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# Summary of Desk-based Review 20 November 2006

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## Introduction

This is a summary of the full-report titled “*Desk-Based Review, 20 November, 2006: Prepared for the Wimmera-Southern Mallee Drought Report 2007.*”

WIDCORP was commissioned to prepare the desk-based review as part of the Wimmera-Southern Mallee Drought Report: a comprehensive report on the current implications of the ongoing drought on the economic and social sustainability across the six shires (Buloke, Horsham Rural City, Hindmarsh, Northern Grampians, West Wimmera and Yarriambiack,) of the Wimmera-Southern Mallee region. This review provides a snapshot of the region in drought conditions. There are presently ongoing drought initiatives, some of which have been released subsequent to the completion of this review.

This review covers the period 2001 to November 20, 2006. Secondary data forms the basis of this review and included analysis of all relevant and available sources and content analysis from major research projects on drought over the past decade. The review collated key information that best reflects the current regional drought situation, documented the type and extent of economic and social support available, and identified any critical gaps in available information used to inform drought management decisions.

The Wimmera and Southern Mallee region is experiencing almost ten years of drought conditions. The drought has placed considerable stress on the entire region, including its economic, social and environmental base. Approximately 40% of this region is currently EC declared. The drought has affected the capacity of the farming community through reduction of water, reduced yields and likely crop failure, and some de-stocking. Importantly, the outcome of this is likely to impact on the economic viability and social wellbeing of the surrounding region and its small communities.

Despite the impacts of prolonged drought the response of the region has so far been adaptive, innovative and resilient. Major change has already occurred with the development of collaborative partnerships, consolidation of farms, advancement in new crops and varieties, and commencement of the Wimmera-Mallee pipeline. In addition, in parts of the region, tourism and other non-agricultural industries have provided some economic diversification. Continued drought conditions however may change the current situation.

### **Profile**

Economic and land use activity across the shires in the Wimmera Southern Mallee region is dominated by broad acre cropping and grazing.<sup>1</sup> The region produces more than half of Victoria’s total grain crop, oilseeds and pulses. This accounts for a substantial proportion of the Victorian Gross Value of Production.<sup>2</sup> Other important industries for the region are mining, manufacturing and tourism. In this region there are three University /Research Centres including University of Ballarat, Grains Innovation Park and Birchip Cropping group. Horsham is the region’s major centre. The economy of this rural city is largely based on servicing the rural sector, retailing, education and health, and to a lesser extent on agriculture. The estimated population across the Wimmera-Southern Mallee region is 58, 041.<sup>3</sup> Declining and ageing populations are characteristic across the region and reflect general trends in rural

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<sup>1</sup> DSE, 2004a; WDA & RPDG, 2004

<sup>2</sup> WDA & RPDG, 2004

<sup>3</sup> ABS, 2004, 2005

and regional Australia.<sup>4</sup> Over the next 30 years population decline is projected for the shires of Buloke, Hindmarsh, West Wimmera and Yarriambiack. Northern Grampians is projected to have little change in population size, and Horsham Rural City is expected to undergo population growth.<sup>5</sup> The pattern of population change is typical for rural areas in the west of Victoria, where the populations are increasingly concentrating in larger towns.

## **Social impacts under drought conditions**

Literature describing drought in Australia over the last decade<sup>6</sup> has identified the following social (and subsequently economic) impacts of drought: unemployment; reduced access to education; increase in rural poverty; reduction in access to health and welfare; population decline; loss of social capital; loss of institutional capital; reduced agricultural workforce; and stress in farm families and communities.

In addition, the health impacts of drought have been identified and relate to continuous stress, increased workload and reduced income. These in turn affects family relationships, individual mental health and health-related behaviours.<sup>7</sup>

Research has also identified that communities experiencing drought demonstrate resilience within individuals, in partnerships and in rural communities.<sup>8</sup> This resilience can be built upon.<sup>9</sup>

### ***Health profile across the region***

Health profile across the region based on 2001 to 2005<sup>10</sup> data represents the Wimmera-Mallee region as having:

- a reasonably good socio-economic profile, based on education, employment, and socio-economic status compared to Victoria and Australian averages
- a high level of social resilience and community strength
- a lower life expectancy of residents than the State of Victoria
- a poorer health status in a number of Shires, in terms of higher rates of disease.

