (or 0.7) to be satisfied that the items are working well together.

Psychometric analysis of scales used in this study

Index of risk

Reliability analysis was used to develop the risk index reported in this study. In Question 1 of the survey, respondents were asked to report the extent to which 16 issues were a problem in managing their property, using a rating scale of 1 to 5, where 1 means not at all a problem and 5 means a major problem. These issues were:

- 1 *low commodity prices*
- 2 *input costs (e.g. fuel, energy and fertiliser costs)*
- 3 *interest rates*
- 4 *cash flow*
- 5 *not enough farm income to support family*
- 6 *debt levels*
- 7 *labour (availability and/or cost)*
- 8 *not enough access to community services (e.g. banks, schools, healthcare)*
- 9 *lack of access to training or professional services*
- 10 *cost of training or professional services*
- 11 *water (e.g. allocations for irrigation)*

- 12 *water quality (e.g. salinity, pH, nutrients)*
- 13 *adverse seasonal conditions (e.g. frosts, drought)*
- 14 *soil (e.g. erosion, salinity, pH)*
- 15 *pests or diseases*
- 16 *my health/fitness.*

The Cronbach's Alpha for the risk index was a reliable 0.83.

Social capital and self efficacy scales

Reliability analysis was used to develop the scales for social capital and self efficacy. Respondents were asked to report whether they (strongly) agreed or (strongly) disagreed with a series of statements taken from the literature and field work concerning aspects of social capital and self-efficacy.

The aspects of social capital that were included in the SSP survey instrument related to community cohesion and support were:

- *could ask someone to help them when problems arise*
- *was a member of a local community group (e.g. farmers' co-op, church, sports club, school committee, etc.)*
- *had carried out unpaid work for a community group in the past 12 months*
- *felt part of their local community*
- *felt that local people were willing to help each other.*

The Cronbach's Alpha for the self efficacy scale was a reliable 0.74

Self-efficacy is concerned with a person's sense of their own competence to manage a range of stressful situations. The survey included questions about the degree to which the respondent:

- *believed that they had the capacity to handle unforeseen situations*
- *could rely on their coping abilities to remain calm when facing difficulties*
- *believed they had the ability to think of good solutions when facing difficulties.*

The Cronbach's Alpha for the self efficacy scale was a reliable 0.80.

THE SOCIAL WELLBEING OF RURAL AUSTRALIANS:

AN ANALYSIS OF THE HOUSEHOLD, INCOME AND LABOUR DYNAMICS IN AUSTRALIA (HILDA) LONGITUDINAL DATASET

REPORT PREPARED FOR THE DROUGHT REVIEW BRANCH, AUSTRALIAN GOVERNMENT DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

Anthony Hogan, Cain Polidano, Jacqui Russell and Patrick Stakelum

September 2008

This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied Economic and Social Research (MIAESR). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either FaHCSIA or the MIAESR.

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KEY FINDINGS

Background

This report is one of three 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 on the social wellbeing of rural Australians using the Household, Income and Labour Dynamics in Australia (HILDA) dataset.

The HILDA dataset

The HILDA Survey is a national study that asks a wide range of questions covering matters such as financial and emotional wellbeing, health-related quality of life and social connectedness. In this study, rural people are those living in rural areas and small towns with fewer than 1000 people.

Rural people report being more satisfied with some aspects of their lives

HILDA data show that rural people express greater satisfaction across a variety of measures (satisfaction with relationships and financial situation) compared with urban people. Levels of connectedness are similar between communities.

Rural people are less satisfied with access to services than people in urban areas

Rural people are significantly less satisfied with access to services than urban people. This difference between urban and rural people is the most marked of the indicators.

Rural people report poorer physical health. Rural peoples' summary quality of life scores show higher levels of physical pain and reduced body functioning. Mental health scores for rural people are marginally better than for urban people.

Rural people face higher transport costs

Motor vehicle and fuel costs are higher for rural people. Urban people score at both extremes (low and high) of the index of social disadvantage.

Rural people are happier at work but their workplace stress is increasing

Rural people are more likely to report higher levels of control over their daily work than urban people. However, over the period of the study, rural people moved from being less stressed than urban people to being equally stressed by their work.

Limitations of this analysis

People living in remote areas, and Aboriginal and Torres Strait Islander people in particular, are under-represented in HILDA data. Wave 6 of the data (collected in 2006) was not available at the time of this analysis. Comparative analysis of wealth and social capital would be possible with use of Wave 6 data.



LIST OF ACRONYMS

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
BRS	Bureau of Rural Sciences
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
EC	<p>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:</p> <ul style="list-style-type: none"> • <i>must be rare, that is it must not have occurred more than once on average in every 20 to 25 years</i> • <i>must result in a rare and severe downturn in farm income over a prolonged period of time (e.g. greater than 12 months)</i> • <i>must be a discrete event that is not part of long-term structural adjustment processes or normal fluctuations in commodity prices</i>
MP	Member of Parliament
SSP	Social Sciences Program, Bureau of Rural Sciences

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BACKGROUND

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 (The Hon. Tony Burke MP 2008a). This review follows on from the Primary Industries Ministerial Forum in Cairns earlier in 2008, where Ministers agreed that current approaches to drought and Exceptional Circumstances (EC) might no longer be the most appropriate in the context of a changing climate (PIMC 2008, The Hon. Tony Burke MP 2008b). Ministers saw that drought policy needed to be improved to create an environment of self-reliance and preparedness, and to encourage the adoption of appropriate climate change management practices.

As part of the review process the Minister for Agriculture, Fisheries and Forestry appointed a seven member Expert Social Panel (2008) to:

- *assess the social impact of drought on farm families and rural communities*
- *identify gaps and areas for improvement in Australian, state and territory government social support services that are designed to mitigate the impact of drought on farm families and rural communities.*

To support the work of the Expert Social Panel, the SSP was asked by the Drought Review Branch to:

- *provide an analysis of the social circumstances of rural people and communities (compared with urban communities) based on previously unanalysed dimensions from the Household Income and Labour Dynamics in Australia (HILDA) survey*
- *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 change and industry adaptation survey of farmers (Hogan et al. 2008a)*
- *provide an analysis of the Quality of Life survey of farmers and farm workers in drought areas (compared with 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).*

This report responds to the first of these requests in relation to the social wellbeing of rural Australians using the HILDA dataset.



METHODS

The HILDA survey is a longitudinal household-based study that began in 2001. The same respondents in each household are surveyed each year, regardless of whether they have moved to another residence. The survey is funded by the Commonwealth Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA). HILDA has the following features:

- 1 *it collects information about economic and subjective wellbeing, as well as labour market and family dynamics*
- 2 *the study has funds for twelve annual surveys, or 'waves'*
- 3 *special thematic modules are included in each wave*
- 4 *Wave 1, conducted in 2001, consisted of 7682 households and 19 914 individuals. Interviews are conducted annually with all adult members of each household.*

The HILDA survey asks respondents a wide range of questions covering matters such as financial and emotional wellbeing, health-related quality of life and social connectedness.

The analysis in this paper is concerned with a comparison of social and economic wellbeing between urban and rural Australians. Within the HILDA dataset, individuals can be defined as being of urban or rural domicile, using one of several variables. For the purposes of this study, the Section of State (HHSOS) was the derived spatial variable that was used to assign respondents to a group as either Urban or Rural. The HHSOS classification is a standard geographic classification used by the Australian Bureau of Statistics and is employed in the HILDA studies.¹ Within HHSOS, respondents can be coded as major urban, other urban, bounded locality or rural balance.

In this report, a new variable was created that consisted of 'urban' (major and other urban) and 'rural' (bounded locality and rural balance, which includes people living in small towns, villages and rural areas with fewer than 1000 people). These two groupings constituted 84 per cent and 16 per cent of the sample respectively. In 2006, 'rural' comprised 12 per cent of the total Australian population (2.3 million people) (BRS 2008).

