Social Assessment

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Special thanks goes to those community members who gave generously of their time and knowledge. Much of rural and regional Victoria is undergoing increasing organisational change. The call on community participation to meet and manage the challenge of change is significant, and for this reason alone the continuing spirit of participants to address the Regional Forest Agreement process is greatly appreciated. The social assessment work benefited greatly from comment and input by a diverse range of people who recognise the value of the forests in the North East and their value to the future of the region.

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Contents

List of Tables

List of Figures

Executive Summary

Over the past decade, there has been a growing awareness by government, industry and the community of the importance of considering the social implications of decisions. Social assessment is a tool used to predict the future effects of policy decisions upon people, their physical and psychological health, well-being and welfare, their traditions, lifestyles, institutions and interpersonal relationships (D'Amore, 1978).

A social assessment provides a 'snapshot' of the people and communities that may be affected by planning and policy decisions. Detailed information is collected on the social and biophysical environment, the historical background of an area and its response to change, contemporary issues, political and social structures, culture, attitudes, social-psychological conditions, community vitality and population statistics. This information is then used to predict the likely impacts, both positive and negative, which may be experienced by individuals and groups within the community and to determine ways in which such impacts may be managed. As Armour (1990) has outlined, such impacts may include changes that occur in:

- People's way of life (how they live, work, play and interact with one another on a day-to-day basis);
- Their culture (shared beliefs, customs and values); and/or
- Their community (its cohesion, stability, character, services and facilities).

Social assessment is also a mechanism which can facilitate stakeholder and community participation in the decision making process. Through participatory techniques such as workshops and public meetings, people can become involved in the collection of social information relating to their area. This information is considered critical in the social assessment process, as people who may be directly affected by a particular policy proposal are in the best position to say how such events are experienced.

A variety of data collection methods and data sources have been used as part of the North East social assessment to strengthen the study design and validate the results. The methods included documentary analysis, secondary statistical analysis, mail and telephone surveys, personal interviews, participant observation, informal networking and workshop techniques.

Mail surveys were distributed to forest contractors, timber processing industries, forest user businesses (eg apiarists, seed collectors, firewood collectors, miners and graziers), and tourism operators. Separate questionnaires were distributed to the employees of such business: mill employees, employees of contractor businesses, and tourism guides/ hosts. A total of 1012 surveys were administered with an overall response rate of approximately 35% (variations were evident across different forest user groups).

The community telephone survey undertaken as part of the social assessment work was based on a sample size of 1,100 households. The sample size allowed five sub-regional samples to be drawn from the total population of the North East RFA region, with each

sample having a sample size of around 220. The five sub-regional areas were defined on the basis of the percentage of the population within 1991 Census Collector Districts (CCDs) that were employed in forestry and agricultural industries. Contiguous areas with similar percentages of the population employed within forestry and agriculture were then used to define the five sub-regional sectors.

More detailed assessment work was undertaken in a series of case studies covering six communities across the region: Beechworth, Benalla, Corryong, Mansfield, Mt Beauty and Myrtleford. These communities differed in terms of their population size, dependence on forest uses and values, diversity of the local economy and geographic location.

This report contains the views of many people in the North East or those with an interest in the forests of the region. The views expressed are not necessarily those of the Steering Committee or the Commonwealth or Victorian Governments.

Social and Economic Profile

In 1996, the total population of the North East RFA region was 174,378 persons. The North East region has experienced consistent growth over the past 10 years (1.31%), and has a relatively high level of residential mobility, in comparison to Regional Victoria taken as a whole. The majority of this growth relates to retirees and the elderly.

North East residents exhibit strong levels of community attachment to the area and sense of community within the region is generally high. Social infrastructure provision is generally good, though some contraction of services has occurred in recent years. Historically, the region has experienced high ethnic migration which has resulted in a culturally diverse population.

The labour force in the North East is composed of a slightly higher level of white collar employment than Regional Victoria taken as a whole. This is consistent with relatively higher household incomes, and higher educational qualifications in the North East, compared to Regional Victoria. In 1991, the unemployment rate in the North East (10.30%) was below the regional average for Victoria (12.05%).

The main industries in the North East include community services (16.84%), wholesale industries (16.32%), and manufacturing (11.94%) concentrated in the major regional centres of Benalla, Wangaratta and Wodonga. The North East also has a traditional reliance upon the agriculture and forestry industries which continue to make a significant contribution to the present regional economy (10.50%). The future of the region is seen, by those who attended workshops and filled in surveys, to lie in the further development of tourism, manufacturing, agriculture and the softwood industry.

Changes in Forest and Land Use

In the North East, changes in both Federal and State government policies have required some readjustment of the management of forest resources with subsequent implications for communities in the region. The continual updating of information concerning forest production, conservation, recreation, water, historic and cultural heritage and social values, and the need to balance the provision of these uses and values in management, has provided the impetus for policy change. In Victoria key policy changes have resulted from:

- Victoria's Timber Industry Strategy (1986);
- the Code of Forest Practices (1989);
- the State Plantations Impact Study (1990);
- the National Forest Policy Statement (1992)
- the implementation of former Land Conservation Council recommendations for the use of public land.

The Land Conservation Council has conducted numerous inquiries into the protection of public land in the region over the last 25 years. Special investigations relating to plantations, alpine areas, rivers and streams, and wilderness values, have addressed a range of issues associated with native forests.

Changes in land use have had some implications for the region. Such impacts include:

- employment loss in the timber industry, due to phase downs and industry contraction;
- reduced access to forest areas for uses such as apiary, cattle grazing and particular tourist operations;
- reduced access for exploration and mining;
- increased opportunities for cultural and nature-based tourism and recreation through the establishment of parks and reserves, historic areas and wilderness

The LCC collected a large volume of social and economic information on a range of values and uses in the North East and took this into account in making its recommendations in the various studies. This information, for example, has been used to minimise the social and economic impacts of various recommendations on individual enterprises and local communities. The delineation of boundaries for conservation reserves of various kinds has also been undertaken by the LCC to protect significant values, taking into consideration potential adverse impacts on other uses and values. In addition to documented changes, community perceptions of changes in land use were also examined as part of this assessment.

Results of the telephone survey across the region, indicated that 25% of respondents believed there had been some change in the use of forests within their area over the last two years which had affected the community in which they lived. This view was more pronounced in areas with a higher dependence upon timber and forest-related industries, such as those located in the Eastern (32%) and South Western (29%) sectors of the region. The most commonly reported changes occurring within communities were related to the closure of mills (11% response) and the development of pine plantations (10% response).

A total of 54% of respondents also outlined that a decrease in the use of forests by the timber industry in the future would affect their community. Again, variation was evident across the region, with respondents in the eastern sector most likely to agree with the statement and those in the North West sector least likely to agree. The most significant and singularly important perceived change to the community from a decrease in future timber industry activity was the perceived increase in unemployment and associated financial hardship (83%). An increase in unemployment and associated financial hardship was identified as the most important family impact due to a decrease in the future activity of the timber industry (62.9%).

These findings highlight that timber industry issues are of foremost concern to a large number of people living in rural communities across the region, particularly in the Eastern and South Western sectors. Issues relating to employment and job certainty and the subsequent flow-on-effects to the local community such as loss of local business and relocation of youth from rural areas were raised as issues of particular importance. Impacts experienced because of limited access to sites were paramount for cattle graziers, apiarists, miners and prospectors.

Stakeholder Views

In recent years, there has been a growing interest in forest issues and a considerable increase in the number of groups wishing to influence forest use and management. These groups often bring quite different perspectives and values to particular issues. Often it is those groups in close proximity to the forest, those with pre-existing rights, local knowledge and high dependency that have less power or influence in the forest debate (Colfer, 1995). An analysis of the main issues and the response of different stakeholder groups is useful in predicting how individuals and groups may respond to different policy alternatives.

Forest-related Industry (Timber, Apiary, Seed, Firewood, Grazing, Specialty timbers)

Issues raised by these groups related predominantly to access to the forest and resource security. Those involved directly in the timber industry sought recognition for its achievements and a more sensitive portrayal of the industry. They desired a sustainable forestry approach, and expressed the desire for industry and employment certainty to allow them to pursue new business and market opportunities and facilitate job creation. Many outlined the desire to minimise conflict through balanced decision making.

Those involved in forest uses other than timber harvesting, questioned particular management practices in relation to their business. For example, apiarists believed that selective harvesting enabled better retention of trees valuable for honey, and there was support for regeneration and reforestation. Concerns were also expressed in regard to maximising the utilisation of wood, protection of flora and fauna and concern over feral animals and weed infestation. Access was a key issue for these groups and their dependence on licences to access and use forested land. Opportunities were seen to lie in continued access for multiple use and the expansion of new markets.

Conservation

Those people particularly interested in conservation expressed concern about forest management practices and their environmental impacts. They expressed a desire for more areas to be placed in National and State parks and reserves. There was some concern expressed over whether they should participate in the RFA process and they questioned the scientific rigour of the work being undertaken, and the lack of external review. Stakeholders also raised issues in relation to loss of biodiversity, wilderness and old growth values, soil erosion, weed infestation, and water quality. Within the North East, major opportunities included expansion of tourism and recreational use of forest areas, further plantation development, support for future environmental protection initiatives (such as salinity works) and the further development of local environmental networks.

Tourism

Tour operators were concerned about some forest management practices, particularly the impacts on biodiversity and the visual impact of harvesting on their operations. Access was identified as an issue and the need to be informed about forestry activities and restrictions on access to public forests due to harvesting activities. Safety issues were also outlined, particularly damage to roads and speed of trucks. Opportunities related to increased linkages between small tourist operators and larger ventures, further potential for the development of eco-tourism and better communication and education on forestry practices for visitors to the region.

Mining and Prospecting

Access to public land was a prominent issue for miners and prospectors, who believed that uncertainty of access resulted in uncertainty for the industry and its workforce. It was expressed that a minimum network of maintained track access was required and that multiple use was appropriate in the forests. Concerns were raised in relation to fire management practices. It was indicated that outcomes could be achieved which satisfied both industry and conservation goals.

Landholders

Landholders discussed the need for shared use of forests by industry, tourism and recreational users. Concern was raised about the visual impact of harvesting and the need for adequate buffer zones to minimise the visual impacts of forestry activities. Landholders were concerned about weed infestation and water quality because of harvesting techniques and burning practices. Road damage and safety issues were also outlined. Opportunities for farm forestry and plantation development were considered important on both public and private land.

Forest Agencies

Forest Agency staff felt that there was a need to closely monitor water quality and revegetation post-harvest to ensure success and to review any impacts. Maintenance of access roads was considered important, as well as resources for the management of forest areas for both commercial and non-commercial uses. Opportunities relating to better management of forest areas both in parks and state forests were identified, as well as the need to protect natural values and provide for further tourism development.

Aboriginal Community

Aboriginal groups expressed the need for areas of significance to be understood and considered in forest management plans, and the need to understand that Aboriginal groups did not wish for particular sites of cultural significance to be recorded. More direct dialogue between parties and further training of forestry workers in understanding cultural differences is required. Issues of foremost concern included native title and the use of forested areas for traditional cultural purposes. Concerns regarding the impact of management practices were also raised in relation to water quality. Opportunities focused upon employment for Aboriginal people in forest management and planning, regeneration of forested lands and as cultural officers, further development of Aboriginal cultural tourism and support for bush tucker and revegetation initiatives.

Local Government

Local government representatives focused on planning controls and infrastructure provision, particularly concerning road maintenance and upgrading. Concerns were raised regarding water quality and environmental aesthetics. Opportunities were seen to exist in terms of increased support for farm forestry, improved relationships with the timber industry and the economic benefits of this partnership for local communities.

GENERAL COMMUNITY

The views of the North East community were obtained through a telephone survey of the region. The results illustrate a range of attitudes and views towards the use and management of native forests across the region. The sample reflected variation in residents proximity to native forest and their

level of involvement in forest management, planning and protection. An estimated 68% of the sample indicated that native forest occurred within 10 kilometres of their home. Proximity to native forest areas was particularly high in the Eastern (82%) and the Central sector (84%). In relation to involvement in forest management, planning and protection, 18% of the population in the North East considered themselves to have been actively involved. This involvement included tree planting (19%), fire prevention (10.8%) and membership of Landcare or other similar environmental groups (10.1%).

Thirty six percent of the North East sample indicated that they, or their families, were employed in forest dependent industries (timber, tourism, mining, beekeeping, seed collection and grazing). A comparison of employment in forest related industries across the five sectors shows that the South West (76.3%) and North West (66.7%) sectors had the highest levels of respondents or family members employed in grazing industries. Employment in timber industries was highest in the Central sector (38.8%), while the highest percentage of employment in tourism industries occurred within the Eastern Sector (31.4%).

Within the last year an estimated 59% of respondents to the telephone survey visited native forests in Victoria. Twenty two percent visited native forests 'once a month' or more. The visitation of native forests did not differ significantly across the five sub-regional sectors. The three most common native forest areas visited within the last year included: Mount Buffalo (15%), Chiltern (11%) and the Alpine National Park (6%). Respondents reported a wide range of activities undertaken when visiting native forests. The three most popular activities nominated included: walking or bushwalking (52%), picnics and barbeques (21%) and sightseeing (15%).

Thirty percent of respondents were concerned about changes to native forests in Victoria due to human use. The major issues raised by respondents in relation to their concern over the use of native forests included: logging (22%), clear felling of native forests (16%) and the destruction of native forests (7%). When asked to identify the most important issues in relation to native forest management, respondents nominated cattle grazing on the high plains (20%), regeneration of native forests after logging (19%) and the preservation and protection of native forests for future generations (17%).

The telephone survey included eleven belief statements which were used to identify community views in relation to forest values and management. These belief statements are outlined in Table A following.

