



**Socio-economic impacts of land use change**  
in the Green Triangle and Central Victoria

# Living with land use change: different views and perspectives

Report prepared for the *Socio-economic impacts of land use change in the Green Triangle and Central Victoria* study

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## Executive Summary

### *Introduction*

Land and its uses are essential to all human communities. Every person is shaped in a range of ways by the landscape in which they live, and the products and resources produced on the land. Land and its uses are particularly important for rural communities, where many people are directly dependent on land for their livelihood, and the way land is used has a central role in defining the identity of an area and its community.

Changes in land use can have a profound impact on the personal, family, work and social lives of people living in rural communities, as well as those living in rural and regional towns. Many rural regions across Australia have experienced rapid land use change in recent decades. The region extending from the 'Green Triangle' in South Australia and western Victoria through to Colac in central Victoria is no exception, with multiple types of land use change occurring in recent decades. These have included expansion of plantation forestry, increase in rural residential properties, increase in cropping, decrease in wool production in some areas, increase in prime lamb production, and a range of changes to the dairy industry in different parts of the region.

These land use changes have the potential to lead to profound shifts in the region's communities and economy. They provoke ongoing debate and sometimes conflict amongst residents of the region, who are affected in different ways by land use change.

To better understand the impacts of land use change in the Green Triangle and Central Victoria over the past 15 years, a new study was developed and launched in August 2006. The *Socio-economic impacts of land use change in the Green Triangle and Central Victoria (Land Use Change)* study builds on and extends a study undertaken in 2000 by the University of Melbourne (Petheram *et al.* 2000).

The goal of the *Land Use Change* study is to provide a comprehensive understanding and quantification of land use, industry and socio-economic change across the region since 1991, and how different people experience these changes.

This report documents the perceptions of 57 residents of the region who took part in group interviews in September 2006. In the interviews they discussed the nature of land use change, and how it has affected their lives and the communities they live in.

This report is the first of seven detailing results of different parts of the study.

### *Aims and methods*

Group interviews were undertaken at the start of the *Land Use Change* study to develop a better understanding of how people in the region are experiencing land use and socio-economic change, and the diversity of views about the nature and impacts of land use change. The eight group interviews were undertaken in September 2006, in Beaufort, Colac, Heywood, Horsham, Lucindale, Mortlake, Penola/Coonawarra and Warrnambool. The 57 participants included farmers and graziers from agricultural sectors including dairy, broadacre cropping and grazing and horticulture; plantation managers; members of local environmental, volunteer and community service groups; rural residents other than farmers; local business people; and local government staff and councillors. While a wide diversity of people participated in the interviews, some groups were better represented than others. The majority of participants had been or were currently involved in traditional farming activities in the region. Fewer participants were rural residents who did not farm, who farmed for new/alternative products, or were town residents, although most interviews had at least one or two participants who fell into these categories. None of the group interview participants identified themselves as indigenous. The views represented may therefore be more reflective of those held by people involved in traditional agriculture than of those held by town residents, rural residential residents, indigenous residents of the region, or those involved in newer land use industries.

During each group interview, participants were asked to identify and describe the different land use changes they had observed in the part of the study area they were familiar with, prioritise which land use changes were the most important or significant, and discuss the drivers and impacts of land use changes they ranked as highly important.

Results of the group interviews were used to inform subsequent stages of the *Land Use Change* study, and to better understand the different ways people experience and understand land use change.

The research reported in this document is qualitative and, as such, does not make claims about the validity of the different and often conflicting perceptions held by group interview participants, or attempt to quantify how many people hold the different views identified in the interviews. Subsequent reports forming part of the *Land Use Change* study will examine various aspects of land use change in the study region using quantitative data.

### *Results*

Results of the group interviews are summarised below, focusing on identifying the diversity of sometimes conflicting perceptions reported about the nature and impacts of land use change in the region.

### *Defining different land uses*

Participants were asked to discuss key land uses in the region. Key land uses identified included agroforestry, blue gum plantations, cropping (all types), dairy farming, grazing (sheep for prime lamb, sheep for wool, beef cattle), horticulture, pine plantations, rural residential expansion and viticulture. Each of these involved a group of activities which could be defined as a distinct 'land use', although often having links to other land uses.