The sample size in the designated rural areas enables comparisons to be made between the social circumstances of people living in rural areas and those living in urban areas. However, it should be noted that the people living in rural areas (in places with fewer than 1000 people) include a range of different occupations, including working on farms, working in small towns, and people of retirement age.

The data from five annual surveys or waves (2001 to 2005) were available for this analysis. Not all questions were asked in all waves. For example, questions on access to services were only asked in Wave 2. Although not available at the time of the analysis, the inclusion of Wave 6 data would enable a comparison of respondents' changes in wealth between 2002 and 2006. In addition, Wave 6 data contain more in-depth information on social capital.

The aim of this analysis is to provide information to the Expert Social Panel (the Panel) on the wellbeing of rural Australians. Sets of items within the HILDA surveys likely to be of interest to the Panel were identified.

Thematically these are:

- 1 *Satisfaction with life*
- 2 *Connectedness*
- 3 *Access to services*
- 4 *Health status*
- 5 *Disadvantage in rural communities*
- 6 *Financial issues*
- 7 *Workplace issues.*

Since many of these sections of HILDA contained a number of survey questions, scaled variables were derived from the data for life satisfaction, financial stress, disposable income and workplace stress. Details on how these scales were derived can be found in Appendix A. The following sections in this report compare the various social circumstances of people living in rural areas with those of people living in urban communities. Statistically significant differences are reported for differences between urban and rural populations where differences were less than 0.05.

FINDINGS

SATISFACTION WITH LIFE

Satisfaction with life is reported as a summary scale with comparisons made between rural and urban communities. Figure 1 illustrates the finding for 2005.

People living in rural areas were more highly satisfied with their life than those in urban areas. For the higher levels of life satisfaction (score of 8 or more), 39.6 per cent of people living in rural areas were satisfied, compared with 28.5 per cent of people living in urban areas. These differences were statistically significant.

1 COMPARISON OF SATISFACTION WITH LIFE FOR RURAL AND URBAN POPULATIONS, 2005



CONNECTEDNESS

Respondents in the HILDA study were asked to report on a series of questions concerned with their connection with others in the community. These data are an indicator of social capital and social inclusion. The questions were concerned with levels of perceived loneliness, sufficiency of friends and visitors, and the perceived level of help available. Table 1 reports these indicators of social connectedness by rural and urban populations for 2005.

1 INDICATORS OF SOCIAL CONNECTEDNESS (PER CENT AGREEING), 2005

Measures of connectedness	Rural %	Urban %
Have enough friends	45.9	46.6
People visit me as often as I would like	30.7	30.7
I often feel very lonely	19.0	19.7
Have enough help	12.4	12.5

Source: HILDA 2005.

2 ADEQUACY OF ACCESS TO SERVICES, 2002

	Rural %	Urban %
Adequate access to services	9.1	40.0
Adequate transport	8.2	42.4

Source: HILDA 2002.

There were no statistically significant differences between the scores of rural and urban communities on these indicators.

ACCESS TO SERVICES

It is often stated that people living in rural areas have a lower level of access to services, compared with people living in urban areas. The 2002 HILDA dataset contains a series of questions on people's living and lifestyle situations, including items concerned with the adequacy of transport and access to services. HILDA does not define the nature of services to which people seek access.

This analysis of the HILDA data quantifies a marked difference in the adequacy of access to services and transport for rural people. Fewer than one in ten people living in rural areas reported that they had adequate access to services or transport, compared with people living in urban areas where 40 per cent reported adequacy of services and transport.

Although not quantified in the HILDA survey, reduced access to services can result in reduced health care options for people living in rural communities (Berry 2008). Access to the latest forms of mental health assistance, for example, may be hampered by something as simple as reduced access to mobile telephone coverage preventing the delivery, for example, of SMS communication-based interventions.

HEALTH STATUS

The HILDA dataset contains results on the internationally recognised health-related quality of life measure, the SF 36. This scale provides data on 8 measures of health, including aspects of both physical health and mental health. These are:

1 Physical health

- i physical functioning (i.e. level of mobility, e.g. ability to climb stairs or walk a certain distance)
- ii role-physical (i.e. the level of difficulty in mobilising)
- iii bodily pain (i.e. the magnitude of pain and/or level of interference with tasks)
- iv general health (i.e. a person's perception of their health status).

2 Mental health

- i vitality (i.e. the sense of 'energy' versus 'fatigue' experienced)
- ii social functioning (i.e. the extent of and amount of time spent engaging in social relations)

iii *role-emotional* (i.e. perceptions of ability to accomplish tasks or degree of care taken in accomplishing tasks)

iv *mental health* (i.e. a person's sense of their mental health, e.g. 'down in the dumps' or 'happy').

The raw scores on the SF 36 are transformed to a 0 – 100 scale where the higher score reflects better health.

Table 3 shows that overall there were no statistically significant differences between people in urban and rural communities on indicators of general health (e.g. ability to walk to the corner with a bag of groceries). Over the five years of data, people living in rural areas consistently showed slightly better mental health status than those in urban areas, with this difference being statistically significant. People living in rural areas reported statistically significant poorer health outcomes for physical functioning and bodily pain. Table 3 illustrates the differences in responses for 2005.

3 HEALTH-RELATED MEASURES OF QUALITY OF LIFE (SF 36) (%), 2005

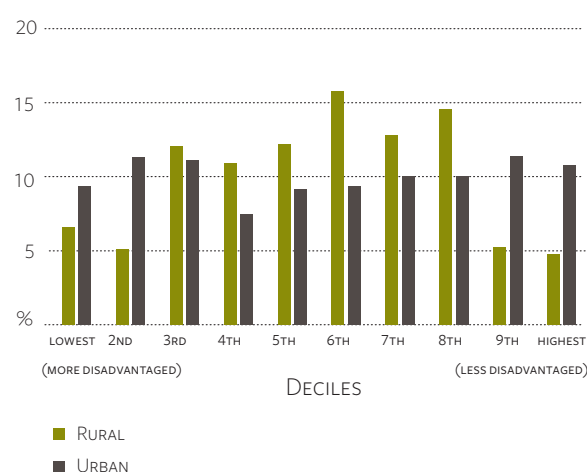
SF 36 measure	Rural	Urban	Rural compared with urban (p<.05)
Role-emotional	83.8	82.4	Better outcome
Social functioning	82.6	81.7	Better outcome
Physical functioning	82.3	83.0	Poorer outcome
Role-physical	76.9	79.1	Poorer outcome
Bodily pain	71.7	73.9	Poorer outcome
Mental health	75.6	73.7	Better outcome
General health	68.8	69.1	No statistical difference
Vitality	60.7	60.3	No statistical difference

Source: HILDA 2005.

DISADVANTAGE IN RURAL COMMUNITIES

The HILDA dataset contains a series of indicators developed by the Australian Bureau of Statistics (ABS) on relative social disadvantage. One such indicator is the SEIFA10, an index of the Relative Socio-economic Disadvantage of individuals, derived from ABS Census variables related to disadvantage such as: low income; low educational attainment; unemployment; and access to motor vehicles. The highest relative disadvantage is associated with the lowest decile rating on the Socio-Economic Indexes for Area10 (SEIFA10). Higher scores reflect lower levels of disadvantage.

2 COMPARISON OF SOCIAL AND ECONOMIC DISADVANTAGE (SEIFA SCORES), 2005



Source: Hilda 2005.

Figure 2 illustrates the differences in the levels of disadvantage calculated using the SEIFA10 index for 2005.

Figure 2 shows that people living in rural areas are proportionately more highly represented from the third to the eighth deciles of the SEIFA scores. They are less likely than urban people to rank amongst the most disadvantaged or least disadvantaged people. These differences were persistent over time.