The results indicate that people in the North East value the forests in their region, and are supportive of efforts to better protect native forests and sensitive ecosystems. Over eighty percent of respondents agreed that trees are important for their own sake and that the forest ecosystem is delicate and easily upset. In addition, many respondents identified the natural beauty of the regions forests as a key determinant for deciding to live in the area (68.2%).

The results also indicate that people in the North East are very interested in forest management and planning. The majority of respondents expressed concern over the management of native forests (64.8%) and were supportive of better laws to protect the use of native forests (75.2%). There was also a high level of interest in the management and use of native forests (86.6%), and a recognition that people with an economic dependence on the forest should be more involved in how forests are used and managed (66.1%).

Table A.General Community Belief Statements

Belief Statements	Percentage agreement
Forest conservation and protection directly threatens the economic well being of the Victorian community	44.7
Forest industries should have more say in how forests are managed	66.1
Laws to protect native forests limit my choices and personal freedom	27.3
Protecting native forests will threaten jobs for people like me	15.8
Better laws are needed to protect the use of native forests	75.2
I don't think we are managing our native forests very well	64.8
The balance of the forest ecosystem is delicate and easily upset	88.7
I sometimes feel torn between the need for jobs and the need to preserve native forests in Victoria	64.7
One of the main reasons I live in this area is the natural beauty of the forest	68.2
I am very interested in the management and use of native forests in Victoria	86.6
Trees are important for their own sake	96.8

Note: *Respondents were asked to (1) strongly agree, (2) agree, (3) disagree, or (4) strongly disagree with each belief statement. Percentage agreement is the percentage of respondents indicating either strongly agree or agree.*
Source: *EBC (1998).*

The results also highlighted that people are aware of the importance of forest industries to the region. Many respondents identified that they feel torn between conservation of forests and the need for employment provided by forest industries (64.7%). Forty five percent felt that the conservation of forest values posed a threat to the economic well being of the Victorian community. Fifteen percent of respondents believed that protecting native forests would directly threaten jobs in their industries.

Forest Industry Activity and Linkages

The Timber Industry

While the following discussion relates to the hardwood sector of the timber industry, it is acknowledged that some mills receive a combination of both hardwood and softwood resources from the North East. These mills are clearly identified and discussed separately, where appropriate, from the hardwood sector as a whole.

There are ten major processors drawing hardwood resources from native forests within the North East region. Six of these mills are hardwood sawmills located within the region itself at Mansfield, Benalla, Corryong, Mt Beauty and Whitfield. Two other hardwood sawmills are located outside the region in Seymour/Murrindindi and Swifts Creek. These mills draw approximately 17% and 29% of their resource respectively from within the North East region. A further five processors receive a small volume of residual logs or sawmill residues only from the North East, including four sawmills and a woodchip processing facility located in Geelong.

The North East region is comprised of three forest management areas. These areas have quite distinct township resource clusters (TRC), that is communities which are geographically distinct and which are reliant on hardwood resources drawn from these particular forest management areas (FMA). For example, the townships of Mansfield, Benalla

and Whitfield are townships linked to the Benalla-Mansfield FMA.

Within the Benalla-Mansfield TRC, the townships of Benalla and Mansfield are the primary locations of timber processing and contracting employees. Corryong is the primary location in the Wodonga TRC, and within the Wangaratta TRC, Mt Beauty is the primary workplace location of employees. It is suggested that change in resource availability within each FMA may directly affect specific townships within these particular township resource clusters.

Two mills located at Benalla and Myrtleford are predominantly softwood operations and draw less than 10% of their total intake from hardwood resources from within the region. While these industries do not have a major or direct dependence on native hardwood resource, they are still significant in terms of the large number of workers they employ. The mill at Myrtleford has approximately 350 employees, while the mill at Benalla has 210 employees, these numbers are over four times that of all timber processing industries in the North East region with a direct reliance on the native hardwood resource.

Forest Industries Employee Profile

An examination of the profiles of forest industry employees, indicates that the majority are employed on a full-time basis (88.2%) and have worked within the industry for an average of 13.2 years, and for their current employer for an average of 10.6 years. Many employees (45.9%) have not worked in other industries, and 28.7% have had to relocate to retain their employment within the industry. The majority have a high school education or have attained TAFE/Trade certificates.

The average age of forest industry employees is 40, over 50% are married and the average family size is three. In terms of community attachment, employees have resided within their respective communities for considerable periods of time (average of 17 years), and participate in about 2 community groups on average. Forty one percent own their own homes outright, 29% are paying off mortgages, and 29% rent their accommodation.

Forest industry families tend to be young to middle age families with approximately 13% of family members being of primary school age. Within the Benalla-Mansfield TRC, primary aged children attend schools located in Mansfield, Benalla and Whitfield, and secondary schools in Mansfield and Benalla. Myrtleford is the main location for attendance at primary and secondary schools in the Wangaratta TRC, and Corryong is the main location for primary and secondary school attendance in the Wodonga TRC.

Timber Processing and Contracting Industry Employee Household Expenditure

In relation to household expenditure, timber processing industries located in the region generate approximately $20M in annual household expenditure. When all timber processing industries dependent on resources from the North East are considered across all townships (inside and outside of the region) this figure increases to approximately $23M. Household expenditure from contracting businesses alone contributes an additional $10M. However, it is important to separate those processing and contracting businesses with a limited dependence on hardwood resources from those industries which have a strong dependence on hardwood resources sourced from the region. The limited hardwood resource dependent processors and contractors, located mainly at Myrtleford and Benalla, generate approximately $18M in annual household expenditure. Alternately, the main hardwood dependent industries generate

approximately $14M in annual household expenditure, mainly reflecting the expenditure patterns of sawmill employees.

Within the Benalla-Mansfield TRC, location of expenditure largely occurs in the townships of Mansfield and Benalla. Melbourne and Wangaratta are also important industry expenditure locations for legal and insurance purchases and the purchase of major equipment and vehicles. Within the Wangaratta TRC, the townships of Wodonga, Wangaratta, Myrtleford and Beechworth are primary expenditure townships. Corryong and Wodonga, to a lesser extent, are the main expenditure locations for townships located in the Wodonga TRC.

Overall, there are 3,262 employees and family dependants associated with the timber industry within the region. Of this total, there are approximately 1,336 employees and family dependants associated with those industries with a strong reliance on hardwood resources sourced from the region, with a further 1,926 employees and family dependants associated with limited hardwood resource dependent industries. These figures are likely to be an underestimate, as they do not include businesses and individuals that may be subcontracted or additional contractors and businesses that were not sampled in the survey. The timber industry (including contractors), reliant on resource from the North East region, makes a significant contribution to the local and regional economy with an estimated $33M in employee household expenditure generated by these businesses each year, with the main hardwood resource dependent industries accounting for at least $14M of this expenditure.

Other Forest-related Industries

Other forest related industries within the region include apiary, cattle grazing, firewood collection, mining, prospecting, and tourism.

In relation to cattle grazing, there are a total of 610 licence holders across the North East region, including 10 seasonal bush grazing licences and 40 alpine grazing licences. The licenses are widely distributed across the region, most occur on small, isolated blocks of public land or stream frontages adjacent to private property.

There are a total of 61 permanent bee sites and 145 temporary bee sites licenced in the North East. Two of the most valuable forest species for honey making are the Red Stringy Bark and the Red Box, though other species are used in non-seasonal months. Firewood and seed collection are also common activities within the region. NRE employs contractors to collect seed for regeneration purposes, however little other commercial activity is evident. Firewood is collected from State forests across the region, with the greatest demand for firewood existing in the townships of Benalla, Beechworth, Wodonga and Wangaratta. Collection areas include Mount Pilot Multipurpose Park, Barambogie State Forest, Moyhu Forest Reserve and the Reef Hills Park.

Prospecting is also a common activity across the region, particularly in the areas surrounding Beechworth due to the historic connection of the area with gold mining.

In relation to tourism, the rich heritage and natural features of the region make an important contribution to the economic, social and cultural life of the area. Tourism and recreation are important industries, with a particular emphasis on alpine recreation, water-based activities and cultural heritage. In 1995, the area attracted approximately 1.45 million visitors who spent approximately $219 million. Popular tourist destinations include the alpine resorts (Mount Buller, Falls Creek and Mount Hotham), and the surrounding townships of Bright, Mount Beauty, Mansfield, the historic township of Beechworth and the

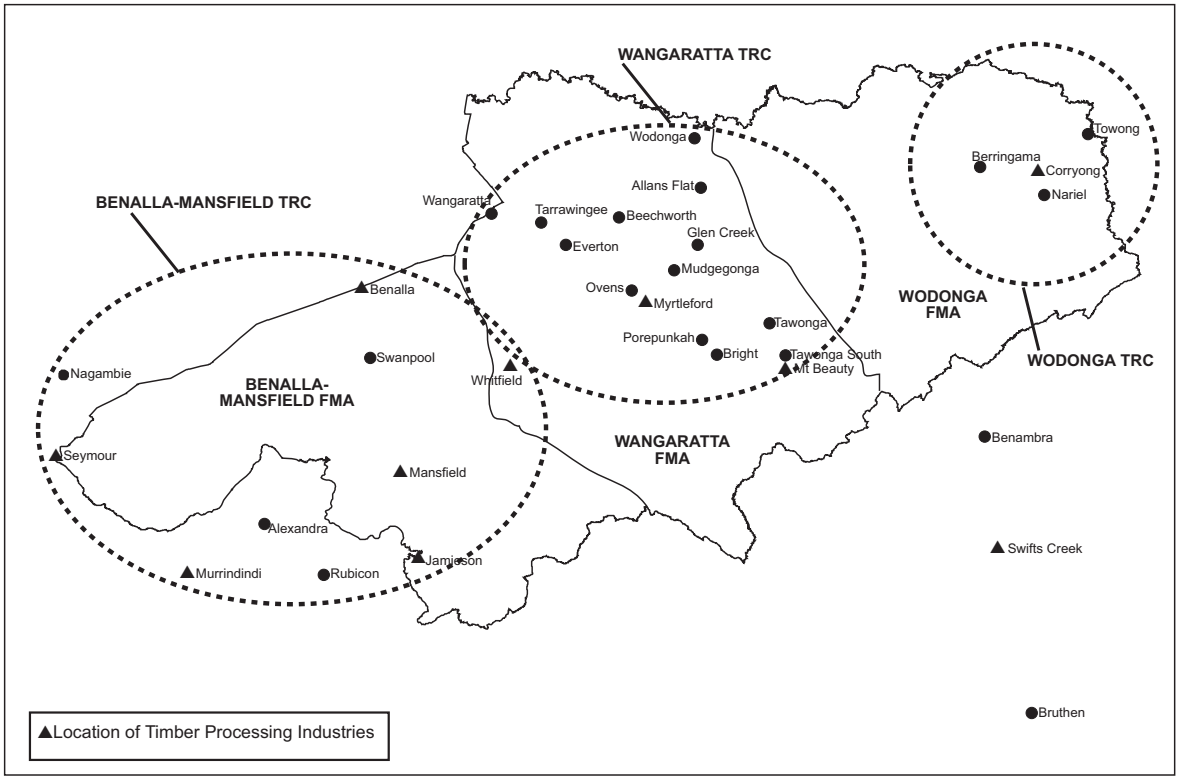


Figure A. Map of Town Resource Clusters

wine districts, including Rutherglen. The main centres of Wangaratta and Albury/ Wodonga also benefit from visitors to the region. There are a range of recreational and tourist activities associated with the region, these include: trail horse riding, bushwalking, wine tasting, historic sites and museum visits, snow skiing/snowboarding, dining, fishing, camping, four wheel driving and canoeing. Many of these activities are undertaken in both state forests and National Parks within the region.

A total of 113 tourist operators have licences to use areas of forest within the region. Forty tourism businesses are based within the region itself; 25 of these operations are located in the Wangaratta TRC in townships such as Bright, Beechworth and Mt.Beauty; 10 operators are located in the Benalla-Mansfield TRC with 6 operators located in Mansfield; and there are 5 operators in the Wodonga TRC, 2 of which are located in the township of Corryong.

Community Case Studies

As part of the social assessment process, detailed assessment was undertaken in six communities across the region. A variety of methods were used to develop a detailed profile of each community. Information was obtained through secondary data sources such as ABS statistics, shire reports, government publications, and community service directories, and through community workshops and extensive fieldwork in each of the communities. This information was collected in order to provide an assessment of the socio-economic structure, historical response to change, community attachment and to identify forest values and attitudes towards forest use and management.

Benalla

The township of Benalla is a major regional centre with an agricultural, administrative and

manufacturing economic base. In Benalla, 2.61% of the population are employed in agriculture and forestry, with a significant proportion of employees working for timber processing and manufacturing operations. Significant changes in Benalla include the shift from a predominantly white collar public sector employee base, to a manufacturing industry base, and the decline in farm profitability within the district. Benalla workshop participants indicated that the major forest issues for the region include water quality, forest management, and the restructuring of forest agencies.

Beechworth

Beechworth is an historic goldmining town, located at the base of the Stanley plateau. Although mining and timber have been important industries in the past, today the township's forest linkage is largely centred on tourism and recreation, and in particular cultural heritage. Workshop participants identified two key changes that have affected the community: an influx of new residents and the shift from an agricultural and government economic base, to tourism. The community believes it has benefited from an injection of new values, energy and ideas. Due to the increasing importance of tourism, there is concern for the protection of the Stanley plateau and a need for recognition of non-economic values of the forest.

Corryong

Corryong is a small community situated in the far north east corner of the region. It is a traditional agricultural district and was once a significant hydro-electricity town. Although the number of sawmills has declined in recent years, two hardwood sawmill businesses continue to contribute to the local economy. The community is characterised by strong social and familial ties. Such networks have been critical for the community in adapting to the cumulative impacts of economic contraction and service withdrawals from the region (e.g. closure of butter factory, closure of local railway service). The primary forest issues nominated by workshop participants were unemployment and population loss, due to reductions in timber resource availability.