### *What does land use change involve?*

Group interview participants identified that land use change may involve some or all of the following:

- change in the area of land used for a particular purpose
- change in the number of people employed in different land use industries
- change in the way a land use is undertaken, including the technology used, efficiency of production and methods of production
- change in local and regional economic activity as a result of changing demand for goods and services, and
- change in volume and value of goods produced.

This range of types of change is important to recognise. A change in intensity or efficiency of land use can have socio-economic consequences as significant as those resulting from change in the total area of land being used for a particular purpose.

### *What land use changes have been occurring in the region?*

The land use changes most commonly observed in the region over the last 10-15 years, and sometimes longer, by group interview participants were:

- increase in the area of **blue gum plantations**
- a trend to increasing **farm size and property amalgamation**, associated with increasing efficiency of production and changes in technology
- increases in the area of land used for **cropping**, diversity and type of crops established, location of cropping in the region, and changes to cropping practices
- changes to the **dairy** industry, varying substantially across the region. In some areas, dairy farming had decreased over time; in southern areas with reliable rainfall it had increased in area. Other changes included intensification of production and increasing dairy herd size.
- increased numbers of small **rural residential** properties (variously labelled as hobby farming, lifestyle properties, 'seachange')

- changes in **water availability, use and regulation**
- increased use of **on-farm conservation practices** aimed at improving sustainability
- decreased **grazing for wool production**
- increased **agroforestry**
- changes to **beef cattle grazing** — sometimes involving growth in the industry and sometimes decline
- increase in grazing for **prime lamb production**
- increase in land managed on behalf of investors via **Managed Investment Schemes**, and
- increased **intensity of agriculture**, often associated with introduction or increased use of irrigation.

Many other land use changes were also described, but not as often as those listed above. In some cases a land use change was identified in only one or two group interviews because it was relatively localised — for example, development of new mines.

Participants were asked to identify which land use changes were most important. Six land use changes were ranked as highly important in three or more interviews:

- increases in blue gum plantations (ranked as an important land use change in all eight interviews)
- increased cropping (five interviews)
- changes in water availability, use and regulation (five interviews)
- increased dairy farming (four interviews)
- farm amalgamation/increased farm size (ranked as important in three interviews), and
- rural residential expansion (three interviews).

#### *Impacts of land use change*

Participants were asked to discuss the impacts of different land use changes. These fell into the categories of impacts on local and regional economic activity; community interaction and cohesion; services and community groups; employment availability and types; other industries; population and demographics; environmental conditions; water use and availability; who manages land; land prices and markets; and infrastructure condition and use.

The impacts of the six land use changes commonly ranked as important by interview participants are described briefly below.

### *Blue gum plantations*

The impacts of blue gum plantation expansion, while debated, were most commonly described as negative, with fewer positive than negative perceptions of impact discussed. Most participants believed expansion of blue gums impacted negatively on local economic activity (although some disagreed with this view). There were more mixed views about impacts on regional economic activity, with some believing blue gum expansion has positive impacts on regional activity and some believing it has neutral or negative impacts. Increase in the area of blue gums was commonly believed to lead to decreases in the population of rural communities, with flow on negative impacts on provision of services and community groups, and community interaction and cohesion. Some participants believed that blue gum expansion leads to availability of new types of employment, while others were concerned that the employment generated may not be comparable to that generated by alternative land uses. Several participants described concern that expansion of blue gums may make it difficult for other industries to maintain or expand production.

Views about environmental impacts were mixed, with some describing positive and others negative impacts. A key concern commonly raised was the question of whether plantation expansion affects water availability. Blue gum expansion was widely believed to have led to increased land prices, associated with positive benefits for landholders wishing to sell land, and with negative impacts for those wishing to purchase land. It was described as involving a shift to new people and corporations managing land. Some participants described blue gum expansion as resulting in loss of infrastructure from farms, and as leading to increased pressure on road infrastructure.

### *Cropping*

Expansion of cropping, particularly where it involved amalgamation of farms, was described as having a range of differing impacts. Some participants believed it has led to increased local and regional economic activity; others that it has led to decreases in economic activity. There was more agreement about employment, with several participants describing cropping expansion as being associated with increased mechanisation and decreases in overall employment availability over time, as well as changes in the types of jobs available and their location. Some participants described cropping expansion as leading to loss of rural population, with flow-on negative impacts on provision of services and community groups, and community interaction and cohesion. When environmental impacts were discussed, cropping expansion was mostly perceived as having negative impacts due to use of chemicals and loss of biodiversity. It was also described as being associated with increased need for water drainage.