FINANCIAL ISSUES

Expenditure patterns in households

The HILDA dataset contains information on annual household income and expenditure. From these data a ratio was derived (see Appendix A) of the level of expenditure relative to available income. It is an indicator of the relative cost of living. Expenditures included in the ratio are:

- 1 Groceries
- 2 Alcohol
- 3 Cigarettes
- 4 Public transport and taxis
- 5 Meals eaten out, hobbies
- 6 Sports, gambling, and entertainment
- 7 Motor vehicle fuel
- 8 Clothing and footwear
- 9 Telephone rent and calls (excluding internet charges)
- 10 Holidays and holiday travel
- 11 Private health and accident insurance
- 12 Health Care
- 13 Home repairs/renovations/maintenance
- 14 Motor vehicle repairs/maintenance
- 15 Education fees
- 16 Electricity bills, gas bills and other heating fuel.

Figure 3 shows the differences in the ratio of income to expenses calculated for 2005.

Statistically significant differences can be observed between urban and rural communities. Rural people are more likely than urban people to spend a higher proportion of their income on living expenses. Of particular interest, there is a higher proportion of people living in rural areas whose costs of living are



either equal to or in excess of their income. At a summary level it can be said that people living in rural areas are over-represented when the ratio of costs to income is 80 per cent or greater (approximately 27 per cent versus 20 per cent).

Expenditure on motor vehicle fuel and vehicle running costs

Comparative data were available on annual household expenditure on motor vehicle fuel for 2005 (Figure 4). Notably, these data were collected prior to the recent spike in global fuel prices. People living in rural communities were statistically significantly more likely to expend more than \$3000 each year on fuel than people living in urban communities (37.1 per cent compared with 23.8 per cent, respectively).

Figure 5 shows that people living in rural communities were also more likely to expend more than \$1000 a year on motor vehicle maintenance than people living in urban communities (47.8 per cent compared with 38.8 per cent).

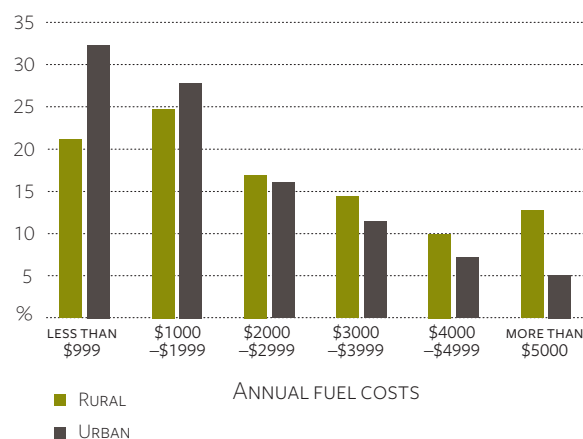
Overall financial hardship

The HILDA dataset contains measures of items about the ability of respondents to pay bills, feed and house themselves and similar matters (see Appendix A for further details on these items). These data are presented in Figure 6. In all cases, urban people were more financially stressed than rural people, with the least difference in 2005.

WORKPLACE ISSUES

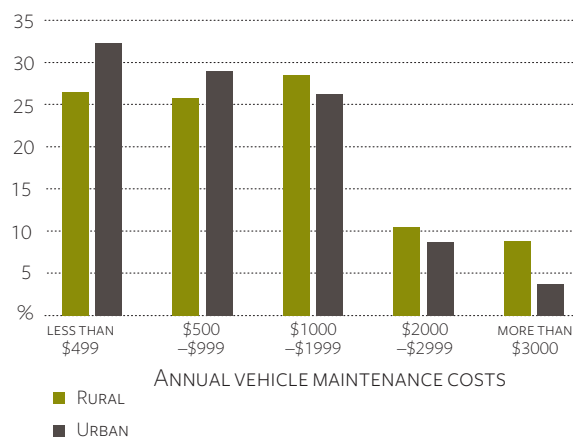
The HILDA dataset contains a series of items on workplace wellbeing (i.e. the Karasek workplace stress items) that are taken from the British Whitehall employment study (Ferrie 2004, Karasek and Theorell 1990). These items relate to job latitude, job security, job stress and fairness of pay as set out below:

4 ANNUAL HOUSEHOLD MOTOR VEHICLE FUEL COSTS, 2005



Source: Hilda 2005.

5 ANNUAL HOUSEHOLD MOTOR VEHICLE MAINTENANCE COSTS, 2005



Source: Hilda 2005.

4 WORKPLACE STRESSORS, 2005

7 point rating scale	Job security		Job latitude		Job stress	
	Rural %	Urban %	Rural %	Urban %	Rural %	Urban %
Low	0.7	0.7	5.2	4.5	1.7	1.9
	1.9	1.7	10.6	11.4	6.0	5.5
	6.1	7.0	16.0	16.8	11.0	11.7
	17.0	16.0	21.8	21.8	20.0	19.0
	24.8	26.4	20.7	21.6	20.8	20.8
High	28.6	28.7	15.7	15.8	23.9	26.1
	21.0	19.6	10.0	8.1	16.6	15.1

Source: HILDA 2005 (highlighted differences are statistically significant).

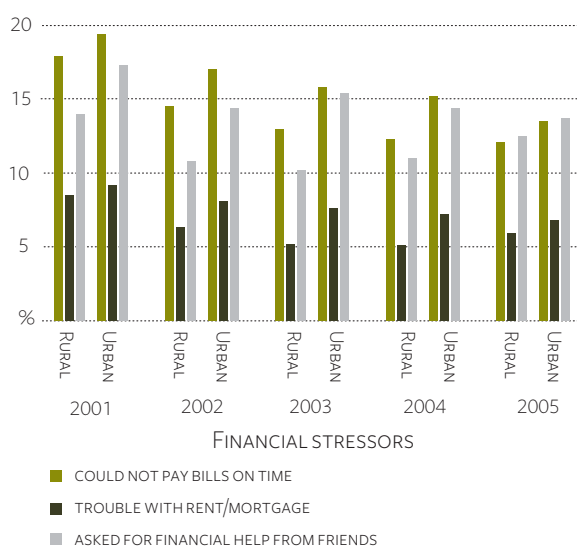
i Job latitude:

- I have a lot of freedom to decide how I do my own work
- I have a lot of say about what happens on my job
- I have a lot of freedom to decide when I do my work.

ii Job security:

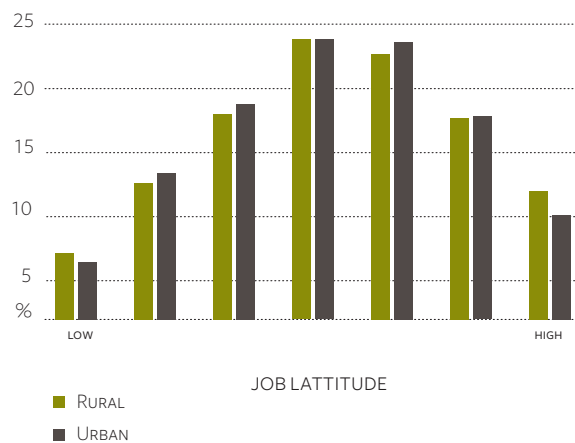
- I have a secure future in my job
- The company I work for will still be in business five years from now
- I worry about the future of my job.

6 FINANCIAL STRESSORS, 2001 TO 2005



Source: Hilda 2001-05.

7 JOB LATITUDE, 2005



iii Job stress:

- *My job is complex and difficult*
- *My job often requires me to learn new skills*
- *My job is more stressful than I had ever imagined*
- *I fear that the amount of stress in my job will make me physically ill.*

iv Fairness of pay:

- *I get paid fairly for the things I do in my job.*

Figure 7 and Table 4 indicate that rural workers were statistically more likely than urban workers to report slightly higher levels of latitude in their jobs (20 per cent more likely). Initially rural workers reported being less stressed than urban workers, however, over the course of 2001 to 2005 this gap closed. There were no statistical differences in relation to job security and fair pay.