Mansfield

Mansfield is an agricultural district with a traditional focus on timber production and mining. In recent years, there has been an expansion in the local tourism industry, with a particular emphasis on the surrounding high country for both its heritage value and recreational potential. In Mansfield, 4.61% of the population are employed in agriculture and forestry. Mansfield has experienced a decline in its timber industry base; the township now has only one sawmill operating, whereas in the 1970s there were six sawmills. Workshop participants identified this decline in the timber industry and the subsequent rise in tourism opportunities as the most significant change in the region. Mansfield residents were concerned that the availability of funding to forest agencies would not be sufficient to adequately address a range of forest management concerns, particularly in relation to nature based tourism (e.g. regulation of park visitors).

Mount Beauty

Mount Beauty is located at the foot of Mt Bogong in Victoria's alpine region, and was established in the 1940s to house migrants who worked on the Kiewa hydro-electricity scheme. There is one sawmill in the district that provides significant local employment through production of a variety of value-added products. The most significant change identified by workshop participants has been the downsizing of the hydro-electricity operations. Although this led to significant employment loss, high community attachment to the area has encouraged people to stay and

create new employment opportunities, particularly in relation to tourism. Workshop participants expressed a balanced approach to forest management and wanted to see improved forest management practices, multiple use regimes in place, and farm forestry opportunities encouraged.

Myrtleford

Myrtleford is a mixed industrial, commercial and agricultural district, with excellent recreational opportunities and an ethnically diverse community. In Myrtleford, 7.39% of the population are employed in agriculture and forestry (predominantly softwood operations). Workshop participants identified the development of tourism as the most significant change in the district. Promotion of tourism, particularly, the renaming of the Great Alpine Road, has assisted tourism development in Myrtleford. With this dual forest linkage through the softwood industry and tourism, workshop participants raised a spectrum of forest related issues relating to forest management, agriforestry, biodiversity, non-economic value of forests, local employment and ecotourism.

Forest Values and Usage

Forest values and uses were also examined across the six case study areas. 'Representation of Place' maps generated by community workshop participants were used to capture the range and diversity of values people ascribe to their local environment.

It is evident from the community workshops that people living within the North East region participate in a variety of economic, recreational and cultural forest related activities and identify with a range of forest values. The following is a summary of the forest values and uses nominated by workshop participants across the six case study areas. Maps and further information from the community workshops are included in this report. This information provides an insight into the variety of values and uses that people associate with the forests of the North East. However, given that it was derived from workshop participants it should not be viewed as a comprehensive assessment of the range of uses or the only locations where those activities or values occur.

- ***Historic*** eg historical gold mines, saw mill history, cattlemen's festival, historic areas accessed by 4WD, Italian intern camps, memories of childhood, historic research, aboriginal history and culture, hut site, bushrangers, railway lines

- ***Aesthetic*** eg sightseeing, scenic views from Powers Lookout, native wildflowers, Murmungee landscape, river and surrounds, photography (orchids, funghi), bird and mammal watching, wildflowers, landscape, visual amenity, waterfalls, scenic drives, pink granite rock

- ***Environment*** eg National Park iron bark stand, environmental policy: Greening Delatite, blue algae at Lake Mokoan, water quality trials, salinity control, mammal surveys, regional parklands, landcare, gemstones, botany, wet sclerophyll forest, water catchments

- ***Recreation*** eg river fly fishing, camping, horse riding, 4WD, water recreation, skiing, picnicking, boating, great mountain race, winter sports, canoeing, barbeques, swimming, rock climbing, orienteering, mountain bike riding, trail bike riding, deer/ duck hunting, bushwalking

- ***Economic*** eg tourism, firewood collection, apiary, trail horse operators, farming, timber

harvesting and milling, gold mining, vineyard/ wineries, olive production, summer tourism, cattle grazing, plantation development, geological activity, prospecting, ash eucalypt regrowth, blue gum logging, restaurants, experiential and eco-tourism

- ***Social/ Cultural*** eg sheer enjoyment, Mansfield Country Festival, family ties, Tolmie Spots Day, arts and cultural activities, Mt Pilot full moon parties, visiting friends and family

- ***Education*** eg nature study, school trips, school camps, timbertop school visits, youth skills development project (portable sawmills), forest interpretation, field naturalist activities, retreats

- ***Safety*** eg SES/ Police search and rescue.

Conclusion

The information collected as part of the social assessment process indicates there are a range of positive and negative impacts that may be associated with changes in forest policy within the northeast region. These impacts will vary according to geographic location, regional/community context and by stakeholder group.

It is evident from the data collected in the telephone survey, that there is a perception among respondents, particularly those in the eastern and south-western sectors of the region, that a reduction in forest industry activity within the region could adversely impact on their communities. Such change could result in increased unemployment and associated financial hardship.

It is also evident that links exist between small rural communities and other localities within the region. Townships such as Myrtleford, Beechworth, Mount Beauty, Wangaratta and Albury comprise the primary catchment for forest industry expenditure. Many of these townships also constitute a secondary catchment, with the inclusion of townships such as Bright and Wodonga. The tertiary catchment extends beyond the main centres of Wangaratta and Wodonga to Seymour and Melbourne. An understanding of the linkages between resource use, communities and other localities within and outside of the region is important in determining the extent and nature of positive and negative impacts likely to be experienced as a result of changing landuse.

In summary, the north east region has a diverse economic base. The region is well serviced by the regional centres of Benalla, Wodonga and Wangaratta, and social infrastructure provision is good. The region is experiencing growth in particular industries such as tourism and recreation, though it is perceived that agriculture and plantation development also provide future regional economic opportunities.

While the data collected in the Social Assessment will be used to inform the RFA decision making process, it is hoped that the report may also be useful in facilitating future social and economic development within the North East region.

Introduction

The first section of this report defines social assessment and highlights the importance of considering this approach within a natural resource planning context. The section provides a brief overview of the social assessment process, outlining the methods employed. A multi-method approach to data collection has been adopted utilising survey, interview, workshop, networking and participant observation techniques. Public involvement is a critical component of any social assessment process and as a result the methods employed have been selected to maximise community participation, where possible.

The second section of the report provides a description of the North East region and identifies the major social changes that have occurred in the region in relation to forest land use. Through the use of historical analysis and a comprehensive review of secondary data sources, including state and regional statistical information, a picture of the social environment within the region is constructed.

Section three identifies the views of stakeholder groups with an interest in the management and use of native forests within the region. The stakeholder analysis is based on discussions and consultations held with a range of key stakeholders groups and individuals at a state, regional and local level. This information is supplemented by data obtained through mail surveys of forest related industry employees, and a telephone survey of the wider regional community.

Section four identifies the linkage between land used by timber and forest-related industries and communities. Survey and catchment analyses are used to identify employment, expenditure and service use patterns across the region and to highlight communities with a particular dependence upon the forest resource.

Section five provides information on six case study areas which are intended to characterise the social and economic diversity of the region. Profiling work at the local level provides an analysis of a community's ability to respond to change, the community's relationship with the forest, patterns of land use, use of services, and the community's future visions for the areas they value and use.

1 Methodology

The social assessment approach employed in the Regional Forest Agreement process for the North East Region of Victoria reflects the work of social assessment practitioners such as Dale and Lane (1994) and Taylor, Bryan and Goodrich (1990), who propose an iterative and adaptive issues-oriented approach to social assessment.

The aim of the social assessment process is to provide a better understanding of the social environment within a particular region to inform the development of a Regional Forest Agreement. This involves the collection of objective facts such as population statistics, and the documentation of community values and perceptions on particular issues. Certain methods employed within the assessment process, such as the random survey method, may be considered more representative than other methods such as workshops. However, when a triangulation approach is adopted, which utilises both quantitative and qualitative methods of inquiry, the validity or accuracy of the information collected is enhanced. Triangulation attempts to integrate data collected through different methods and sources to gain a more comprehensive understanding of the domain under investigation.

While much of the data collected in the process is of a cross-sectional nature, whereby a sample of the population is selected and information collected at one point in time, historical analyses have been undertaken to place the present social environment in an historical context of change. It is important to note that research design and the choice of data collection methods depends largely on the nature of the problem under investigation, the population being researched, the extent of resources available and the constraints of the framework in which social assessment is being undertaken.

The following criteria (Table 1.1) were considered to be important in relation to a community's sensitivity or vulnerability to change. Relevant indicators were established for each criterion and measured at a community level of analysis, where appropriate. The table also identifies the data collection methods employed. These methods are outlined in detail later in this section.

Data collected in the assessment phase will be used as a platform from which impact predictions can be made during the integration phase of the Regional Forest Agreement process.

Quantitative Data Collection Methods

Social Indicators

Social indicators are measures of community and social well-being that are measured at regular intervals, enabling the determination of trends or fluctuations. For example, crime and unemployment rates may be considered indicators of community vitality.

Social indicators may also be descriptive measures of social conditions or analytical measures of social well-being with specific interrelationships with other variables. Social indicators are often used to monitor the impacts of large scale social change on the quality of life of residents.

Table 1.1. Social Indicators

Criteria	Indicators/Variables	Method of collection
Economic Viability	· Industry diversity · Industry by employment · Size of local businesses · Household income · Number of dwellings sold	Review of secondary data sources such as ABS and IRDB (Integrated regional database) statistics, shire/council reports
	· Local and regional expenditure patterns of forest-related industry within the region · Household expenditure patterns of forest-related industry employees	Surveys of forest-related industries and employees of these industries
Forest Industry Employment and Labour Force Characteristics	· Profiles of occupational groups working in forest related industries (e.g. number of workers, years worked in the industry, experience in other industries, age and structure of workforce, educational level)	Review of secondary data sources such as ABS, IRDB statistics, previous research within this population Information from industry associations Surveys of forest users
Population Characteristics	· Projected population size · Population growth, Population mobility · Median family income · Age structure · Median monthly mortgage repayments · Median weekly rental · Number of mortgaged houses · Percentage of private authority dwellings · Percentage of occupied rental dwellings · Educational qualifications · Family distribution/Ethnicity	Review of secondary data sources such as ABS, IRDB Shire/council, government agency reports
Provision of social infrastructure	· Extent and use of community services such as Education, Health, Welfare and Recreation.	Review of secondary data sources such as ABS, relevant government agency reports and statistics, community service directories
Community Vitality	· Proportion of family in the community · Degree of pride in the community · Length of residence/Desire to relocate · Political Efficacy · Membership/participation in community organisations · Degree of crime · Housing ownership, Income distribution · Dependence upon social security · Rate of unemployment	Review of secondary data sources such as ABS statistics. Survey methods Qualitative assessment through informal interviewing, participant observation, networking, and community workshop
Social Well-being	· Density of local ties · Sense of community · Attachment to place	Review of secondary data sources such as ABS and relevant agency statistics Survey methods Qualitative assessment through informal interviewing, participant observation, networking, and community workshops
Historical response to change	· Qualitative assessment of historical response to change in recent years. What have been the significant events and how has the community responded or managed change?	Review of secondary data sources such as archival records, oral histories, social indicator data. Interviews and community workshops
Community Visions/ Aspirations	· Qualitative assessment of the potential for alternative economic opportunities for the township or region	Informal and semi-structured interviews, and community workshops
Community attitudes towards forest use and management	· Quantitative and qualitative assessment of community attitudes to forest use and management and potential impacts resulting from changes in resource availability	Surveys, community workshops, and structured interviews

In the present assessment, census data and other social indicator data sets such as those held by Commonwealth and State government agencies (e.g. health, education) were examined to identify the key social indicator variables within the North East region and to examine these indicators over time.

Through the use of social indicator data, a Community Sensitivity Index can be developed to assist in the identification of communities most sensitive to change. A detailed discussion of the theoretical development of the index can be found in Coakes and Fenton (1998).

Survey methods

The survey method is designed to deal with the nature of people's thoughts, feelings and perceptions on particular issues. The survey involves the development of a number of questions/items that utilise a number of pre-determined response categories. An individual's perspective's and experiences can also be collated and assigned numeric codes to assist in analysis.

A major advantage of using survey methods is that they allow a sample of the population to present its views. Survey methods which employ probability sampling techniques allow a random sample of the population, resulting in a relatively accurate representation of the views of the community as a whole. However, survey methods are not without their limitations, the main disadvantage being that such methods are only snapshots in time and are often not an adequate substitute for the dynamic interaction and development of ideas that occur in face-to-face discussions. This difficulty can be overcome if the survey method is used in conjunction with other methods such as in-depth interviews or workshops which provide a means to validate the information obtained.

A number of general survey methods exist. Those methods used in the present assessment are outlined below, namely the mail survey and the telephone interview.

Mail Survey

The mail survey is one of the most common means of distributing self-administered questionnaires. Interviewer bias is avoided as the survey is self-administered and can be completed relatively quickly. However, this method has a number of disadvantages in that respondents are unable to clarify questions should they need to and the researcher has little control over how the survey is completed. For example, variability among responses to a given question may exist as respondents may choose to work through the questions in different sequences. Furthermore, one of the main problems associated with the mail survey is response bias. That is, mail surveys tend to exclude respondents with literacy problems and can be intimidating to those with limited educational background. In addition, response rates for mail surveys tend to be fairly low (standard response rate of approximately 10%) and thus the degree of error or bias in the sample increases. However, despite these limitations, the mail survey does provide a useful means of obtaining information from people from different backgrounds across a wide geographical area.

Three separate questionnaires were designed for the mail survey of industries in the North East. They included a questionnaire to be completed by forest contractors, timber processing industries and forest user businesses (eg. apiarists, seed collectors, grazing licensees), a questionnaire to be completed by tourism businesses and a questionnaire to be completed by employees of forest contractors, forest users, tourism operators and mill employees.

These questionnaires were distributed by mail to timber processing industries, timber harvesting contractors and businesses with apiary, seed, mining, prospecting, roading, firewood and cattle grazing licence interests on public land in the region. Databases and mailing lists held by Victorian State Government agencies and industry peak bodies were used as the basis for sampling.