Changes in the community fabric pertaining to the current social impacts of drought have not been quantified however some anecdotal evidence of the impact of drought in this community would suggest:

- increased mental health issues for farmers<sup>11</sup>
- concerns of increased crime and lack of staffing by local police<sup>12</sup>
- concerns of reduced access to sports because of financial constraints on business sponsors and families, water unavailability, possible ground closures, and over-demand for volunteers<sup>13</sup>, and
- decline or loss of resident gardens.<sup>14</sup>

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<sup>4</sup> ABS, 2005

<sup>5</sup> DSE, 2004a

<sup>6</sup> Alston & Kent, 2004; Mahoney & Blau, 2006; Stayne & Barclay, 2002; Stehlik, 2003, 2005

<sup>7</sup> Mahoney & Blau, 2006

<sup>8</sup> Alston & Kent, 2004; Mahoney & Blau, 2006; Stehlik, 2003

<sup>9</sup> Stehlik, 2003

<sup>10</sup> ABS, 2001; DHS, 2001, 2004, 2005; DVC, 2005; Vinson, 2004

<sup>11</sup> Wimmera Uniting Care, cited in Horsham Drought Community Recovery Committee, 2006

<sup>12</sup> Drought Recovery Meeting, July 2006

<sup>13</sup> Wimmera Regional Sports Assembly, 2006, November, 2005

### **Evidence of drought assistance needs and service usage**

- Drought-related phone calls made to the DPI/DSE customer service centre more than doubled in September compared to the previous month.<sup>15</sup>
- The Christian Emergency Food Centre<sup>16</sup> experienced an increase in assistance requested from rural as compared to urban locations.
- Data on exceptional circumstances relief payments (ECRP)<sup>17</sup> and claims on shire rates was collected. Whilst the data is limited in terms of lack of comparison to state and national records, the information does reflect the general demand for such subsidies.
- Information on EC interest rate subsidies through Rural Finance reveal that 76 applications (or 18% of total applications) were from the EC declared areas in the Wimmera-Southern Mallee region.<sup>18</sup>
- Rural financial counselling services report high workloads, increased client tensions and increased client base from those less inclined to seek assistance.<sup>19</sup>
- Drought community development officer positions have provided valuable social recovery work for drought-affected people and community groups. Whilst these specific positions no longer exist (contracts expired in June, 2006), the shires of Horsham Rural City and Northern Grampians have maintained similar positions.

### **Education and Training**

Data available on school attendance rates revealed no significant variations over the last five years.<sup>20</sup> Data was limited for kindergarten rates.<sup>21</sup>

Post school training, education and employment concerns have been highlighted about the lack of future options for early school and Year 12 leavers.<sup>22</sup>

## **Economic impacts under drought conditions**

Structural adjustment and regional development initiatives were reviewed in light of the current drought. The main forces shaping socio-economic structures in the region are agriculture productivity.<sup>23</sup> Australian agricultural landscapes are impacted by drought coupled with restructuring and globalisation and are similar to the social impacts previously identified.

Key Victorian government policy documents<sup>24</sup> address structural adjustment and regional development in the region.

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<sup>14</sup> Drought Recovery Meeting, September, 2006

<sup>15</sup> DPI, 2006b

<sup>16</sup> Christian Emergency Food Centre, 2006

<sup>17</sup> Centrelink, 2006

<sup>18</sup> Rural Finance, 2006

<sup>19</sup> Drought Recovery Meeting, (July, 2006, September 2006). Yarriambiack Shire Council Chamber; Rural Financial Counselling Services staff, (2006). Personal communication, October 10 & 12.