REFERENCES

- Berry, H (2008) Personal communication. National Centre for Epidemiology and Population Health, Australian National University.
- BRS (2008) 2008 Social Atlas of Rural and Regional Australia: Country Matters. Bureau of Rural Sciences, Australian Government, Available: <http://affashop.gov.au/product.asp?prodid=13896> [Accessed 6 August 2008]
- Expert Social Panel (2008) 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, Available: http://www.daff.gov.au/__data/assets/pdf_file/0004/710644/social_panels_issues_paper.pdf [Accessed 2 July 2008]
- Ferrie, JE (Ed.) (2004) Work, Stress, Health: The Whitehall II Study: Department of Epidemiology and Public Health, International Centre for Health and Society, University College London [Available: <http://www.ucl.ac.uk/whitehallII/findings/Whitehallbooklet.pdf>].
- Hogan, A, M Hanslip, R Kancans, J Russell and B Maguire (2008a) Climate risk and adaptation among primary producers: Topline results focusing on primary producers reporting the effects of adverse seasonal conditions, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.
- Hogan, A, B Maguire, J Russell and P Stakelum (2008b) The social wellbeing of rural Australians: A comparative analysis of farmers and people working in agriculture in drought-affected areas and the Australian population using the Deakin Personal Wellbeing Index, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.

- Karasek, R (1979) Job demands, job decision latitude, and mental strain: implications for job redesign. 24: 285-307.
- Karasek, R and T Theorell (1990) Healthy work: stress, productivity, and the reconstruction of working life, New York: Basic Books.
- PIMC (2008) Communique of the Primary Industries Ministerial Council - Meeting held in Melbourne, 17 April 2008, Available: http://www.daff.gov.au/__data/assets/pdf_file/0007/625624/pimc-13.pdf [Accessed 25 July 2008]
- The Hon. Tony Burke MP (2008a) Expert Panel to review social impacts of drought. Media release. Office of the Minister of Agriculture, Fisheries and Forestry.
- The Hon. Tony Burke MP (2008b) Primary Industries Ministerial Forum Communique, Cairns, 28-29 February 2008, Available: http://www.maff.gov.au/media/media_releases/february_2008/primary_industries_ministerial_forum_communique [Accessed 2 September 2008]

APPENDIX A

SCALE DEVELOPMENT AND ANALYSIS

Much of the work of social scientists is to identify and report on social attitudes, motivations, values and behaviours. While behaviours (e.g. voting behaviour) and social indicators (e.g. annual income) can be independently observed, attitudes and motivations are things that exist inside peoples' heads and as such, are more difficult to observe and report on. A number of analytical techniques are reported in this study. Techniques such as reliability analysis and factor analysis are commonly used in social science research to assess the extent to which larger numbers of survey items work well together to assess higher level constructs. These analyses are important to ensure that the data reported are statistically reliable and robust. In this section, typical methods used to assess the quality of social surveys are reported. This summary is intended to aid the reader in understanding how the analysis of data in this paper has been approached by the research team.

Constructs

It is rare that an attitude, value or motivation (henceforth referred to as attitudes) is determined by just one thing. Typically in survey work, attitudes are measured as constructs, higher level concepts made up of a variety of factors that go together to form an overall whole. The construct is usually informed by a theoretical framework that the researchers have brought to bear on the project. Extensive psychometric work goes into the development of a reliable survey instrument including qualitative research, cognitive testing, survey piloting, construct testing and cross validation of survey results. Given this amount of work, researchers are reluctant to change an item in a validated survey without repeating this series of studies.

Reliability analysis

In this paper a reliability analysis was applied to the survey data to ensure that the variables behaved properly in psychometric terms. Reliability analysis tests whether or not the survey items work together to make a coherent scale. If they do, an analyst may calculate a summary scale variable and use this instead of the larger number of survey items used in the original study. Once again, this makes reporting the data simpler and more coherent.

While there are some similarities between reliability analysis and factor analysis, reliability analysis is much more finely focused on assessing one central theme from a set of items, whereas factor analysis can deal with multiple themes at the one time. Reliability analysis is concerned to ensure that respondents respond to survey questions in a similar way such that a set of items could be said to make up a consistent scale. Reliability analysis tests these items to see if they go well together as a scale and, if they do, an analyst can compute a summary variable for the scale that is made up of these variables (by using the average for each item for example). When the new scale variable is produced it retains the survey's original scale (for example scores of 1 to 5 where 1 means strongly disagree and 5 means strongly agree). A common statistic produced by this routine is called the Cronbach Alpha. Like factor analysis, one looks for a score of around 70 per cent (or 0.7) to be satisfied that the items are working well together.

Psychometric analysis of scales used in this study

Life satisfaction scale

Within the HILDA dataset, a variety of variables are used to describe life satisfaction. These items included satisfaction with partner, children, financial situation and life generally. Respondents rated their satisfaction for each item on a score of 0 (totally dissatisfied) to 10 (totally satisfied). To simplify reporting, a life satisfaction scale was derived from these data using reliability analysis. The Cronbach Alpha for this scale was an acceptable 0.67.

Disposable income

The HILDA dataset contains information on a wide range of household expenses such as food, clothing, fuel, and holidays. It also contains information on annual household income. To simplify reporting on these data a ratio of disposable income was calculated as a ratio of expenses over income.

Financial stress

The HILDA dataset contains information on a range of variables concerned with financial stress. These questions related to:

- 1 the ability to pay electricity, gas or telephone bills on time
- 2 the ability to pay the mortgage or rent on time
- 3 the need to pawn or sell something
- 4 going without meals
- 5 ability to heat the home

- 6 requests for financial help from friends or family
- 7 requests for help from welfare/community organisations.

Reliability analysis was used to develop a scale of financial hardship. The scale showed good internal reliability with an acceptable Cronbach Alpha of 0.70.

Conditions at work

The HILDA dataset contains information on a range of variables concerned with wellbeing at work. These items have been drawn from the internationally recognised Whitehall study of workplace stress (Ferrie 2004, Karasek 1979) and include constructs such as job security, job latitude and job stress. Reliability analysis was used to check the internal reliability of these scales.

i The job security scale consisted of the following items:

- *I have a secure future in my job*
- *The company I work for will still be in business in 5 years' time*
- *I (do not) worry about the future of my job.*

The Cronbach Alpha for this scale was an acceptable 0.64.

ii The job latitude scale consisted of the following items:

- *I have a lot of freedom to decide how I do my own work*
- *I have a lot of say about what happens on my job*
- *I have a lot of freedom to decide when I do my work.*

The Cronbach Alpha for this scale was an acceptable 0.82.

iii The job stress scale consisted of the following items:

- *My job is complex and difficult*
- *My job often requires me to learn new skills*
- *My job is more stressful than I had ever imagined*
- *I fear that the amount of stress in my job will make me physically ill*

The Cronbach Alpha for this scale was an acceptable 0.79.

THE SOCIAL WELLBEING OF RURAL AUSTRALIANS:

A COMPARATIVE ANALYSIS OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS AND THE AUSTRALIAN POPULATION USING THE DEAKIN PERSONAL WELLBEING INDEX

REPORT PREPARED FOR THE DROUGHT REVIEW BRANCH, AUSTRALIAN GOVERNMENT DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY

Anthony Hogan, Brigit Maguire, Jacqui Russell and Patrick Stakelum

September 2008

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KEY FINDINGS

Background

This report is one of three 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.

The paper reports on a comparison of wellbeing of two populations:

- *a sample of 500 agricultural workers in drought-affected areas*
- *a nationally representative sample of 1203 individuals of the Australian population aged 18 years and over.*

Methods

This study used the Deakin Personal Wellbeing Index, which contains eight items of life satisfaction or wellbeing measures, each one corresponding to a quality of life domain:

- *standard of living*
- *health*
- *achieving in life*
- *personal relationships*
- *safety*
- *community-connectedness*
- *future security*
- *spirituality or religion.*

It also contains a ninth summary question on overall wellbeing (life as a whole). A series of standard Newspoll Omnibus survey questions was also asked to both populations. These included gender, age, educational levels, and household income.

Comparing wellbeing

For eight of the nine wellbeing measures, there was a significant difference between agricultural workers in drought-affected areas and the Australian population. Agricultural workers in drought-affected areas were less satisfied with their lives as a whole. There was no statistical difference between the two samples in satisfaction with what they are achieving in life.

For people working in agriculture in drought-affected areas, both white-collar workers (e.g. farm managers), and blue-collar workers (e.g. farm labourers), had similar measures of wellbeing.