### *Water availability and use*

The primary impacts of change in water availability and use were described as changes in the land uses that can be undertaken, and the viability of agricultural enterprises. Few other impacts were discussed.

### *Dairy farming*

Dairy farming was generally considered to contribute positively to local and regional economic activity. Expansion of dairy farming was believed to create more jobs in local areas. Participants identified difficulty in obtaining enough labour for dairy farming, and several believed that people have become less willing to work in the industry over time, mostly because of the type and amount of work involved. Typically, participants believed that increases in dairy farming led to growth in local population, and decreases to a fall in population, with associated impacts on provision of services and community groups, and community interaction and cohesion. Some shifts in the management of dairy farms were noted, including an increase in the number of farmers migrating from other countries (particularly New Zealand) to manage farms.

Expansion of dairy farming was described by some as potentially having negative environmental impacts, while others believed that in recent years there has been a shift to more sustainable farming practices in dairy and other agricultural industries. Demand for land from dairy farmers was described as contributing to land price increases in recent years in some parts of the region, with similar impacts to those described above in the section on plantations. Expansion of dairy farming was also described as creating increased pressure on road infrastructure.

### *Farm amalgamation*

While identified as a key type of land use change, the impacts of farm amalgamation were mostly discussed when particular land uses such as cropping were described. When its impacts were described outside the context of a particular land use, it was typically believed to have led to a shift of employment opportunities away from local areas into regional centres, to contractors working across larger regions, to a reduction in rural population and associated flow-on effects on community interaction and cohesion and community groups and services, and to more corporate management of farms.

### *Rural residential development*

The impacts believed to result from rural residential expansion varied depending on the type of rural residential expansion being discussed. The expansion of rural residential 'lifestyle' blocks was sometimes believed to lead to decreased local and regional economic activity, particularly where the new residents are 'weekenders' who do not live permanently in the region. However, where new residents do move

permanently to a region, it was described as contributing to economic activity, and to increased employment in towns. Some participants were concerned that expansion of small rural residential properties reduced availability of land for traditional agriculture.

However, the most common impact discussed was the impact of rural residential expansion on the number and type of people living in rural areas, and on community interaction and cohesion. Rural residential expansion was generally believed to lead to population growth, with new residents shifting into communities. These new residents were sometimes viewed as a ‘positive’ and sometimes as a ‘negative’. Many agreed that it can take some time for new residents to integrate into a rural community, and several described negative experiences of people who have moved onto rural residential blocks in their area. Expansion of rural residential properties was typically described as creating upward pressure on land prices.

*The Land Use Change study*

This report forms one of several reports from the *Land Use Change* study, and should be read in conjunction with other reports. The project reports are summarised in the following table.

| <b>Publication</b>  | <b>Description</b>   | <b>Publication date</b> |
|---|--|-------------------------|
| <b>Living with land use change: different views and perspectives</b>                                  | This report presents the results of the group interviews undertaken in the region in late 2006. It highlights the diversity of way people in the region have been impacted by land use change. | Mar 2008                |
| <b>Comparing industries: final framework</b>  | This methodology report documents the framework developed to compare different industries to equivalent points in the chain of production.   | Mar 2008                |
| <b>Understanding resident views on land use change</b>  | Reports results of the ‘resident views on land use change’ survey.   | May 2008                |
| <b>Impacts of land use change to farm forestry and plantation forestry: landholder survey results</b> | Analyses the impact of changing land use to plantation forestry or farm forestry on rural populations and on those who decide to make the change.  | June 2008               |
| <b>Employment and spending: comparing the activity generated by different primary industries</b>      | Quantifies how much employment and spending different industries generate in the community.  | Sept 2008               |
| <b>Socio-economic impacts of land use change: what do the statistics tell us?</b>                     | Analyses the changes in land use, and social and economic characteristics across the region over time.   | Sept 2008               |
| <b>Socio-economic of land use change: Integration report &amp; Summary report</b>                     | Integration: Integrates findings across the whole project<br>Summary: summarises the findings of the preceding publications.   | Sept 2008               |