Tourism businesses and employee questionnaires were distributed by mail to all tourism businesses identified by regional tourism development agencies and tourism businesses who held licences or permits to operate within forest areas in North East Victoria. (Further detail of methods is provided in Section four).

Community Telephone Survey

Telephone surveys are often chosen for survey research due to lower cost, enhanced data quality, ease of administration and reduced data retrieval time. Major advantages of such a method are that interviews can be completed quickly and because contacts are made by phone, a greater number of people can be sampled, resulting in a higher response rate. A major drawback, however, involves the problem of selection bias, that is respondents are limited to those who have telephones. While this has been of concern previously, it is now reported that over 95% of all households in Australia have telephones. In addition, there may also be a limit as to how long respondents are willing to remain on the phone. However, techniques in questionnaire construction and interviewing procedure can reduce this problem. It has also been suggested that individuals may be reluctant to provide information to a 'faceless voice' (Shaughnessy & Zechmeister, 1990).

- *Sample Size*

The community telephone survey undertaken in the North East as part of the social assessment work was based on a telephone sample size of 1,100. A sample of this size permits considerable statistical confidence when making inferences from a sample to the overall regional population. The sample size allowed five sub-regional samples to be drawn from the total population of the North East Victorian RFA region, with each regional sample having a sample size of around 220 as shown in Table 1.2.

- *Sample Selection*

Random sampling was used to identify households from within the North East region to be involved in the telephone survey. The published white pages directory for Victoria was used to randomly select household phone numbers.

Sampling was based on the random selection of telephone numbers from within five sub-regional areas (See Figure 1.1). The five sub-regional areas were defined on the basis of, the percentage of the population within 1991 Census Collector Districts (CCDs) that were employed in forestry and agricultural industries. Contiguous areas with similar percentages of the population employed within forestry and agriculture were then used to define the five sub-regional sectors used in this study (Table 1.3). Essentially this approach stratified the population in relation to residence within CCD areas with varying levels of employment in the agriculture and forestry industries, but at the same time constrained the

Table 1.2. Final sample sizes for sub-regional sectors

Sector	Sample Size	Percentage
Border	220	19.9
Eastern	217	19.7
North West	218	19.8
Central	223	20.2
South West	225	20.4
Total sample	**1103**	**100.0**

Source: EBC (1998).

Table 1.3. Geographic stratification of telephone survey sample within the North East

Aggregation of Census Collector District Values (91)	No. of Occupied Private Dwellings	Percentge in Forestry & Agribulture
Border	8,406	1.65
Eastern	7,070	23.07
North West	4,082	14.23
Central	6,757	15.75
South West	6,982	17.27
Total NE Region	**33,297**	**14.39**
Total Victoria	**1,639,841**	**6.00**

Source: *ABS (1991).*
Prepared by: *EBC (1998).*

stratification to contiguous and adjacent geographic areas.

As the study was to be based on five regional sectors defined using CCD boundaries, each town, and all telephone numbers within the town, were allocated to one of the five geographic areas. Telephone numbers were then randomly sampled, using simple random sampling, from within each of the five sectors. Using this procedure, where simple random sampling occurs within each sector, the sample within each sector was distributed in proportion to the number of households within each town, district or area in each sector.

- *Questionnaire Design*

The most important constraint on the design of the questionnaire was that it must be able to be completed through a telephone interview and that the maximum interview duration could be no longer than 15 minutes.

The questionnaire focused on the significance of forest value to the community in the North East region (see Appendix A).

Several questions within the questionnaire asked respondents to indicate their level of

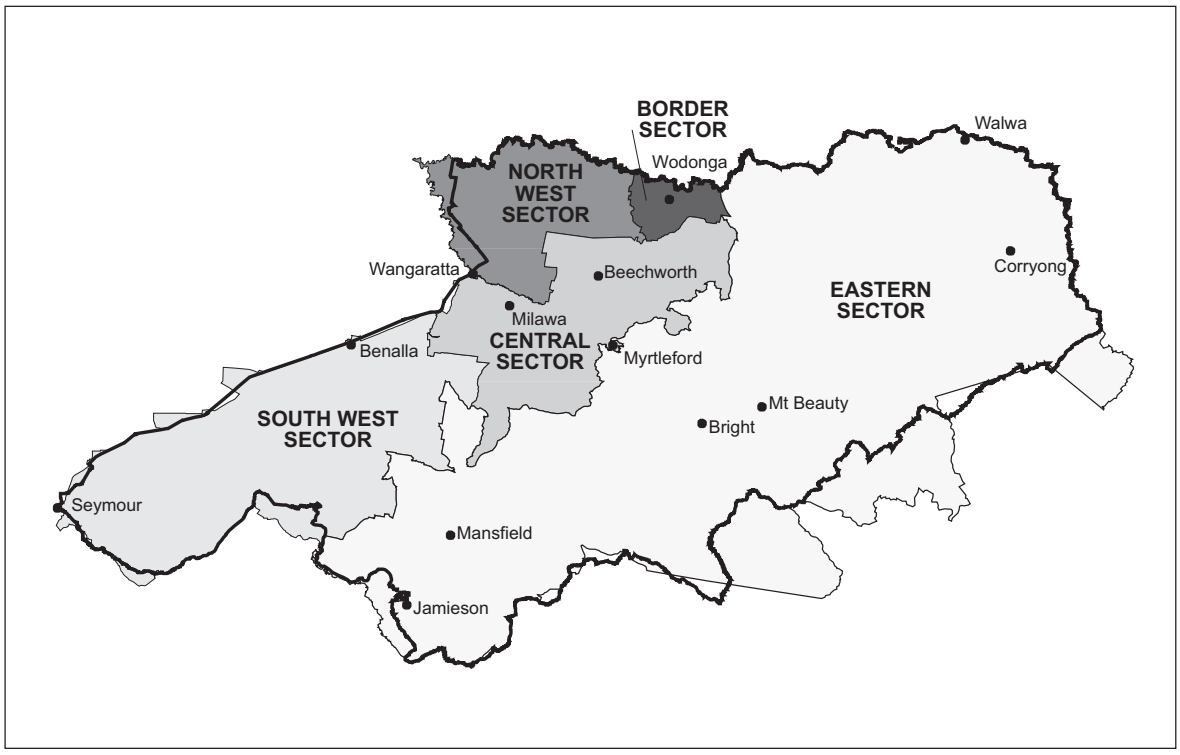


Figure 1.1. Map of the random telephone survey sectors

concern in relation to environmental issues. The term 'concern' is a technical term used in the social assessment of environmental values and should not be interpreted as reflecting either a positive or a negative evaluation of the environment or environmental issues.

The questionnaire was pre-tested on a random sample of 20 respondents in the North East. Only minor changes to the questionnaire format were required.

Telephone Interview Procedures

Thirty-five telephone interviewers were used to undertake the survey. Each interviewer was supplied with a list of randomly selected telephone numbers in a random order and was required to systematically work through the list until the required number of interviews had been obtained. Interviewers were instructed to make up to three recalls on those telephone numbers that were not answered on the first occasion.

The list of telephone numbers supplied to each interviewer was randomly sorted and randomly selected from the total list of randomly selected telephone numbers from throughout the North East region. This procedure minimised bias that may have occurred if interviewers had used lists of telephone numbers from specific regional areas.

The interviewers were instructed to obtain interviews with those respondents aged 15 years and over. Interviewers were required to record responses to all open-ended questions using, as far as practical, verbatim wording and to avoid classifying or coding responses.

Interviews were completed between the 7th and 16th of November, 1997 between 6.00pm and 8.00pm during the week and between 10.00am and 8.00pm during the weekend. The final sample sizes for each of the five sub-regional sectors are shown in Table 1.2. The sample sizes for each of the five sectors allowed for meaningful inferences to be made to the population within each sector. However, the total sample could not be used in generalising to the total population of residents within the North East region, as each sector was not represented in proportion to the total population size.

In order to infer sample statistics to population parameters the sample was proportionally adjusted to reflect the total population within each of the five sectors. As telephone numbers were used as the primary sampling unit, the proportional adjustment was based on the number of private dwellings within each sector, as each private dwelling could reasonably be assumed to have one telephone number. The sample was proportionally adjusted by taking the total sample for the South West sector, which had the highest number of private dwellings, and proportionally adjusting the remaining four sectors relative to the sample size for this sector.

Table 1.4 shows the sample proportions required for each sector relative to the South West sector. On the basis of the derived proportions, the total sample for the South West sector was used and proportionate random samples used to obtain the required number of respondents from each of the remaining four sectors.

Table 1.4 shows the final sample size for the North East region to be 904, which consisted of sub samples from each sector in proportion to the number of private dwellings within each sector.

Table headings in this report identify whether the table is based on the *North East Sample*, as previously defined, or whether the table compares samples *Across the five sectors* and therefore makes use of the total sample.

Table 1.4. Sub sampling procedures for the North East region population sample

Sector	Private dwellings	Proportion	Sub sample size
South West	8,625	1.00	225
Border	8,584	0.99	218
Central	7,506	0.87	194
Eastern	7,318	0.84	182
North West	3,401	0.39	85
Total	**35,434**		**904**

Note: *The number of private dwellings is based on ABS (1991) census data for each of the five sectors. Relative proportion is given relative to the South West, which has the highest number of private dwellings Sub sample sizes are defined relative to the total sample size for the South West sector.*
Source: *EBC (1998).*

Quantitative Data Analysis

Quantitative data collected during the course of the assessment was coded and analysed using the Statistical Package for the Social Sciences (SPSS). Depending on the nature of the research problem, different descriptive, univariate and multivariate statistical analyses were undertaken including frequency analysis, multiple response analysis, cross tabulations, analysis of variance (ANOVA with planned comparisons) and factor analysis.

Qualitative Data Collection Methods

Documentary Review

Written materials provide a record of the historical development of the region, and a current profile of key issues. Documents such as government reports, shire directories, consultancy reports, research projects and documented local histories, provide an easily accessible and reliable source of information that is recognised within the communities described. Information was also obtained through informal networks, particularly face-to-face contact, to validate and complement information obtained through other sources.

Informal Networking

Informal networking involves both systematically observing and participating in the day-to-day life of communities, organisations and groups. The technique seeks to identify the social factors that shape daily life of communities in the region. Face-to-face relationships with individuals allows a qualitative understanding of important social phenomena to be developed.

Informal networking allows the collection of data on a range of behaviours, a greater variety of interactions and a more open discussion of issues. It is an open-ended, flexible and interactive process, where the data collected is defined and redefined based on field experience and observation. The technique is particularly useful when used in conjunction with other methods.

The main weakness of the method is in assessing the reliability of the data and the time required to obtain and analyse the information collected.

The Forest Community Coordinator for Victoria has been extensively involved in fieldwork within the North East region throughout the social assessment process.

Personal Interviews

The personal interview method allows much more flexibility than the mail survey as respondents are able to clarify questions which may be unclear and the interviewer is able to ask respondents to elaborate on their answers to open-ended questions. In addition, the response rate for such a method is usually relatively high (commonly 80-85%). However, one of the main problems with the approach is interviewer bias, that is the way in which questions are framed and the probes used to facilitate responses. Interviewers should be a neutral medium through which questions and responses are transmitted. Therefore questions need to be asked in the same way and interviewers must be careful not to introduce ideas that may become part of the respondent's answers. Extensive training and close supervision help to alleviate such problems. Personal interviews may differ in structure from those which are more structured and systematic in nature to those which take on the appearance of normal everyday conversation.

Interviews that are less structured, afford the interviewer the freedom to explore, probe and ask questions on a specified range of topics and issues, and provide more freedom and flexibility in approach. In an unstructured interview, the interviewer decides on the sequence of questions during the course of the interview, increasing the comprehensiveness of the data and making the data collection more systematic. The greatest strength of this approach is that the interviewer is given the liberty to develop conversational style with the interviewee which in turn enables individual perspectives and experiences to emerge more naturally. The main weakness, however, is that salient topics may be omitted and due to interviewer flexibility in questioning, different responses may be obtained. The use of only one interviewer can reduce this problem of incomparability.

Community Workshops

Community workshops provide a forum to generate a 'group product' such as lists of issues, conceptual alternatives, impacts or mutually acceptable plans of action. Workshops are best used when there is a specific problem or issue that needs to be addressed. Techniques that may be employed in the workshop process include: brainstorming, nominal group process and subgroup discussions. Following the identification of issues, similar techniques can be used to weight or rank issues and investigate ways in which issues can be addressed. The workshop process has a number of strengths. It facilitates maximum flow of information and allows participants to explore solutions to issues or problems. However, depending upon workshop size it may be difficult to keep participants focused on a particular project. Despite these limitations, workshops afford a collective analysis of a problem(s) from people with a diverse range of backgrounds.

A variety of sampling frames have been employed to access participants in the process. Contacts made with participants at a local community level have occurred largely through a process of networking. Networking is one of the most informal of all participatory techniques and begins with contact with key groups or individuals in a community and then 'snowballs' throughout the wider community in a process commonly referred to as 'snowball sampling'. This approach provides an effective means of accessing the formal and informal networks present in a community.

Qualitative Data Analysis

There are a variety of techniques which can be used to analyse qualitative data collected through interview and workshop methods. The techniques employed in this assessment

included content/theme analysis and analytical induction methods.

Feedback and Evaluation

Results of the social assessment are provided to stakeholders and local communities involved in the process through the publication of this report and through the Forest Community Coordinator for Victoria.