<sup>20</sup> DE&T, 2005

<sup>21</sup> DHS, 2006

<sup>22</sup> Horsham Drought Community Recovery Committee, 2006; Wimmera Southern Mallee LLEN, 2006, personal communication, October 19

<sup>23</sup> Barr, 2005

<sup>24</sup> *Growing Victoria Together, A Fairer Victoria, Moving Forward; Our Environment, Our Future; Securing Our Water Future Together, Strategic Directions 2005-08*

### ***Economic impacts of drought on small business and agricultural production and farming***

There is limited secondary data available on the impact of drought on small business including Agri-business. Reliance on anecdotal evidence is problematic; however comments about small business closures within the region, and high levels of debt in the agri-business sector have been reported.

The Department of Primary Industry in Horsham and ABARE provide evidence of the impacts of drought in the region and indicate this impact will be significant:

- ABARE reported that most of Australia's winter grain growing regions are in grip of serious drought impacts and there is likely to be severe losses on grain production and forced sales of livestock.
- Whilst the value of grain is estimated to increase this year, DPI estimates that the Wimmera-Southern Mallee region if faced with a poor finish to the season would result in a 70% downturn in the value of production in comparison to last year.

## **Impacts on water resources under drought conditions**

Prolonged drought in much of southern Australia, in particular the Wimmera and Southern Mallee region has been evidenced by the following:

- below average annual rainfall and above average temperatures as a result of the 1997, 2002 and 2006 El Nino events<sup>25</sup>
- rainfall deciles over the catchment areas for the Wimmera-Mallee region have been the lowest on record from 2002 to 2006<sup>26</sup>
- water levels have been reducing for almost a decade in the region's storage system, managed by GWM Water. Storage volume is now down to a record low level of 5.7%.<sup>27</sup> GWM Water estimates that if there are no inflows by July 2007 to water storages, they will be as low as 2.7%
- there is insufficient water for delivery through the channel system<sup>28</sup>
- there are severe water restrictions (Stage 4) across most of the region,
- a water carting program has commenced<sup>29</sup>
- environmental flow allocations for 2006 have been withheld.<sup>30</sup>

Concerns have been raised by local stakeholders about the impacts of water shortages and water carting as a result of drought on the farming community:<sup>31</sup>

- The added financial burden of and additional workload on farmers to set up necessary infrastructure for water cartage programs.
- Infrastructure adjustments to accommodate transition from delivery of water via tanks rather than dams.
- Water pricing issues for users, such as cost of water cartage and continued payments on water rates despite not receiving full allocated amounts of water.

### ***Water Infrastructure***

The necessity to secure water supply across the region has been exacerbated by the current drought conditions. A major water infrastructure project, the Wimmera Mallee Pipeline is currently underway and will save significant water. Water demand modelling, by GWM water, indicates the Wimmera Mallee Pipeline is likely to meet demand levels over the next 50 years or so, accounting for changes to inflows

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<sup>25</sup> National Water Commission, 2006

<sup>26</sup> *ibid*

<sup>27</sup> GWM Water, no date

<sup>28</sup> GWM Water, 2006c

<sup>29</sup> GWM Water, 2006a

<sup>30</sup> Premier of Victoria, 12 September, 2006

<sup>31</sup> Horsham Drought Community Recovery Committee, 2006

brought about by medium climate change scenarios. GMMWater indicates that towns supplied by groundwater have currently secure water sources. Further exploration of groundwater use is underway.

### ***Demand for water***

As water supply becomes limited competing demand for water is likely to intensify. Urban expansion and migration, new and competing land uses including mining will contribute to this change in demand. There are currently a number of programs at the local, state and federal levels that are responding to long-term climate variability and change.<sup>32</sup> These responses will assist to better manage water resources and to assist in minimising the socio-economic vulnerability of rural communities through adaptive capacity strategies.<sup>33</sup>

## **Drought responses as at 20 November, 2006**

There are a number of initiatives in place including a range of drought assistance measures recently announced by Commonwealth, and in particular State governments, which directly address the social and economic needs of the region.

### ***Social response***

The current social response to drought within the region includes:

- General, family, and financial counselling provided through Centrelink and local agencies including Wimmera Uniting Care and the Rural Financial Counselling Service.
- Funding for delivery of mental health, early childhood and community support programs (E.g. increasing community morale, maintaining municipal pools, and community sporting grounds and facilities) under the community support package.
- Drought Social Recovery Strategy within the Grampians and Loddon-Mallee region, co-ordinated by DHS and the dissemination of drought-related information and activities co-ordinated by DPI.
- Social support from other locally-based charitable organisations.