Agricultural workers in drought-affected areas are less satisfied with their future security

The most striking finding from the study is that agricultural workers in drought-affected areas were up to 40 per cent more likely to report feeling less satisfied with their future security than Australians in general.

Descriptive statistics

There are fewer young people (under 34) working in drought-affected areas compared with the Australian population as a whole.

In comparison to the Australian population in general, agricultural workers in drought-affected areas were more likely to:

- *have children*
- *be married or living together*
- *finish school in Year 10*
- *have a diploma or certificate from a college or TAFE (including an apprenticeship) but less likely to have a degree or diploma from a university.*

LIST OF ACRONYMS

ABARE Australian Bureau of Agricultural and Resource Economics

ABS Australian Bureau of Statistics

ANZSIC Australian and New Zealand Standard Industrial Classification

BRS Bureau of Rural Sciences

DAFF Australian Government Department of Agriculture, Fisheries and Forestry

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:

- *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*

MP Member of Parliament

SSP Social Sciences Program, Bureau of Rural Sciences

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BACKGROUND

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 (The Hon. Tony Burke MP 2008a). This review follows on from the Primary Industries Ministerial Forum in Cairns earlier in 2008, where Ministers agreed that current approaches to drought and Exceptional Circumstances (EC) might no longer be the most appropriate in the context of a changing climate (PIMC 2008, The Hon. Tony Burke MP 2008b). Ministers saw that drought policy needed to be improved to create an environment of self-reliance and preparedness, and to encourage the adoption of appropriate climate change management practices.

As part of the review process the Minister for Agriculture, Fisheries and Forestry appointed a seven member Expert Social Panel (2008) to:

- *assess the social impact of drought on farm families and rural communities*
- *identify gaps and areas for improvement in Australian, state and territory government social support services that are designed to mitigate the impact of drought on farm families and rural communities.*

To support the work of the Expert Social Panel, the SSP was asked by the Drought Review Branch to:

- *provide an analysis of the Quality of Life survey of farmers and farm workers in drought areas (compared with the total Australian community) using the recognised Deakin Wellbeing Index (based on a national Newspoll survey conducted in mid July 2008)*
- *provide an analysis of the social circumstances of rural people and communities (compared with urban communities) based on previously unanalysed dimensions from the Household Income and Labour Dynamics in Australia (HILDA) survey (Hogan et al. 2008b)*
- *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 change and industry adaptation survey of farmers (Hogan et al. 2008a).*

This paper responds to the first of these requests, reporting on the wellbeing study of agricultural workers in drought-affected areas, and compares their wellbeing with that of a nationally representative sample of Australians aged 18 years and over. It provides findings in relation to the question of whether the quality of life of people and communities in drought-affected areas differs from that of Australians in general.

METHODS

This study was provided to the Drought Review Branch in response to a request by the Expert Social Panel (the Panel) that a study be undertaken on the social wellbeing of agricultural workers in drought-affected areas, and to compare their wellbeing with that of Australians in general. There was a specific request by the Panel that the comparison be based upon the Deakin Personal Wellbeing Index (PWI).

The PWI was developed from the Comprehensive Quality of Life Scale (ComQoL) by Cummins et al. (2005, 1994). The method underpinning the ComQoL focused on the interaction of how happy a person is with aspects of life that are important to them.

The PWI scale contains eight items of satisfaction, each one corresponding with a quality of life domain.

The index asks:

Thinking about how satisfied you are with particular aspects of your life. Using a scale from 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with each of the following:

- 1 *your standard of living*
- 2 *your health*
- 3 *what you are achieving in life*
- 4 *your personal relationships*
- 5 *how safe you feel*
- 6 *feeling part of your community*
- 7 *your future security*
- 8 *your spirituality or religion.*

A ninth item measures overall wellbeing:

Thinking now about your own life and personal circumstances, using a scale from 0 to 10, where 0 is not at all satisfied and 10 is extremely satisfied, how satisfied are you with your life as a whole?

The PWI provides a reliable measure of social wellbeing. Details about the robustness of the measure can be found in Appendix A. The appendix also provides an explanation of statistical tests used in the study.

In this study, respondents completed the study in two groups:

- 1 *as part of a national telephone Omnibus study conducted by Newspoll on a nationally representative sample of Australians aged 18 years and over (n=1203)*
- 2 *as part of a nationally representative telephone sample of Australians aged 18 years and over, who were working in agriculture (including farm owners and farm workers) in 23 drought declared areas in Australia (n=500).*

In addition to the PWI, a series of standard Newspoll Omnibus survey questions was also asked of both populations. These included gender, age, educational levels, and household income. Reliability and factor analysis were conducted on the data (see Appendix A for further details). These analyses confirmed that the data are robust.

In the national survey, interviews were conducted between 18 and 20 July 2008 by fully trained and personally briefed interviewers. The study of agricultural workers in drought-affected areas was conducted the following week. A system of call backs was put in place so as to include those people who were frequently away from home. To reflect the population distribution, results were post-weighted to Australian Bureau of Statistics (ABS) data on age, highest level of schooling completed, gender and area. Analysis was conducted on both weighted and unweighted datasets. There was very little difference between the two analyses. However, as the weights for each study are calculated differently it is not possible to simply put the datasets together. Certain statistical routines can become problematic when using weighted data (e.g. for regression). For these reasons the results reported in this paper are for unweighted data. The data reported compare outcomes for agricultural workers (farmers and farm workers) in drought-affected areas with the Australian population. For ease of reading, the data from agricultural workers in drought-affected areas in this report is at times referred to as 'drought-affected' and is compared with 'the Australian population'.

The data are reported in three sections. First, respondents' mean scores on the PWI items are reported by sub-group (agricultural workers in drought-affected areas and the Australian population), and statistical differences are reported. Second, since perceptions of wellbeing can be influenced by social factors, these results are subjected to further analysis that controls for the effects of age and income. Logistic regression is used for this analysis, comparing outcomes for the two samples—those in drought-affected areas and the national sample. Third, the demographics are reported for the two samples.

COMPARING WELLBEING

This section reports on respondents' replies to the questions in the PWI. Table 1 provides a comparison of responses for agricultural workers in drought-affected areas with the Australian population. Statistical tests were used to assess whether there was a significant difference between agricultural workers in drought-affected areas and the Australian population on measures of wellbeing and these results are reported in Table 1.

1 WELLBEING OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION

Item of satisfaction	Agricultural workers in drought-affected areas		Australian population		Significant difference? (pffio.05)
	Mean (SD)		Mean (SD)		
how safe you feel	8.4	(1.7)	7.9	(1.8)	Yes
your personal relationships	8.3	(1.8)	8.0	(2.3)	Yes
your health	7.7	(1.8)	7.4	(1.9)	Yes
life as a whole	7.5	(1.8)	7.7	(1.7)	Yes
your standard of living	7.4	(1.7)	7.8	(1.7)	Yes
feeling part of your community	7.4	(1.9)	7.0	(2.0)	Yes
what you are achieving in life	7.2	(1.8)	7.4	(1.9)	No
your future security	6.7	(2.1)	7.1	(2.0)	Yes
your spirituality or religion	6.5	(2.8)	6.9	(2.8)	Yes

For eight of the nine wellbeing measures there was a statistically significant difference between respondents working in drought-affected areas and the Australian population. While these differences in mean scores are small, in real terms, they may translate into many people having different levels of satisfaction, which may indicate a slightly higher demand for services at a population level. Berry (2008) advises that constructs such as safety mean different things in urban and rural communities. The nature of violence, for example, is different in rural communities where assaults (e.g. sexual or domestic violence) may be perpetrated by people known to the victim, whereas assaults in urban centres are more likely to be committed by people not known to the victim. For reasons such as this, urban people may feel less safe (i.e. their environment is less predictable) than people living in rural communities.

The difference between the two samples in respondents' satisfaction with what they are achieving in life was not statistically significant, although agricultural workers in drought-affected areas had a lower score.