Expert Panel Assessment

A reference group of social assessment experts has been established to provide technical expertise relating to the methodology and approaches adopted by the Social Assessment Unit in the course of its work. This group has met regularly since the beginning of the Regional Forest Agreement process, most recently in April 1998. Membership of the panel includes representatives from the scientific and academic sectors:

Dr Alan Dale
Regional Planner
CSIRO Tropical Agriculture
Cunningham Laboratory
Queensland

Dr Jacquie Tracey
Senior Project Officer
Industry Development
Forestry Structural Adjustment Unit
Department of Land and Water Conservation
Sydney, New South Wales

Dr Brian Bishop
Associate Professor
School of Psychology
Curtin University of Technology
Perth, Western Australia

Dr Marcus Lane
Postdoctoral Research Fellow
Department of Landscape and Environmental Planning
RMIT
Melbourne, Victoria

All panel members have extensive research and applied experience within the social impact assessment field and have published extensively in national and international forums.

2 Regional Social Change

Social Change

Social change is widespread and is evident in all social systems (Moore, 1974; Smith, 1976). However, despite the supposed normality associated with social change, the understanding of the change process remains limited, due to both inadequate theoretical development of concepts and a paucity of detailed local research on the issue (Jones & Tonts, 1995). Furthermore, there are many common myths or misconceptions associated with social change. These suggest that change is deviant or atypical, that change is necessarily traumatic or stressful, and that change leads or results in a relatively uniform pattern of behaviour (Thomas & Veno, 1992).

While change can be considered a relatively normal phenomenon, that carries no implicit trauma and comes in a diverse range of patterns and alternatives open to society, the origin and rate of change can produce stressful consequences. For example, change may be perceived as more stressful if imposed from outside, and if it occurs too rapidly or too slowly. Rogers (1983) identifies a number of impediments or barriers to coping with social change. These include:

- Value systems - local cultural values may be inconsistent with values and lifestyles underlying proposed social changes.
- Social Structures - high degrees of social inequality, community fragmentation and vested interests may impede change.
- Opposition to the goals of change – people may resist change when change is perceived to be a threat to their basic security, when the change is not understood and when the change is imposed upon them.

However, as Lauer (1982) notes not all change is resisted. In many cases, change is welcomed, yielding significant positive effects at both an individual and a community level.

Social Change within Rural Australia

Many researchers have outlined the many changes occurring in rural communities across Australia. Lawrence (1996) categorises these changes into four basic categories, namely economic, political, environmental and social factors.

From an economic perspective, major international and national economic pressures have affected primary industries, forcing these sectors to increase efficiency and productivity. While this has led to more competitive, export-oriented operations, this has been accompanied by a contraction in employment in many rural centres, shrinking business activity in rural towns and an out-migration of young people seeking new educational and work opportunities.

The economic decline experienced in rural communities across Australia has been exacerbated by the centralisation of services to larger regional centres and the reduction and withdrawal of a range of services from small rural communities. Impacts have been experienced predominantly in the health and education service sectors, but also in the financial sector (e.g. closure of local banks).

From an environmental perspective, the ongoing use of natural resources has brought into question the issue of resource sustainability. Environmental issues such as salinity, erosion, acidification and biodiversity protection are major issues across some parts of the Australian landscape. Rural industries are being increasingly required to address their current practices to ensure sustainability of resources into the future.

Furthermore, the nature of what is 'rural' is changing. As rural communities strive to maintain their economic viability, through diversification of the traditional rural industry base, the social fabric of rural communities is also affected.

Due to the nature of rural communities, that is their isolation and their cultural traditions, their response to change may be quite different from the responses of other areas. For example, Kapferer (1990) suggests that due to their isolation, there has been a necessity for rural communities to develop as self-contained entities, resulting in a prevailing culture of self-reliance and a reluctance to seek help or assistance. The development of initiatives by communities to increase their local viability, is also seen to exacerbate the degree of competitiveness between rural areas.

While it is evident that communities have, and are continuing to respond to change, it is necessary to understand that the interrelated effects of a number of changes over time are likely to be greater than if they are considered independently. A community that has been affected by a succession of adverse impacts, is likely to have less adaptive potential compared with a community that has been a relatively unaffected by change (Carley and Bustelo, 1984). Therefore, while social assessment must attempt to isolate the effects of particular changes from others, it is important to place such change in context.

Recognition of the perspectives of the communities concerned is essential in any form of social assessment. Impact analyses are likely to be inaccurate if they discount the impacted people's values, social dynamics, and beliefs about events. The people directly affected are in the best position to say how they actually experience events. In predicting the potential impacts of forthcoming policies, people's own predictions, in the form of optimism and concerns, are a significant component of behaviour and hence the impacts likely to be felt (Ross, 1990).

Often, the way in which a community has responded to change in the past, may influence its response to change in the future. An historical assessment of change may be useful in identifying impacts of previous proposals and the response of communities to these changes.

The following section describes the context for the social assessment work in the north east region of Victoria. The section examines the main economic, political and environmental factors that have driven change within the region, and the ensuing social change.

2a Regional Profile

Geographic description

The RFA region is located in the north east of Victoria. It extends from the central Victorian townships of Seymour and Mansfield in the south, to Rutherglen in the north-west, and Corryong in the north-east. The region partially includes Victoria's High Country and it encompasses a network of State forests, in addition to numerous parks and reserves, including Alpine and Mount Buffalo National Parks. The region is noted for its extensive river systems and waterways which include the Ovens River, the Kiewa River, the Mitta Mitta River, Lake Eildon, Lake Dartmouth, and the Hume Weir.

Approximately half of the region is privately owned and most of it is used for a range of agricultural activities such as beef production and viticulture.

The RFA North East region extends across a range of municipalities listed in Figure 2.1 and the following table.

Local Government Areas	
Alpine Shire	Wodonga Rural City
Delatite Shire	Mitchell Shire (partial)
Indigo Shire	Murrindindi Shire (partial)
Towong Shire	Strathbogie Shire (partial)
Wangaratta Shire	

Historic Description

Aboriginal history

Victoria's North East is the traditional land of several Aboriginal tribes - the Minjambuta, Jaitmathang, Ngarigo, Taungarong, and Braiakaulung. Approximately 2,000 Aborigines occupied the alpine region prior to the arrival of Europeans (Gardner 1992: 93).

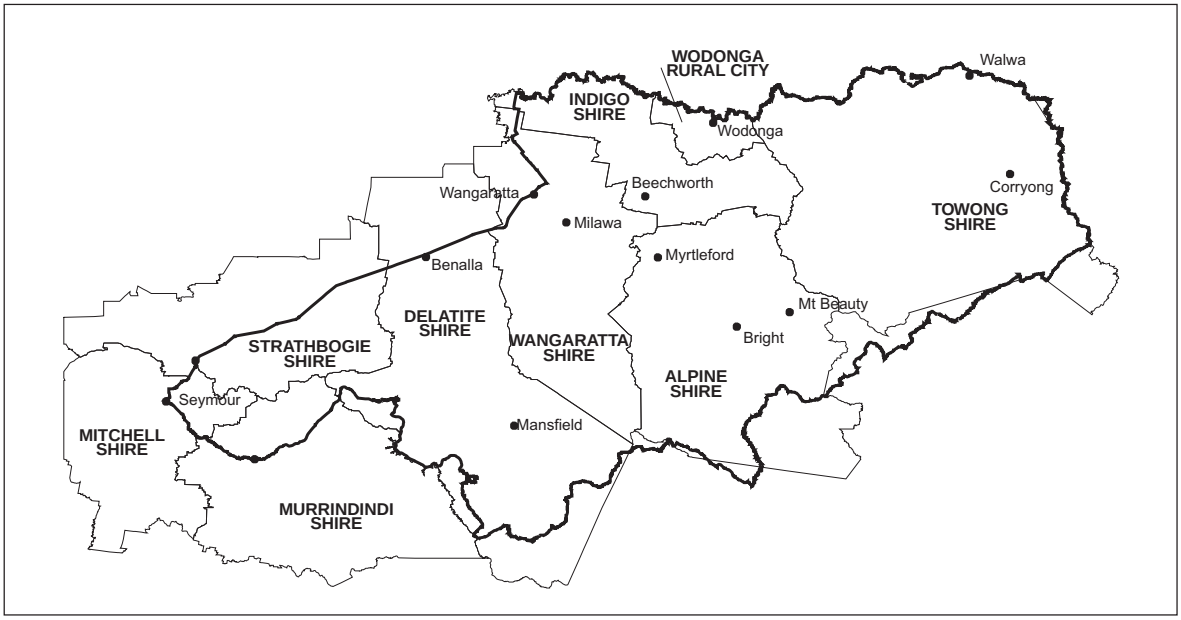


Figure 2.1 Map of the region - LGA boundaries & regional centres

These tribes lived most of the year in the valleys flanking the mountains, but during summer, entered the alpine region to search for the Bogong moth (Flood 1992). The seasonal arrival of the Bogong moth attracted aboriginal tribes in search of rich and abundant food supplies. The moth season was also the focus for gatherings of neighbouring tribes which provided the opportunity for exchange of songs, trade, initiation ceremonies and corroborees.

Evidence of past Aboriginal occupation in the North East has been uncovered by recent archaeological studies which have located the remains of tools, burial sites and Aboriginal art. There is also evidence of the use of fire as a tool for managing hunting and access. Fire was used throughout the region to encourage regeneration, particularly of edible plant foods and exposed edible roots (Boutland 1992).

With the arrival of European settlers and the establishment of land holdings, Aborigines were displaced from their traditional camps and hunting grounds. In less than a decade the North East Aboriginal tribes had virtually disappeared due to attacks from early settlers and disease. Survivors were driven from the Alpine area into missions at Lake Tyers and Lake Wellington.

European arrival

In 1824, Hume and Hovell crossed the River Murray near Wodonga on the first overland trip from New South Wales to Port Phillip. Settlement of the Albury-Wodonga district and east towards Cudgewa and along the Mitta Mitta River, followed in the 1830s. By 1840, land in the Wangaratta district had been settled along the Broken River, Seven Creeks and the Mansfield plain.

In search of further grazing country early settlers looked to the mountains of the North East. Stock was introduced to the high plains in spring and summer in order to allow home pastures to recover. By the 1880s, this annual migration became common practice and boundaries were marked through the allocation of blocks and the issuing of leases.

In 1854, botanist Baron Ferdinand JH Mueller made extensive explorations into the high country of the North East region, to collect and record native plant species. His expedition also contributed to the mapping of the alpine region.

The discovery of gold in north east Victoria in the 1850s saw an influx of prospectors to the region. Beechworth became a major focus of gold digging activity after the discovery of alluvial gold in 1852. A township was surveyed at Beechworth in 1853 and three years later Beechworth was recognised as the regional capital of north-eastern Victoria. Rapid population growth resulted in profitable markets for produce and livestock, and the expansion of local businesses. Other townships were established at Yackandandah, Chiltern, Myrtleford, Bright and Harrietville.

Construction works and increased mining activity throughout the 1850s, resulted in a greater demand for timber resources. While timber supplies had formerly been the by-product of land clearing for agricultural purposes, the mid-nineteenth century saw the development of saw mill businesses to meet local demand and Melbourne markets.

An increase in bushranging also accompanied the Victorian gold rush. Bushranging crimes ranged from cattle hustling and horse stealing to highway and bank robberies. Notorious bushrangers of the North East include Bogong Jack and Ned Kelly. The Kelly gangs bushranging saga unfolded in the townships of Benalla, Euroa and Glenrowan.

The turn of the century saw a renewed interest in regional development and scientific advancement. The search for potential sources of electrical power led to the formation, in 1911, of the Victorian Hydro-Electric Company. In 1921, the State Electricity Commission replaced the Company and an ambitious scheme to exploit the Kiewa River for power gained momentum.

The final version of the Kiewa Valley project presented in 1946 envisaged the construction of two large dams and a series of underground power stations designed to generate 289MW. The project employed around 4000 men and the township of Mount Beauty was constructed to house the workers. The project, however, stalled due to a post-war economic crisis, the labour force was cut and the final output was a reduced capacity of 189W.

In 1949, plans for a larger hydro-electric project, the Snowy Mountain Scheme, gained support from the Victorian and Commonwealth governments. Post World War II immigration provided much of the labour power essential to the realisation of the scheme.

Socio-Demographic Profile

Population

In 1996, the total population of the North East region was 174, 378. In recent years, the North East has experienced stable growth, slightly above the growth rates of regional Victoria, and Victoria. Table 2.1 compares the population size and growth rates of these regions.

Historical Population Growth

An extended time series analysis highlights key shifts in population in the North East region (see Figure 2.2). Since the 1950s, the North East has experienced steady and substantial population growth. Prior to the mid 1970s, the North East grew at a slower rate than Victoria, however, since the early 1980s this trend has reversed. Lower population growth rates in Victoria in recent years are attributed to a decline in fertility rates and interstate migration from Victoria.

The increase in population growth in the mid-1970s in the North East is attributed to the Commonwealth Government's decentralisation policies which promoted massive in-migration to the Albury-Wodonga area for business and employment opportunities. The promotion of Benalla as a major administrative centre for State and Commonwealth Departments during the 1970s is also a component of accelerated growth (Department of Infrastructure, 1997).

Population Structure

In general, the North East age structure is consistent with Regional Victoria. As illustrated in Figure 2.3 following, there is a slightly higher proportion of high school students (13-17 years) in the North East (8.17%) in comparison to Regional Victoria (7.89%), and a slightly higher proportion of

Table 2.1. Population of RFA North East, Regional Victoria and Victoria.

	1986	1991	1996	Annual average growth rate between 86 & 96
North East	154,215	169,877	174,378	1.31%
Regional Victoria	1,148,324	1,220,901	1,234,564	0.75 %
Victoria	4,012,265	4,243,532	4,354,113	0.85 %

Source: ABS, 1986-96.