### ***Economic response***

Numerous assistance measures to support farming families in EC declared areas have been provided, whilst non-farm businesses, until recently,<sup>34</sup> have been largely ignored. Responses include:

- A range of financial subsidies for eligible farmers in EC areas including Exceptional Circumstances assistance; Exceptional Circumstances Relief Payment (ECRP); Interim Income Support (IIS); Exceptional Circumstances Interest Rate Subsidy (ECIRS); concessions for dependent children of farm families through Centrelink programs; and Farm Management Deposits, interest charges relief and other special taxation measures/concessions available through the ATO.
- Professional business and financial planning grants for farmers, as well as free financial counseling through the Rural Financial Counseling Service.
- Extension of Exceptional Circumstances (EC) drought relief including ECRP and IIS to small businesses employing up to 20 staff.

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<sup>32</sup> DSE, 2004b; National Water Commission, 2004

<sup>33</sup> DPI 2006a; Sheperd & Ryan, 2006; Sposito, Evans, Fitzsimons, & Hossain, 2006

<sup>34</sup> Federal Minister for Agriculture, Fisheries and Forestry, 2006, 7 November

- Regional development infrastructure initiatives focusing on small town and local infrastructure development, and environmental works.
- Initiatives that address employment and apprenticeship issues including the Drought Employment Scheme and Drought Apprenticeship Retention Bonus.

### ***Water efficiency response***

The current responses to drought in relation to more efficient use of water include:

- Funding for water projects with industry and water authorities to reduce water consumption and increase opportunities for water reuse.
- Water rate relief for farmers currently receiving less than 50 percent of their water entitlements
- Water tank subsidies for GWM water customers
- Implementation of water restrictions and a water carting program.
- Emergency bore and water supply network including withholding of 3,000ML of water for environmental flows as a contingency for emergency water supply.
- Priority by the four local CMAs to address water resource management issues
- The Northern Mallee Pipeline (completed) and Wimmera Mallee Pipeline (commenced October 2006).
- National and State policies addressing water use and water management.

## **Conclusion**

This review has compiled local, regional, state and national resources to provide information on the current social, economic, and water-resource impacts of the drought in the Wimmera-Southern Mallee region. The review contextualises the impact of drought in the region and the response of local, state and commonwealth funding and resources to address the specific and immediate needs of the region.

### **Key findings include:**

- **Initiatives** are in place including a range of drought assistance measures recently announced by Commonwealth, State and local governments.
- Numerous assistance measures to support farming families in EC declared areas have been provided, whilst non-farm businesses until recently have received little direct assistance.
- The necessity to **secure water supply** across the region has been in part addressed with the commencement of the Wimmera Mallee pipeline. As water supply becomes limited competing demand over water is likely to intensify.
- Reduced inflows of less than 25% to water storages next year is likely to result in further water restrictions and a need for investment in alternative water supplies such as desalinating ground water or sourcing water from outside the region. As such, in the short term, resources are required for coordination of risk-management planning, and in the medium-term, possible implementation of alternate supplies of water.
- That there is adequate **information** collected on impacts of drought on agricultural sector through such agencies as ABARE, and DPI.
- Information on the current state of drought across the region is fragmented across multiple agencies

- Key Victorian government policy documents exist to address structural adjustment and regional development in the region.
- There is a **paucity of data** on impact of drought on rural small business and other social/community organisations and groups.
- There is a lack of quantitative data that examines the social dimensions and impacts of drought and limited secondary data sources which describe the social impacts of drought within the Wimmera-Southern Mallee region.

### Recommendations

- An integrated research program to compile qualitative and quantitative information on the impact of climatic variability on the social, economic and environmental sustainability of the region through a co-ordinated multi-agency approach.
- The provision of resources to develop and coordinate risk-management planning in relation to water resource security for economic, domestic and environmental sustainability across the Wimmera-Southern Mallee.

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