Agricultural workers in drought-affected areas had significantly lower levels of satisfaction with their life as a whole and their standard of living.

Results of regression analysis

The eight significant PWI items were examined for differences between agricultural workers in drought-affected areas and the Australian population. Table 2 provides the results for the model (further details of the analysis can be found in Appendix A). It includes odds ratios and confidence intervals that give an indication of the strength of the result. The percentage likelihood column is derived from the odds ratio and is included for ease of interpretation. A positive percentage figure indicates that agricultural workers in drought-affected areas are X per cent less likely to be satisfied than those in the Australian population. A negative percentage figure indicates that agricultural workers in drought-affected areas are X per cent more likely to be satisfied than those in the Australian population.

2 WELLBEING OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION*

Item of satisfaction	Percentage likelihood	Odds Ratio	Lower confidence interval (for odds ratio)	Upper confidence interval (for odds ratio)
life as a whole	16%	1.159	1.067	1.259
your standard of living	14%	1.136	1.044	1.236
your health	-11%	0.899	0.839	0.963
your personal relationships	-15%	0.873	0.820	0.929
how safe you feel	-31%	0.766	0.709	0.828
feeling part of your community	-10%	0.907	0.850	0.966
your future security	18%	1.176	1.101	1.257
your spirituality or religion	5%	1.049	1.011	1.088

* $\chi^2=145.230$ (10); $p<0.001$ (controlling for age and income)

The results show that in comparison with the Australian population (controlling for age and income), agricultural workers in drought-affected areas are approximately 14 to 16 per cent less likely to be satisfied with their life as a whole and their standard of living. They are 10 to 15 per cent more likely to be satisfied with their health, personal relationships and to feel part of the community. They are approximately 31 per cent more likely than the Australian population to feel safe and five per cent less satisfied with their spirituality or religion. Similarly, they are 18 per cent less likely to feel satisfied with their future security. In this model, 'income', explained approximately two per cent of the difference between the two groups.

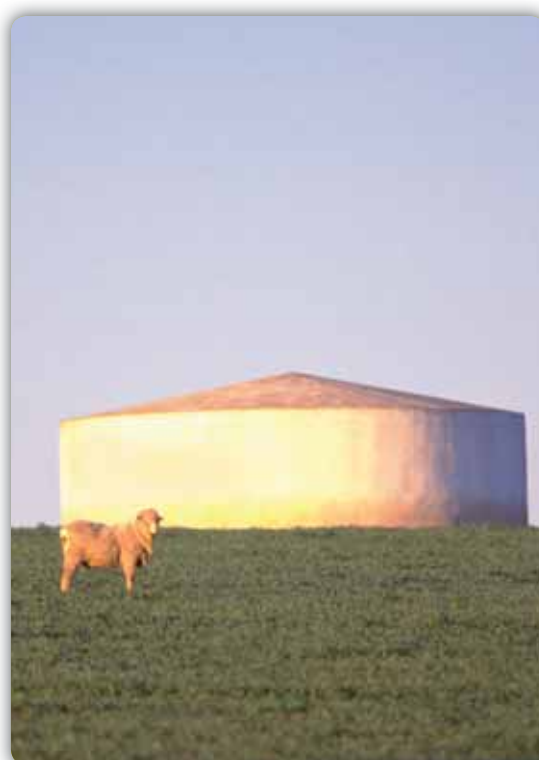
Without taking into account the influence of other variables, agricultural workers in drought-affected areas were approximately 40 per cent more likely to report feeling less satisfied with their future than Australians in general. This is a notable difference in the results for the two groups.

Respondents in drought-affected areas who were dissatisfied with their future security were more likely to:

- *be over 40 years of age*
- *be male (although this may be because of the greater proportion of males in the drought-affected sample)*
- *have two adults in the household*
- *not have children*
- *work full time*
- *have Year 11 or 12 education*
- *be married*
- *earn under \$30 000*
- *have no post-school qualifications.*

It is possible that there may be some differences in wellbeing between farm owners and managers, and farm workers. This question was explored for the drought-affected respondents only, using white/blue collar coding according to the Australian Standard Classification of Occupations (ASCO).

Independent samples t-tests on agricultural workers in drought-affected areas revealed no significant differences between white-collar respondents and blue-collar respondents on measures of wellbeing. This result was confirmed using regression analysis controlling for income and gender.



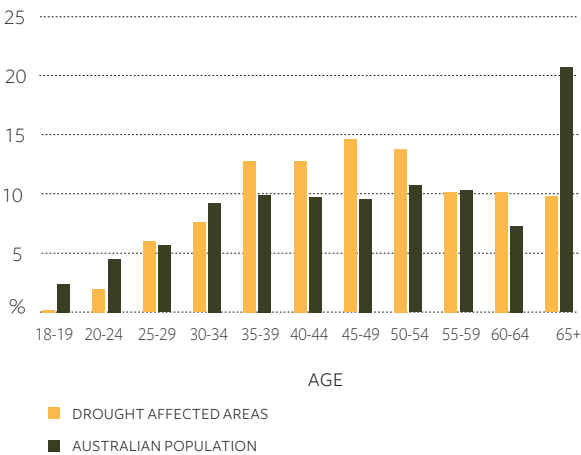
DESCRIPTIVE STATISTICS

The survey results provide descriptive information about the respondents, including:

- age
- gender
- household structure
- school education
- post-school education
- marital status
- work status
- blue/white collar workers
- household income.

These variables can be used to compare the respondents who were agricultural workers in drought-affected areas and respondents from the nationally representative sample of Australians.

1 AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS AND THE AUSTRALIAN POPULATION, BY AGE



Since the drought sample was specifically targeted at people employed in the agricultural sector and not the general rural population, it is not appropriate to statistically compare this sample with the randomly collected Australian population sample on demographic items. Rather, general trends are described to illustrate differences between the respondents working in agriculture in drought-affected areas and the Australian population generally.

3 AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS AND THE AUSTRALIAN POPULATION BY GENDER

Gender	Agricultural workers in drought-affected areas %	Australian population %
Male	73	50
Female	27	50

Figure 1 shows that there are proportionately fewer young people (under 34 years) working in the agricultural sector of drought-affected areas than in the Australian population. It also shows that there is a greater proportion of people between 35 and 64 years working in agriculture in drought-affected areas, reflecting an ageing profile of agricultural workers. The biggest difference depicted in Figure 1 is for people aged over 65 years. These differences may be explained by the different characteristics of the two populations being compared; the ‘drought-affected population’ refers to respondents who identified that

they were working in the agricultural sector, whereas the 'Australian population' refers to a nationally representative sample of individuals of the Australian population aged 18 years and over.

Table 3 reports respondents by gender. The population sample used quotas to ensure equal representation by gender. The sample of respondents working in agriculture in drought-affected areas targeted only those employed in agricultural work and results in an anticipated gender split of males to female.

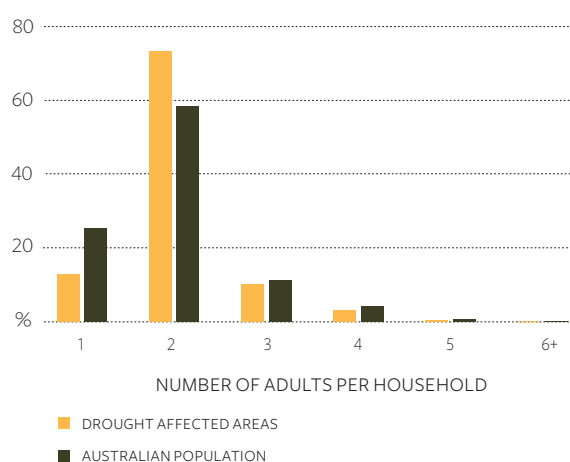
Figure 2 shows that respondents working in agriculture in drought-affected areas are more likely than respondents in the Australian population in general to report two adults in their households, reflecting the demographics of farming occupations.

Figure 3 shows that respondents working in agriculture in drought-affected areas are more likely to report that they had children than the Australian population in general.