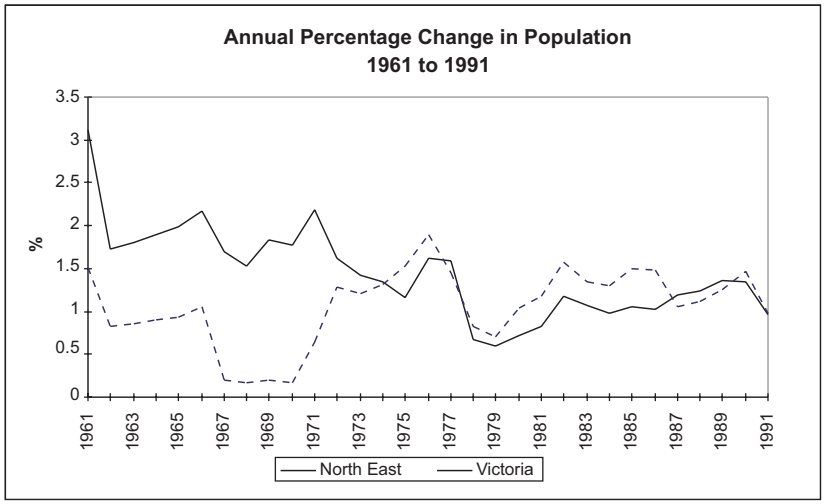


Figure 2.2. Annual Percentage Change in Population 1961 to 1991
Population figures are based on ABS census figures supplied by the Department of Infrastructure. To retain continuity over time, the trend analysis above is based on old local government area boundaries that approximate the North East region. Source: ABS, 1961-1991.

young adults/ parents (25 -39 years) (North East, 21.99%; Regional Victoria, 21.27%). Like most rural areas, the North East has a significant proportion of elderly and early retirement residents (26.41%). However, the proportion of elderly residents is lower than the average for Regional Victoria (27.43%).

Figure 2.4 identifies changes in the North East's age structure since 1986. The age groups that have experienced the most growth in the past decade have been mature adults/ parents, early retirees and elderly residents (40 years and over). The age groups that have experienced a decline in growth in the past decade have been teenagers and young adults (13 - 39 years), and, to a lesser degree, infants and children (0 - 12 years).

The ageing of the North East population is consistent with Regional Victoria, although there are some minor variations. While the North East has experienced more growth in the 40 to 65 age bracket, Regional Victoria has

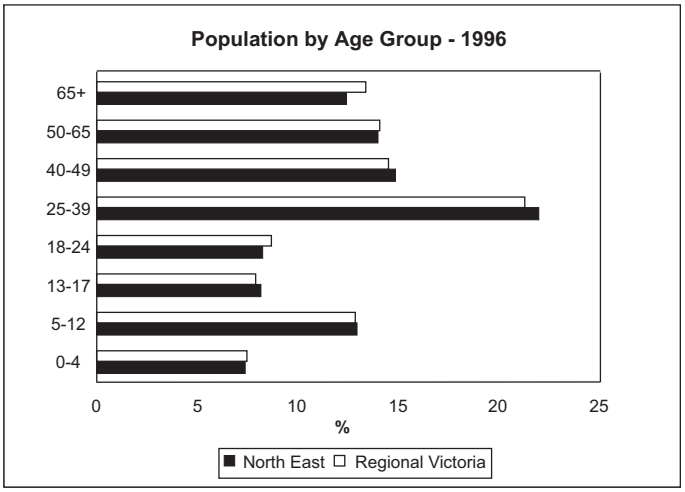


Figure 2.3. Population by Age Group - 1996
Source: ABS, 1996.

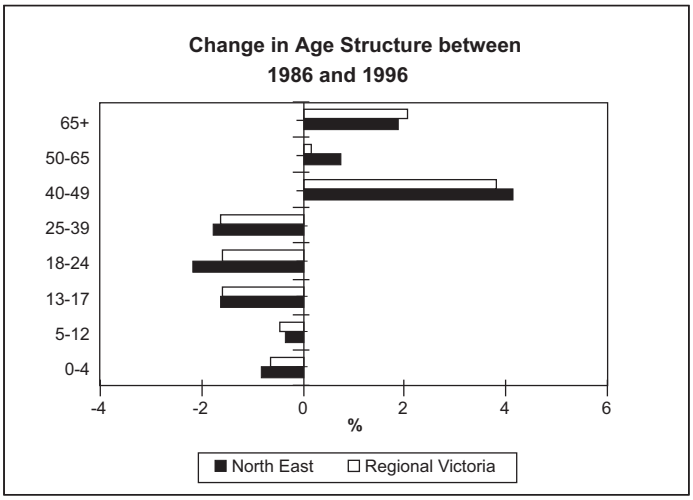


Figure 2.4. Change in Age Structure between 1986 and 1996

Source: ABS, 1986-1996.

experienced more growth in the 65 plus age group. In the younger age groups, the North East has experienced slightly greater declines in population, with the exception of primary age children (5 - 12 years).

Future population growth

The population growth rate of the North East is expected to fall in the long-term. This is primarily attributed to the ageing population evident in the North East region and Victoria in general. Despite an anticipated decline in population numbers, tourism and retirement areas, particularly around Lake Eildon, Bright, Beechworth and along the Murray River, are most likely to experience growth due to the in-migration of retirees seeking a rural lifestyle (Department of Infrastructure, 1997).

Residential mobility

Higher growth rates experienced in the North East in recent years, in comparison to Regional Victoria, are reflected in a higher proportion of new residents. In 1991, 78.8 % of residents in Regional Victoria had lived at the same address five years ago, with 63.2% of residents in the North East also living at the same address. This difference is attributed to intrastate migration (31.9 % of residents lived elsewhere in Victoria), primarily the relocation of Metropolitan Melbourne residents to rural townships in the region (see Table 2.2).

The telephone survey of the North East region undertaken for this assessment indicated that 74% of respondents had moved into the area in which they now live, and 26% had always

Table 2.2 Residential mobility, 1991

Residing 5 years ago	North East		Regional Victoria	
Same address	60,752	63.2 %	622,150	78.8 %
Different SLA, same state	30,602	31.9 %	125,692	15.9 %
Overseas	1,093	1.1 %	11,656	1.5 %
Not Stated	3,647	3.8 %	29,721	3.8 %
Total	**96,094**	**100.0 %**	**789,219**	**100.0 %**

Source: ABS, 1991.

lived in the area (Table 2.3). In relation to length of residence, 26.6% of residents had lived at the same address for between one and five years, 29.2% had lived at the same address between six and ten years, and 44.1% had lived in the area for over ten years. The average length of residence was 24.9 years. (EBC, 1997) (Table 2.3).

Table 2.3. Residential mobility of North East Sample

Years of residence	Frequency	Percent
1-5	134	26.64
6-10	147	29.22
Above 10	222	44.14
Total	**503**	**100.00**

Note: Where a respondent reported that they had been resident in the area all their life, their age was used in assessing length of residence.
Source: EBC, 1997

Amongst those respondents who indicated they had moved to the area, Table 2.4 shows that within the North East sample, 38% had moved to the area for work related reasons and that 37% had moved to the area for family or personal reasons.

Table 2.4. Reasons for moving to area (North East Sample)

Reasons	Frequency	Percent
Work related	245	38.3
Family or personal	237	37.1
Lifestyle	47	7.4
Environment	40	6.2
Retirement	17	2.7
Economic	5	0.8
Other reasons	48	7.5
Total respondents	**639**	**100.0**

Note: Based on only those respondents who indicated they had moved to the area (n=652).
13 respondents did not respond to this question.
Source: EBC (1997).

Table 2.5. How many years do you think you will stay in the area? (North East Sample)

Response	Frequency	Percent
Less than their lifetime	193	22.6
Rest of their life	662	77.4
Total	**855**	**100.0**

Note: 49 respondents did not respond to this question.
Source: EBC (1997).

Community Attachment

Table 2.5 shows that 77% of the telephone survey sample indicated they would likely stay in the area for the rest of their lifetime, indicating a strong sense of attachment to the region.

Ethnicity

The proportion of residents born overseas is slightly lower in the North East (9.90%) in comparison to Regional Victoria (10.37%). The ethnic composition of the North East includes a significant number of residents from the United Kingdom and Ireland, Southern Europe (predominantly Italy), Other European countries, and South East Asia. A significant number of second and third generation immigrants also reside in the area.

The North East region has experienced several waves of overseas immigration throughout its development. The Victorian gold rush in the 1850s encouraged European and Asian, particularly Chinese migrants, to the North East gold fields. Although many prospectors relocated on a temporary basis, others took advantage of the economic prosperity of these townships and established local businesses.

A second wave of immigration occurred in the 1950s following World War II. A shortfall in local labour for the Snowy River Scheme encouraged a major influx of migrants, particularly post-war migrants from Eastern/ Central Europe, (Baltic States, Poland, Germany/ Austria, Ukraine), and Southern

Europe (Italian, Greek). Migrant camps, such as Bonegilla, were established in the North East to accommodate new arrivals.
More recently, decentralisation policies of the 1970s has encouraged an increase in the number of immigrants settling in regional centres such as Albury-Wodonga. In particular, the development of the tobacco industry in Myrtleford has attracted a high number of Italian migrants.

There are a number of multicultural community organisations in the North East, in addition to ethnic targeted government services. For example, in Wangaratta and Myrtleford there are active Italian Pensioner Clubs and Social Groups, a North East wide Polish Association based in Benalla, and in Wodonga there are numerous community organisations that represent a range of ethnic groups: Croatian, Chinese, German/Austrian, Greek, Dutch, Hungarian, Indian, Italian, Laos, Polish, Serbian, Slovenian, Ukraine.

Indigenous Community

In 1996, 799 people in the North East identified themselves as being of Aboriginal and Torres Strait Islander descent (Table 2.6). The larger regional centres of Albury/Wodonga and Wangaratta have the highest proportion of Aboriginal and Torres Strait Islanders in the region. Benalla, Myrtleford and Mansfield also have small numbers of indigenous residents.

In 1996, the North East region had a slightly lower proportion of indigenous residents (0.59%) than Regional Victoria (0.79%). There are three main Aboriginal communities within the North East region: Camp Jungai Co-operative, the custodians for the Taungurong people, Shepparton Rumbalara Aboriginal Co-operative, and the Mungabareena Aboriginal Community based in Wodonga.

Education, Health and Community Services

Health and Human Services

The Department of Human Services Hume region services the North East RFA area. The Department has regional offices in Wodonga, Wangaratta, Benalla and Seymour.

The North East has two large public hospitals the Wangaratta District Hospital and the Wodonga District Hospital, and eight smaller, district hospitals providing medical and surgical services of lower order complexity. The ten major health care services in the North East are listed opposite.

Half of the Hume region's health expenditure (50.3%) is directed towards Acute Health (ie hospital and community health service funding). Other areas of regional expenditure include Aged Community and Mental Health (18%), Youth and Family Services (16%), Disability Services (11%), Public Health (1%), and Corporate Services (1%).

In recent years, State government policy on human services has been redirected towards

Table 2.6 . Indigenous Population, 1996

	North East		Regional Victoria	
Aboriginal and Torres Strait Islanders	799	0.59 %	9508	0.79 %
Australian Born	1211177	89.51 %	1066836	88.84 %
Born Overseas	13399	9.90 %	124464	10.37 %
Total	**135375**	**100.00 %**	**1200808**	**100.00 %**

Note: Caution with interpretation of these figures is required as ABS Census data tends to underestimate actual Aboriginal and Torres Strait Islander populations.
Source: ABS, 1996.

North East Public Health Care Services
Wodonga District Hospital
Wangaratta District Hospital
Tallangatta Hospital
Upper Murray Health and Community Services
Beechworth Hospital
Alpine Health
Benalla and District Memorial Hospital
Mansfield District Hospital
Alexandra District Hospital
Yea and District Hospital

Source: Department of Human Services, 1998.

the downsizing of large scale institutions, in favour of more flexible community based service provision, and an increased emphasis on the role of the private sector. Between 1993 and 1997 an average of 180 clients per year have moved out of institutions in Victoria. In the North East, this policy has involved the closure of the Mayday Hills, a mental health institution located in Beechworth, and its associated training centre (Department of Human Services 1997: 38).

Recent initiatives in health services in the North East include capital investment directed to Wodonga hospital to build the obstetrics capacity, and the development of a new psychiatric unit at Wangaratta to replace the Kerfed Psychiatric Unit established at Beechworth.

Other recent rural health policy initiatives such as the Multi-Purpose Services Program and the Rural Healthstreams Program, are directed towards the provision of localised health care to small rural communities, with a particular emphasis on community-based and home-based settings. Alpine Health is a multi-purpose service which encompasses health service operations in Bright, Myrtleford, and Mt Beauty. Tallangatta Hospital is a participant in the Rural Healthstreams Program, and has recently received funding for capital works.

Education

In relation to education, the student teacher ratios for Government Schools in Victoria for August 1995 were 18.4 for primary schools and 12.0 for secondary schools (Directorate of School Education, Victoria). These results only relate to students in full-time education. Primary and secondary figures include ungraded students from special schools who have been classified according to age.

The Directorate for Education in Victoria specifies a minimum enrolment of 12 for primary schools unless schools are in extremely isolated locations. In addition, designated non remote primary schools with enrolments between 12 and 20 will not be staffed unless they are annexed to a hub school or are part of multi-site primary school.

Tertiary education facilities in rural Victoria have expanded in recent years to accommodate growing educational demands. University and TAFE campuses located in the North East are listed below.

Organisation	Campus
La Trobe University	Wodonga, Beechworth
TAFE	Benalla, Mt Beauty, Wangaratta, Wodonga

The La Trobe University campus at Shepparton, and the Charles Stuart University campus at Albury, are located within close proximity to the North East region, and provide additional tertiary educational facilities for the North East population.

Economic Profile

Labour Force Characteristics

The North East region is characterised by a more qualified, white collar based labour force, in comparison to Regional Victoria (Figure 2.5). The North East has a greater proportion

of Managers/Administrators, Professionals, Para-professionals and Clerks (47.5%), than Regional Victoria (45.5%). The North East also has a greater proportion of qualified blue collar workers, that is, tradespersons (43.5%), compared with Regional Victoria (40.7%), but a lower proportion of labourers, 31.1% and 36.1% respectively.

