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

Understanding residents' views on land use change

Executive Summary

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

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Executive summary

Aim

This document reports research conducted to understand residents' views of selected land uses in the Green Triangle and Central Victoria region.

The report:

- describes and compares residents' views of four land uses increasing in the study region: blue gum plantations, cropping, dairying and rural residential development
- explores the reasons for residents' views using a psychological framework to examine residents' valued outcomes and beliefs about valued outcomes.

The study region includes local government areas (LGAs) in both South Australia (Mt Gambier, Grant, Wattle Range, Naracoorte and Lucindale, Kingston, Robe) and Victoria (West Wimmera, Glenelg, Horsham, Southern Grampians, Moyne, Pyrenees, Corangamite, Colac Otway, Ararat, Northern Grampians, Warrnambool).

Methods

Two surveys of residents were conducted during 2007. The first survey used postal questionnaires to examine the views of 899 adult residents selected at random from telephone directories. The second survey used short face-to-face interviews to examine the views of 414 residents aged 18–45 intercepted in main streets of towns across the study area.

In the first survey, a lower than expected response rate and sampling frame inadequacies resulted in a bias toward older, male residents and residents of regional centres. Respondents to the second survey were reasonably similar to the population of interest (residents aged 18–45) in regard to age, gender and residence but may be unrepresentative in other ways. Despite these limitations, when viewed together, the surveys provide considerable information about residents' views on land use change.

Key findings

Attitudes towards the land uses were investigated using two approaches. In the first approach, participants in Survey 1 were asked about the overall impacts of each land use. In general, participants reported that the overall impacts of increased cropping, dairying and rural residential development were positive. Views on blue gum plantations were much more diverse. Many people in the region considered blue gum plantations to have a negative impact on the region. Residents' views tended to be 'split', with people seeing the overall impacts as either positive or negative and fewer seeing the impacts of the land use as neutral.

Patterns of beliefs differed across some respondent groups. Participants living in South Australia were more likely to be positive about blue gum plantations than participants from other areas. Participants from the south-eastern part of the study (Colac, Warrnambool area etc) tended to be more positive about increased dairying than respondents from other areas. Older and younger participants tended to be more neutral about blue gum plantations than participants in other age groups. Residents of regional centres tended to be more positive about rural residential development than respondents living in small towns and rural areas.

The second approach to measuring attitudes involved asking participants of both surveys whether they agreed each land use was good for rural areas and regional centres. Most respondents agreed that increased rural residential development was good for both rural areas and regional centres, and the majority agreed that increased dairying and cropping is good for both rural areas and regional centres, though support was slightly less strong. There was again much greater diversity of views regarding the benefits of increasing blue gum plantations. For each land use, respondents were more likely to report benefits for regional centres than for rural areas. In both surveys respondents living in regional centres were more likely than respondents living outside regional centres to agree an increase in blue gum plantations would be good for small towns and rural areas.

Questions regarding specific impacts were used in Survey 1 only. Patterns of beliefs about impact of land uses were similar for a number of different social outcomes including employment, population, community involvement outcomes, and regional and local economic outcomes. The following general patterns were observed:

- Increased rural residential development was the only land use change considered by most respondents to have a positive impact on social and economic outcomes.
- For dairying and cropping, views about impacts on social outcomes were diverse. The most frequent view was that increased dairying and cropping have a neutral impact on these outcomes.
- For plantations, views were also very diverse. For employment, economic and population indicators, the most common responses were that plantations have a positive impact on regional centres and a negative impact on rural areas. Most respondents considered plantations to have a negative impact on involvement in community groups.
- Overall, respondents tended to believe that all land uses had more negative impacts on smaller towns and rural areas than on regional centres.

There were less consistent trends among beliefs about physical environmental risks of land uses:

- Most participants indicated concern about the impact of increased plantations and rural residential development on road infrastructure, but concerns were also expressed regarding road impacts of cropping and dairying.
- For all land uses, an increase was most often considered to result in less water available for all uses. The view was expressed most commonly in regard to blue gum plantations and rural residential development.
- Cropping was the land use most frequently associated with increased soil erosion. Views on the soil impacts of plantations were very diverse.
- A large majority of respondents considered increased blue gum plantations to result in increased risk of wildfire.
- All land uses were relatively strongly associated with loss of native vegetation, although 20 per cent of participants considered increased plantations and rural residential development to result in more native vegetation.

The psychological basis for diverse attitudes towards blue gum plantations was explored by considering the relationship between beliefs about the overall impacts of land uses and other factors measured. The first factor considered was the outcomes of land use that participants considered important. These values were found to be generally similar across respondents regardless of their views about blue gum plantations, and therefore provide little explanation of variation in attitudes towards blue gum plantations. A regression analysis was used to examine the importance of three variables in predicting attitudes towards blue gum plantations: a summary score of beliefs about socio-economic impacts of plantations; a summary score of beliefs about physical environment risks and plantations; and beliefs about the social importance of the products of plantations. Together these variables explained 47 per cent of the variance in views on plantations, suggesting other factors must be considered. However, the analysis points to the particular importance of beliefs about socio-economic impacts, which have the strongest relationship with overall attitudes towards plantations.

Conclusions

The study suggests residents of the study region tend to view blue gum plantations very differently from other land uses examined. They are much more likely to report negative overall and specific outcomes of blue gum plantations than other land uses. Perceived impacts must be compared with independently observed impacts of land uses to identify where there is need for mitigation of negative impacts, and where there is need for better communication about costs and benefits of blue gum plantations.

The study also demonstrates that views on land uses differ within the region. While there is some variation in views on other land uses, the greatest variation relates to blue gum plantations. This may reflect differences in experienced impacts of change,

as evidenced by differences between views of respondents living in regional centres and those living in small towns and rural areas. Differences may also reflect broader socio-psychological variation within the region, for example differences in value orientation. The findings do not support the latter interpretation, since values appear generally shared and there is little relationship between valued outcomes and attitudes towards blue gum plantations. Instead, the findings point to the importance of diversity of beliefs about socio-economic impacts of land uses. In the absence of reliable information about socio-economic impacts, it is unsurprising that people have formed diverse views. Obtaining independent, trustworthy information about socio-economic outcomes of plantation forestry should be a high priority.

Researchers have raised the possibility that attitudes towards plantations might change over time as outcomes become clearer and industries develop within a region. While no direct comparison is possible, qualitative comparison with work by Williams et al. (2003) suggests that since 2000, at best, there has been no decrease in the proportion of people who consider blue gum plantations to have an overall negative impact on the region. This suggests that, to date, government and industry responses to community concerns about plantations have not been successful in changing general public opinion.