Table 4 provides further information about the respondents who indicated that they had children. The table shows the proportion of respondents who indicated that they had children in each of five age categories. These categories do not add to 100 per cent because respondents may have more than one child in any given age category.

The table shows that the ages of children in the households of agricultural workers in drought-affected areas did not differ greatly from the ages of children in households across the general Australian population.

2 THE NUMBER OF ADULTS IN HOUSEHOLDS OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH HOUSEHOLDS OF THE AUSTRALIAN POPULATION

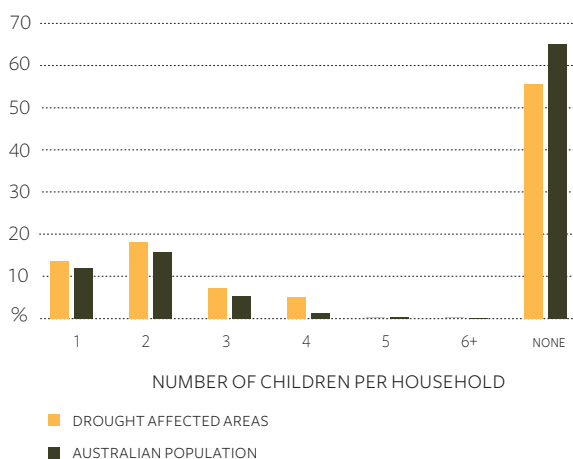


4 AGES OF CHILDREN IN HOUSEHOLDS OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH HOUSEHOLDS OF THE AUSTRALIAN POPULATION

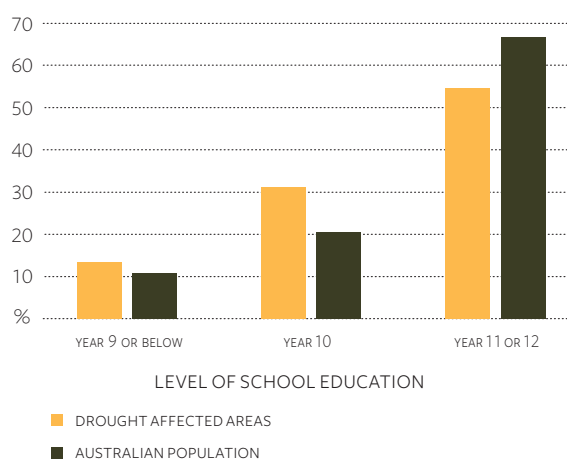
Age of children	Agricultural workers in drought-affected areas %	Australian population %
4 years or under	18	13
5-9	18	15
10-12	14	10
13-15	14	10
16-17	10	8

Figure 4 indicates that the number of agricultural workers in drought-affected areas who finished schooling in Year 9 or below was similar to the Australian population. Agricultural workers in drought-affected areas have a greater proportion of respondents with a Year 10 school education, but a lower proportion of respondents with school education including Years 11 or 12. This is consistent with the lower educational attainment of people working in agricultural occupations.

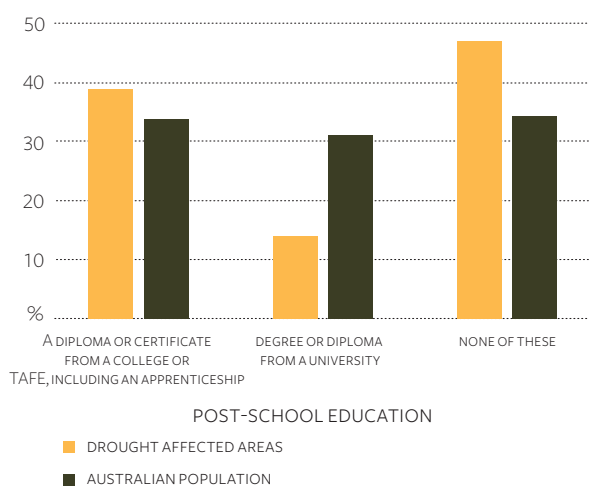
3 THE NUMBER OF CHILDREN IN HOUSEHOLDS OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION



4 LEVEL OF SCHOOL EDUCATION OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION



5 LEVEL OF POST-SCHOOL EDUCATION OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION



The post-school education data show that agricultural workers in drought-affected areas are more likely to have a diploma or certificate from a college or TAFE (including an apprenticeship) but less likely to have a degree or diploma from a university (Figure 5). Agricultural workers in drought-affected areas are also more likely than those from the Australian population to select the 'no, none of these' category.

Figure 6 shows that the greatest proportion of respondents in both the sample of agricultural workers in drought-affected areas and the Australian population in general are married. However, this proportion is higher for respondents working in agriculture in drought-affected areas than in Australia more generally. Conversely, agricultural workers in drought-affected areas are less likely to have never been married, to be separated, divorced or widowed. This is consistent with the overall demographic and household structure of people working in agricultural occupations.

5 COMPARISON OF NUMBER OF WHITE COLLAR AND BLUE COLLAR WORKERS

Type of worker	Agricultural workers in drought-affected areas %	Australian population %
White collar	87	51
Blue collar	13	49

More generally, 85 per cent of respondents working in agriculture in drought-affected

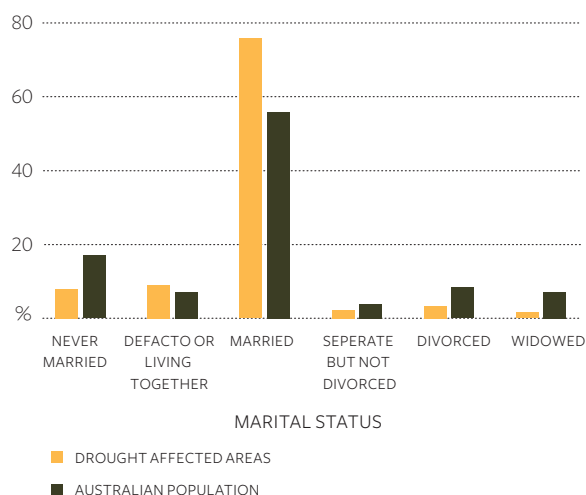
areas were married or living together, compared with only 63 per cent of Australians.

Thirty-nine per cent of respondents from the general Australian population were not working. Nineteen per cent worked part time and 42 per cent worked full time. Due to the nature of the collection methodology for respondents working in agriculture in drought-affected areas, there were no respondents in this sample who were unemployed. Consistent with the predominantly full-time working patterns for people in agricultural occupations, 81 per cent of these respondents worked full time, while 19 per cent worked part time.

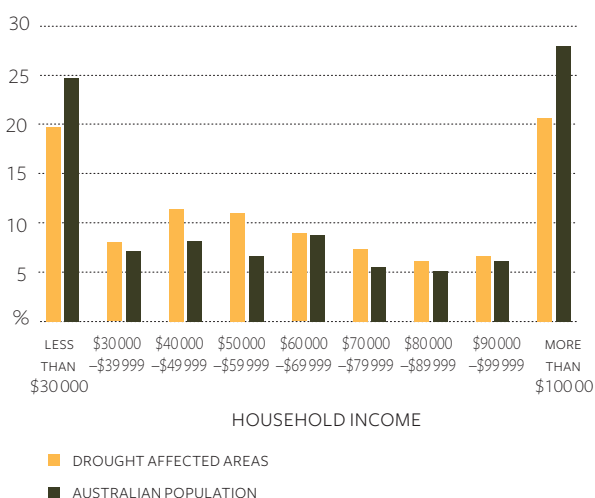
Table 5 provides data on employment status by white and blue collar worker. The white/blue collar coding refers to whether the main income earner of the household has been classified as a white collar or a blue collar worker according to the Australian Standard Classification of Occupations (ASCO) system. Within this classification system, farm owners and farm managers are considered to be 'management' and are therefore coded as white collar workers. For this reason there is a greater proportion of white collar workers in drought-affected areas compared with the general population.