Income

The North East population has slightly higher household incomes, than Regional Victoria. The North East has a greater proportion of high (12.01%) and middle household incomes (35.52%), than Regional Victoria, 10.77 per cent and 32.59 per cent respectively. Conversely, the North East has a lower proportion of low household incomes (45.55%), than Regional Victoria (49.92%). This probably reflects the regions higher educational qualifications and higher proportion of white collar workers.

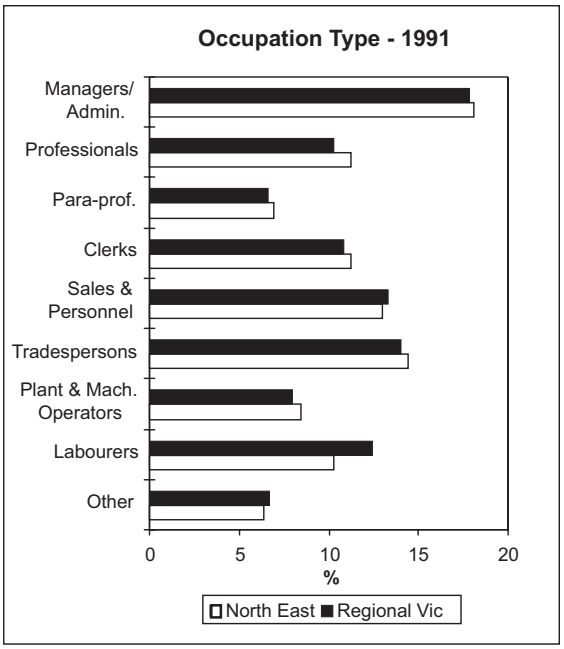


Figure 2.5. Occupation Type
Source: ABS, 1991.

Unemployment

The North East has experienced a lower unemployment rate than Regional Victoria between 1986 and 1991 (see Table 2.7). In 1991, the North East had an unemployment rate of 10.30%, in comparison to an unemployment rate of 12.05% in Regional Victoria.

Industry

The economy of the North East has historically been focused around primary industry (agriculture, forestry, and mining), with the service and manufacturing industries playing a secondary role. Following considerable population growth in the North East's population centres from the mid 1950s onwards, the North East economy has experienced significant diversification. In recent years, the tourism and recreation industries have experienced significant growth. Conversely, the mining industry has declined substantially in the North East.

Based on 1991 information, the economy of the North East is largely dependent on community services (16.84%), wholesale (16.32%), agriculture and forestry (10.50%), and manufacturing (11.94%) (Figure 2.6).

In comparison to Regional Victoria, the North East has a significantly greater reliance on the Public and Defence industry (11.81%). This is partly attributed to the presence of the Australian Defence Industries Plant in Benalla. The Recreation and Personnel industry also makes a greater contribution to the North East economy (8.3%) than in Regional Victoria (6.47%).

The North East region has a range of population centres with different economic strengths. The major economic and service centres include: Wodonga, Wangaratta and Benalla.

Table 2.7. Unemployment rate by sex (percent)

Unemployment rate (%)	1986 North East	1986 Regional Vic	1991 North East	1991 Regional Vic
Male	5.70	7.45	10.69	12.77
Female	8.16	9.10	9.74	11.01
Total	**6.62**	**8.08**	**10.30**	**12.05**

Source: ABS, 1986-1991

The City of Wodonga is a major regional business centre in the North East. Albury/ Wodonga has a large industrial base and good transport links with Sydney and Melbourne. Wodonga has a significant student population from the La Trobe University Campus and Wodonga College of TAFE.

Wangaratta's light industry base is characterised by wool and fabric processing plants, computer manufacturing by Bluegum Technology Pty Ltd (formerly IBM) and particle board production. These industries are major employers for the surrounding area.

Benalla and surrounding districts also rely heavily on several light industries as major employers, such as the manufacture of electrical equipment and particle board, and the Australian Defence Industries plant (ADI).

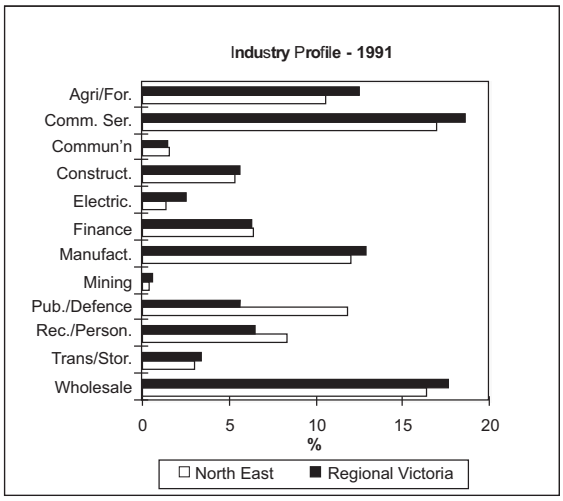
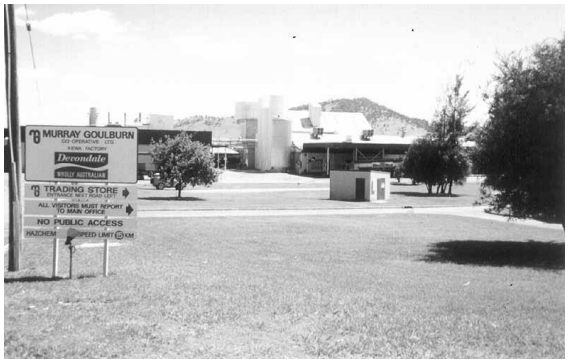


Figure 2.6. Industry Profile - 1991
Source: ABS, 1991.

Smaller population centres in the North East, such as Mansfield, Bright, Myrtleford, Tallangatta, Corryong and Beechworth, are characterised by a greater reliance on primary industry such as agriculture and forestry. The Corryong-Kiewa valleys, are particularly noted for their milk production and dairy products. These townships also rely on a mix of manufacturing and community service industries. In recent years, such townships have experienced an expansion in tourism and recreational economic opportunities.

Forest Related Industries

Timber, tourism and other forest related industries have been central to the development of the North East regional economy, and continue to make a substantial contribution today. According to ABS figures, in 1991, 10.50% of the population were employed in Forestry and Agriculture. Results of a telephone survey of North East residents (EBC, 1997) indicate that 39.27% of respondents and/or their families have been employed in forest-related industries at some time (Table 2.8).



Murray-Goulburn Devondale milk products, Kiewa.

Table 2.8. Employment by forest related industry in the North East region, 1997.

Forest related industry	Frequency	Per cent
Grazing	218	24.11
Timber	101	11.17
Tourism	57	6.31
Mining	22	2.43
Seed collection	13	1.44
Beekeeping	12	1.33
Total	355	39.27
Total NE sample	**904**	**100.00**

Note: This is a multiple dichotomy table.
Source: EBC (1997).

These forest related industries are concentrated in different areas across the region. Timber industry employment is highest in the townships of Myrtleford, Benalla and Mt Beauty. Tourism opportunities on public land are based around the alpine and forested areas.

Timber Industry

There are ten major processors drawing hardwood resource from the North East, including six hardwood sawmills located inside the RFA region (Benalla, Mt Beauty, Corryong, Mansfield, Whitfield), and two sawmills located outside the RFA region (Murrindindi/ Seymour, Swifts Creek) (Table 2.9). In addition, there are five other processors who receive a small volume of residual log or sawmill residues only from the North East, including four sawmills and a woodchip processing facility located in Geelong. In relation to associated transport and harvesting contractors, there are approximately 43 businesses dependent on hardwood drawn from the North East region. Of these, 35 contractor businesses are based inside the region and a further 8 contractor businesses are based outside the region. The extent to which these contractor businesses depend on North East resource varies considerably, as many work multiple contracts across RFA boundaries throughout the year. It is worth noting that in the North East, 70% of the hardwood resource is alpine ash which can only be harvested for 5-6 months of the year.

Future growth in private forest farming operations is also anticipated, with a particular emphasis on hardwood plantings. Recent initiatives, such as NRE's Farm Forestry (FFORNE) project and local business strategies (North East Agribusiness Forum,

Farm Forestry

Table 2.9. Processors drawing resource from the North East region

Processors	Base	Employees
Carter Holt Harvey (predominantly softwood)	Myrtleford	350
Monsbent (predominantly softwood)	Benalla	210
Mt Beauty Timbers	Mt Beauty	55
Neville Smith Timbers	Swifts Creek	23
Whitlands Sawmill	Whitfield	21
Spot Pallets	Corryong	19
Timbers Pty Ltd	Corryong	13
Marbut	Seymour/Murrindindi	67
Williams DSM Timber Mills	Mansfield	7
Ryan & McNulty	Benalla	27

1996), illustrate an increased recognition of the contribution of private farm forest growers to the timber industry, particularly in the north east and north central Victoria. The FFORNE project aims to encourage the development of farm forestry on cleared agricultural land by providing local growers with economic support and advice. Initiatives include: training and education; technical, management and marketing advice; and the fostering of local industry and local government networks. In relation to the FFORNE project, approximately 1400ha of hardwood plantations across 95 farms in the North East RFA area have been planted over the past two years.

The Softwood Industry is a major component of the timber industry in North East Victoria. Existing plantation estates are managed by the Victorian Plantations Corporation (50,000 hectares) and private landholders (10,000 hectares). In 1996, the Softwood Timber industry had the highest Gross Value of Production of any industry in NE Victoria (Source: North East Agribusiness Forum). It is predicted that the plantation capacity of the North East will expand significantly over the next 20 years.

Plants currently taking softwood logs from North East Victoria are summarised in Table 2.10.

Other Native Forest Use

Native forests of the North East supply a range of products and benefits in addition to sawlogs and residual logs. These include grazing, apiculture and minor forest produce (such as firewood, seed collection and specialty timbers).

Cattle grazing in the High Country has a traditional association with the North East. Three types of licence are issued: Grazing, Seasonal Bush Grazing and Alpine Grazing. Since 1991/92, alpine grazing licences, which cover areas above the snowline (1220 m elevation), have been issued for a term of seven years in the Alpine National Park and annually in State forests, although grazing may only take place during periods specified in licence conditions. Almost 220 000 ha of public land was licensed in 1996/97 which returned $26,067 in royalties to NRE. The number of current licences issued in the North East are 560 Grazing, 10 Seasonal Bush Grazing, and 40 Alpine Grazing.

Apiarists regard the drier foothill forests of the North East region, especially those supporting species such as Red Stringybark and Red Box, as among the most valuable for honey production per unit area in Australia (LCC 1981). Bee-keeping on public land is

Table 2.10. Processing companies drawing softwood resource from the North East region

Company	Base	Product
Carter Holt Harvey	Myrtleford	Sawn timber, plywood, tissue, pulp
Dominance Industries	Wangaratta	Medium Density Fibreboard
Monsbent/ D & R Henderson	Benalla	Particleboard
Boral Timber	Tumbarumba	Sawn timber
Australian Newsprint Mills	Albury	Newsprint
GB Timbers	Narbethong	Sawn timber
Radiata Exports	Geelong	Log and sawn timber
Softwood Plantation Exporters	Geelong	Woodchip
Hume Sawmills	Euroa	Sawn timber, preservation
Benalla Timber Products	Benalla	Preservation

Source: DPIE, 1998.

controlled through the issue of annual licences for permanent sites and temporary permits (3 and 6 months) for temporary bee sites. Licences allow access to a site for locating hives and use of forest nectar and pollen resources within a radius of 1.6 km or 0.8 km for permanent and temporary sites respectively. Currently there are 61 permanent bee sites and 145 temporary bee site licenses in the North East. There are other sites in the region that are not currently licensed.

Within the North East, firewood is collected from State forest, some Parks and Reserves, and Shire roadsides. The level of use of public land for the provision of firewood varies across the region. Towns including Wodonga, Wangaratta, Beechworth and Benalla have the greatest demand for firewood and collection areas supplying these towns include Mt Pilot Multi-Purpose Park (MPP), Barambogie State Forest, Moyhu Forest Reserve, and Reef Hills Park.

In relation to specialty timbers, the most sought after species are Red Stringybark, River Redgum and peppermint. These specialty timbers become available in small quantities and may be tendered in small lots. They may also become available in small quantities during sawlog harvesting operations or road construction and these are supplied under specialty timber/craftwood licences.

The Department of Natural Resources and Environment employs contractors to collect seed for regeneration of logging coupes, however, very little seed is collected for private commercial purposes within the North East.

Tourism and Recreation

The rich heritage and natural features of the North East make an important contribution to the economic, social and cultural life of the region. Tourism and recreation are important industries in the North East region, with a particular emphasis on alpine recreation, water based activities, and cultural heritage. The Alpine and Mount Buffalo national parks and surrounding ski resorts, coupled with the region's extensive river network, parks, reserves and State forests provide significant opportunities for nature based tourism. Heritage features of the area include: Aboriginal cultural sites, the traditional life of the mountain cattlemen, popularised through the "Man from Snowy River" film, and historical gold mining towns such as Beechworth. The region's success with wine growing has also been a drawcard for visitors to the area.

Legends, Wine and High Country region

Identified as the "Legends, Wine and High Country" region, the North East is ranked as the third most popular destination in regional Victoria. According to the Tourism Victoria survey (1995), the region attracted around 1.45 million visitors who stayed an average of 3.3 nights and who spent $219 million. These visitors represent 10% of all visitors to Victoria from other regions of Victoria, interstate and overseas.