Figure 7 presents data on household income for the Australian population compared with agricultural workers in drought-affected areas. Respondents who did not know their household income or who refused to answer the question were not included in the analysis of household income. Respondents working in agriculture in drought-affected areas were less likely than the general Australian population to be in either of the two extreme categories of high (above \$100 000) or low (under \$30 000) income. This means there were higher proportions of respondents from drought-affected areas in the middle income categories (from \$30 000 to \$99 999).

6 MARITAL STATUS OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION



7 HOUSEHOLD INCOME OF AGRICULTURAL WORKERS IN DROUGHT-AFFECTED AREAS COMPARED WITH THE AUSTRALIAN POPULATION



REFERENCES

- Cummins, RA, R Eckersley, E Okerstrom, SK Lo, M Davern, B Hunter and J Woerner (2005) The Australian Unity Wellbeing Index: 2004 update. Available: http://www.deakin.edu.au/research/acqol/Conferences/abstracts_papers/2004/Cummins_AWI_update.ppt#1Australian, Centre on Quality of Life - Deakin University.
- Cummins, RA, MP McCabe, Y Romeo and E Gullone (1994) The Comprehensive Quality of Life Scale: Instrument development and psychometric evaluation on tertiary staff and students. *Educational and Psychological Measurement*, 54: 372-82.
- Expert Social Panel (2008) 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, Available: http://www.daff.gov.au/__data/assets/pdf_file/0004/710644/social_panels_issues_paper.pdf [Accessed 2 July 2008]
- Hogan, A, M Hanslip, R Kancans, J Russell and B Maguire (2008a) Climate risk and adaptation among primary producers: Topline results focusing on primary producers reporting the effects of adverse seasonal conditions, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.
- Hogan, A, C Polidano, J Russell and P Stakelum (2008b) The social wellbeing of rural Australians: an analysis of the Household, Income and Labour Dynamics in Australia (HILDA) study, Report prepared for the Drought Review Branch, Australian Government Department of Agriculture, Fisheries and Forestry, September 2008. Canberra: Bureau of Rural Sciences.
- PIMC (2008) Communique of the Primary Industries Ministerial Council - Meeting held in Melbourne, 17 April 2008, Available: http://www.daff.gov.au/__data/assets/pdf_file/0007/625624/pimc-13.pdf [Accessed 25 July 2008]
- The Hon. Tony Burke MP (2008a) Expert Panel to review social impacts of drought. Media release. Office of the Minister of Agriculture, Fisheries and Forestry.
- The Hon. Tony Burke MP (2008b) Primary Industries Ministerial Forum Communique, Cairns, 28-29 February 2008, Available: http://www.maff.gov.au/media/media_releases/february_2008/primary_industries_ministerial_forum_communique [Accessed 2 September 2008]

APPENDIX A

DETAILS ON STATISTICAL ANALYSES CONDUCTED IN THIS STUDY

Much of the work of social scientists is to identify and report on social attitudes, motivations, values and behaviours. While behaviours (eg voting behaviour) and social indicators (e.g. annual income) can be independently observed, attitudes and motivations are things that exist inside peoples' heads and as such, are more difficult to observe and report on. A number of analytical techniques were reported in this study. Techniques such as reliability analysis and factor analysis are commonly used in social science research to assess the extent to which larger numbers of survey items work well together to assess higher-level constructs. These analyses are important to ensure that the data reported are statistically reliable and robust. In this section, typical methods used to assess the quality of social surveys are reported. This summary is intended to aid the reader in understanding how the analysis of data in this paper has been approached by the research team.

Constructs

It is rare that an attitude, value or motivation (henceforth referred to as attitudes) is determined by just one thing. Typically in survey work, attitudes are measured as constructs, higher level concepts made up of a variety of factors that go together to form an overall whole. The construct is usually informed by a theoretical framework that the researchers have brought to bear on the project. Extensive psychometric work goes into the development of a reliable survey instrument including qualitative research, cognitive testing, survey piloting, construct testing and cross validation of survey results. Given this amount of work, researchers are reluctant to change an item in a validated survey without repeating this series of studies.

Psychometric analysis used in this study

In this paper a number of statistical tests were applied to the survey data to ensure that the variables behaved properly in psychometric terms. The psychometric tests applied to the data are briefly discussed below.

Factor analysis

Factor analysis is a statistical method that is used to reduce a large number of survey items about a particular attitude or behaviour into a few underlying new variables or factors. The way it does this is to look for covariance across the responses; that is, by identifying questions for which the answer patterning is the same. An important research factor for farmers managing climate change is that they actively plan to manage their on-farm risks. This idea or factor could be made up of a larger number of different attitudes or behaviours such as succession planning, use of an operational management plan and development of a business management plan. Factor analysis brings common variables such as these together in the dataset and reduces them to a single new variable (or factor) while losing as

little of the response detail as possible. This new variable can then be used to more easily examine the question since one can focus on just one item (e.g. actively plan to manage their on-farm risks) rather than needing to think about a lot of variables all at the same time. In social sciences a factor score of 30 per cent—40 per cent of variance explained is acceptable, but ideally one would like to see factor scores closer to 70 per cent. The higher score indicates that less information has been lost in bringing the items together and that together, these items explain much of what is going on with the behaviours of interest.

Factor analysis of the PWI explained 40 per cent of variance

Reliability analysis

Reliability analysis tests whether or not the survey items work together to make a coherent scale. If they do, an analyst may calculate a summary scale variable and use this instead of the larger number of survey items used in the original study. Once again, this makes reporting the data simpler and more coherent.

While there are some similarities between reliability analysis and factor analysis, reliability analysis can produce much more finely focused on assessing one central theme from a set of items, whereas factor analysis can deal with multiple themes at the one time. Reliability analysis is concerned to ensure that respondents respond to survey questions in a similar way such that a set of items could be said to make up a consistent scale. Reliability analysis tests these items to see if they go well together as a scale and if they do, an analyst can compute a summary variable for the scale that is made up of these variables (by using the average for each item, for example). When the new scale variable is produced it retains the survey's original scale (for example scores of 1 to 5 where 1 means strongly disagree and 5 means strongly agree). A common statistic produced by this routine is called the Cronbach's Alpha. Like factor analysis, one looks for a score of around 70 per (or 0.7) to be satisfied that the items are working well together.

The Cronbach's Alpha for the PWI was a reliable 0.75.

Readers interested in further information on the psychometric properties of the scale are referred to the survey manual. The manual reports that:

- *the survey produces consistent results over time*
- *it consistently measures the same construct*
- *respondents respond to the questions in quite similar ways*
- *it can detect differences between groups with differing levels of wellbeing.*

Regression analysis

Regression analysis is a statistical tool that is used to measure the extent to which a set of variables predict a certain outcome. Standard regression analysis works well when the outcome variable is a continuous variable. However, when the outcome variable is an either/or variable a slightly different form of regression analysis is used. This is called logistic regression. Through the use of some complicated mathematics, logistic regression replicates the kind of data variability one can get with continuous variables so that the analysis can be conducted. Moreover, within this technique, it is possible to use an advanced statistical routine (called backward conditional regression) which eliminates from the analysis, any variable not directly contributing the prediction of the outcomes.

Specifically, the application of the logistic regression routine to the data in this study enabled:

- *analysis of the question of interest (e.g. to analyse the differences in wellbeing between those in drought-affected areas and Australians generally)*
- *bringing all the variables of interest into the analysis*
- *taking into account the extent to which the variables influence each other*
- *producing a result that highlights variables that are influencing the outcome, if they exist.*

Gender was excluded from the analysis in this study because the two samples were not comparable by gender. The model for this analysis (controlling for age and income) (see Section 3) was statistically significant ($\chi^2=145.230$ (10); $p<0.001$). The explanatory power of the model on the overall differences between drought-affected and the Australian population was between eight per cent and 11 per cent. This is a useful result given that only 'one' concept (wellbeing) was examined for differences between the groups. Overall, only one variable was eliminated in the analysis (satisfaction with achievement in life). Notably, the PWI manual identifies this variable as being problematic, possibly because it is a multi-dimensional item, meaning different things to different people.