The most popular tourist destinations in the North East include the alpine resorts and surrounding townships, Bright, Mount Buller, Falls Creek and Mount Hotham, the historic town of Beechworth and the winery district of Rutherglen. Major regional centres such as Wangaratta and Albury/Wodonga also benefit from visitors to the region. This is evident in

Table 2.11. North East Alpine Resort Visitor Trends, 1991-1996

Resort	Average annual visitors	Average annual visitor days	Average length of stay
Mt Buller	231,700	354,500	1.55
Falls Creek	151,000	336,000	2.22
Mt Hotham	105,500	236,500	2.23
Mt Stirling	11,300	12,500	1.08

* *Average is based on the years 1991-1996.*
Source: Alpine Resorts Commission Annual Report 95/96.

both the places that come to mind in relation to the North East, and in actual numbers of visitors to these places.

There are a range of recreational and tourist activities associated with the region. These activities include trail horse riding, bushwalking, wine tasting, historic sites and museum visits, snow skiing/ snowboarding, dining, fishing, camping, history, four wheel driving and canoeing (Panell Kerr Forster, 1997).

Alpine sports and snow recreation is the focus of winter tourism in the North East. The major ski resorts that provide for downhill skiing are Mount Buller, Falls Creek and Mount Hotham. Mount Stirling is also a popular ski destination, particularly for cross-country skiing (Table 2.11).

National Parks

Many of the recreational activities undertaken in the North East are associated with the natural environment. In a 1995 study of recreational use in state forests, growth in the nature based tourism industry was projected at a rate of 3% to 5% per year (Read Sturgess & Associates and Henshall Hansen Pollock, 1995: 43).

The Alpine National Park has recorded significant increase in visitor numbers over the past five years. This is primarily attributed to increased summer usage. In comparison, visits to Mt Buffalo and all National Parks have remained stable (Table 2.12).

Results of the telephone survey (EBC, 1997) suggest that within the last year an estimated 59% of respondents had visited native forests in Victoria. Table 2.14 shows the frequency with which the North East sample had visited native forest. Twenty two percent visited native forests 'once a month' or more. The visitation of native forests did not differ significantly

Table 2.12. Visitation to Victoria's National Parks, 1989-1996

Year	Alpine NP		Mount Buffalo NP		All National Parks	
	visitors	growth (%)	visitors	growth (%)	visitors	growth (%)
1989-90	198,500		198,400		6,589,900	
1990-91	122,800	-38.1	165,700	-16.5	7,369,500	11.8
1991-92	243,580	98.4	179,320	8.2	7,466,570	1.3
1992-93	269,000	10.4	190,200	6.1	7,302,327	-2.2
1993-94	277,500	3.2	190,200	0	7,938,850	8.7
1994-95	300,000	8.1	188,021	1.1	8,855,874	11.6
1995-96	439,082	46.4	203,136	8.0	9,427,621	6.5

Source: Pannell Kerr Forster, 1997: 15

Table 2.13. Recreation in Victoria's State Forests 1994/95

FMA	Total Visitor Days/Nights	Estimated Regional Economic contribution
Benalla Mansfield	198,000	$3.96 - $9.9 million
Wangaratta	125,000	$2.5 - $6.3 million
Wodonga	40,000	$800,000 - $2 million

Source: Read Sturgess and Associates with Henshall Hansen Pollock Associates (1995)

Table 2.14. Frequency of visit to native forest

Response	Frequency	Percent
Once a month or more	198	21.9
Once every three months	115	12.7
Once every six months	125	13.8
Once a year	83	9.2
Freq. not specified	9	1.0
Non-visitors	374	41.4
Total NE sample	**904**	**100.0**

Source: EBC (1997)

across the five sub-regional sectors. The three most common native forest areas visited within the last year included: Mount Buffalo (15%), Chiltern (11%) and the Alpine National Park (6%). Respondents reported a wide range of activities undertaken when visiting native forests. The three most popular activities nominated included: walking or bushwalking (52%), picnics and barbeques (21%) and sightseeing (15%).

State forests

In a study undertaken for the Victorian Department of Natural Resources and Environment (Read Sturgess & Associates and Henshall Hansen Pollock, 1995), both recreation and tourism were identified as important in state forest areas in the North East region. In 1994, there was a total of 362,500 visitor days in State forests in the North East, contributing between $7.2 and $18.1 million per year to the regional economy (Table2.13). The study projected that the Alpine National Park would advance the profile of the North East as a tourist destination and lead to increased recreational use in surrounding state forests.

Future Industry Development

Results from the telephone survey (EBC, 1997) identify future industry development attitudes. Two core questions were used to identify community attitudes towards future industry development. Respondents were asked to identify what they considered would be the main industries in their area within the next 20 years and what new industries, if any, they would like to see develop in their area. Table 2.15 shows that 53% of respondents believed that agriculture would be the main industry in their area within the next twenty years, followed by tourism (51%) and the processing of plantation timbers (33%).

Mt Bogong, Mt Beauty

Table 2.15. What do you think will be the main industries in your area in the next twenty years? (North East Sample)

Response	Frequency	Percent
Agriculture	449	52.6
Tourism	431	50.5
Processing plantation timbers	285	33.4
Manufacturing	129	15.1
Processing native timbers	79	9.3
Mining	21	2.5
Total respondents	**448**	**100.0**

Note: This is a multiple response table where all rows are independent.
50 respondents did not respond to this question
Source: EBC (1997).

Respondents were also asked to indicate other main industries they considered would develop in their area in the next twenty years. One hundred and eight respondents identified other main industries they considered would develop in their area within the next 20 years, with 26% of respondents indicating that wineries and vineyards would be an additional main industry that would develop in their area.

Table 2.16. Preferred New Industry Development (North East Sample)

Response	Frequency	Percent
Tourism	284	46.9
Manufacturing	228	37.6
Agriculture	206	34.0
Processing plantation timbers	169	27.9
Processing native timbers	85	14.0
Mining	23	3.8
Total respondents	**606**	**100.0**

Note: This is a multiple response table where all rows are independent.
50 respondents did not respond to this question
Source: EBC (1997).

New industry development

The majority of respondents (81%) within the North East sample indicated they would like to see new industries develop in their area (Table 2.16).

The preferred type of new industry development is shown in Table 2.16. Tourism (47%) is the most preferred type of industry development reported by respondents, followed by manufacturing (38%) and agriculture (34%).

2b Change in Forest Land Use

Throughout this century, forest related industries have experienced varying degrees of economic growth and diversification due to a range of economic, technological, and social changes. Within the North East region, changes in government regulation of land use and forest management practices have required significant readjustment by these industries with an associated contraction in employment. This section outlines the major changes and the economic and social implications of land use and forest policy developments, and examines community and stakeholder perceptions of social change in the North East.

Review of land use policy and social impacts

In the past two decades, debate over environmental protection and sustainable resource utilisation in Victoria has intensified. In response, a number of inquiries/strategies have been initiated to address the balance between environmental protection and industry development. These include numerous Land Conservation Council (LCC) studies, the Timber Industry Inquiry, Victoria's Timber Industry Strategy (1986) including the Code of Forest Practices (1989), the State Plantations Impact Study (1990) and the National Forest Policy Statement (1992).

In the l970s, l980s and l990s, the LCC conducted a series of land use studies in the North East. These studies included regional investigations and Statewide theme investigations such as wilderness. Each study considered the full range of values and uses on public land in the region, including assessment of socio-economic impacts. The studies resulted in recommendations to the Victorian Government which sought to balance the needs and aspirations of the community in relation to public land, taking into account the uses and values of all land in the region.

The LCC collected a large volume of social and economic information on a range of values and uses in the North East and took this into account in making its recommendations in the various studies. This information was also used to minimise the social and economic impacts of various recommendations on individual enterprises and local communities. For example, recommendations relating to the establishment of the Alpine National Park provided for a phase out of timber harvesting and grazing activities to continue in most of the Park but be phased out in some areas. For example, grazing on the Bogong High Plains has been phased out over a ten year period to allow those affected sufficient time to adjust to the changed circumstances. As originally proposed, the phase out of grazing would have affected a number of families, but when the phase out was implemented at the end of the ten year period, all licensees in the Bogong area of the Park took a reduction in the number of stock they could graze. This meant that all families involved in grazing could continue to operate in the Park. However, overall stock numbers were reduced and significant areas such as the northern Bogong High Plains were set aside from grazing in accordance with the LCC recommendations.

The delineation of boundaries for conservation reserves of various kinds has also been undertaken to ensure the protection of significant values while aiming to minimise

any adverse impacts on other uses and values. For example, the establishment of wilderness areas can potentially impact on recreational activities that are incompatible with wilderness protection. The design of wilderness areas was undertaken to ensure that other activities such as four wheel driving, fishing, deer hunting and horse riding have not been unduly affected, especially where these activities are conducted by commercial tour operators.

However, some social and economic impacts at various levels have resulted from the land use changes arising from the LCC studies and these have been clearly documented in the Council's recommendations for Government prior to it making the final land use decisions. The cumulative impacts have also been documented and taken into account in subsequent decisions. It is also important to note that some activities on public land were not sustainable in the longer term and there needed to be a phase down. While such phase downs do have social and economic impacts, the strategy adopted to achieve the required outcome has been tailored to minimise those impacts. The detail of these strategies has been worked out with those directly involved as one particular strategy may not be relevant to all sectors of industry communities or a region.

In 1986, following the timber industry inquiry, the Victorian government finalised the Timber Industry Strategy (TIS). The strategy specified the requirement for sustainable management practices in relation to timber harvesting. Economic development in the timber industry was based on Value Adding to gain maximum benefit from wood harvested, and through industry investment in technology, to increase its competitiveness. Fifteen year sawlog licences to provide resource security and to encourage investment by the industry were subsequently issued.

A social assessment of the impact of the TIS was undertaken on a statewide basis. This assessment indicated that reducing harvesting to sustainable levels would result in some employment losses, but not within the North East region. The Wangaratta FMA would be operating in the context of a phase-down period until 1993, however, the development of the softwood industry, the encouragement of value-adding and the extension of the sale and processing of residual wood, would offset any employment losses. The government estimated that while 'labour productivity increase' would lead to a loss of 9,000 jobs in the industry, overall employment levels on a statewide basis would increase by 2% in the 15 year period (Government of Victoria, 1986).

In accordance with projected softwood growth specified in the TIS, the State government initiated the 1988 State Plantations Impact Study to review the concerns expressed by rural communities about the State's plantation program and to recommend an implementation program which would be of the greatest benefit to the community. Income and output multipliers derived from a detailed 1983 study of economic linkages in the Latrobe Valley, were used to measure the economic effects of converting farmland to plantations.

Following the proclamation of the Alpine National Park in 1989, a management plan was developed. The planning process which informed the management plan involved consultation with the community. A range of voluntary codes of ethics were developed to educate and encourage visitors to minimise the environmental and social impacts of recreational activities, rather than imposing restrictions on visitor numbers and activities. Uses such as alpine grazing continued to be managed through permit conditions (Department of Conservation and Environment, 1992).

Alpine resort development in the North East has particular implications for the local tourism and recreation industry, and surrounding local communities. In recognition of potential industry and community impacts, the State government commissioned a social and economic impact assessment of the proposed Mt Stirling resort development in 1996 (Sinclair Knight Merz, 1996). Recommendations were based on a comparative analysis of the social effects on different user groups and the wider community. The comparative value of high impact resort development, as opposed to low impact, nature based recreation was identified as a critical issue in terms of economic, environmental and equity trade offs. The report concludes that low order resort development offers more value to a cross-section of the community from a social perspective over the medium to long term than more intensive resource development options.

In the North East region, interest in natural resource management within water catchment areas has developed in response to visible land or resource degradation problems (LCC, 1990; Goulburn Water Quality Working Group, 1996: Goulburn Catchment and Land Protection Board, 1995).

In 1995, the Goulburn Broken Catchment and Land Protection Board initiated a Salinity Management Plan. The Plan recognised the importance of minimising social and economic impacts to communities downstream, by preserving areas of forest upstream. Such preservation is considered crucial to the control of salinity, affecting water quality and soils. In recognition of the need to understand more about the community, a social profile of landholders was presented. A cost benefit analysis of the programme proposed was also conducted. However, a comprehensive social impact assessment was not undertaken.

As identified above, tourism and recreation issues were given explicit attention in the LCC's Alpine special investigation (1982), the Wilderness study (1991) and subsequent management plans.

In a more recent study undertaken for the Victorian Department of Natural Resources and Environment (Read Sturgess & Associates and Henshall Hansen Pollock, 1995), both recreation and tourism were identified as important in state forest areas in the North East region. In 1994, there was a total of 362,500 visitor days in State forest areas in the North East, contributing between $7.2 and $18.1 million per year to the regional economy. The study projected that the Alpine National Park would advance the profile of the North East as a tourist destination and lead to increased recreational use in surrounding state forests.

Places of cultural value include Aboriginal places, historic places, and places of social and aesthetic value. Social impact may potentially be derived from changes to such places via an alternation in use patterns, management or access. For example, any change in forest user or management which adversely affects the state of places of traditional or historic cultural values, may have an associated social impact on groups within the community such as Aboriginal peoples and other forest users. Similarly, adverse changes to the access or management of places of social or aesthetic value, or of historic value, may bear social impact for communities locally or regionally. The social implications of land use or management change on cultural values have been considered in previous LCC studies and the Alpine management plan.

Community Perceptions of Change in Forest and Land Use

Community perceptions of changes in forest use provide insight into how forest and land

use policy decisions affect people living in rural communities. The perceptions detailed below are based on the telephone survey of the North East region (EBC, 1997).

Changes in the timber industry

Survey results indicate that 25% of respondents believe that there has been a change in the use of forests within their area over the last two years which has affected the community in which they lived. As might be expected, this was more pronounced in areas which are more dependent on the timber and forest related industries. Table 2.17 shows that populations within the Eastern and South Western sectors were most likely to have experienced changes in the use of forests which had affected their community, while these changes were least likely to have affected communities in the Border sector.

The most commonly reported change occurring within communities in the last two years as a result of changes in the use of forest areas (Table 2.18, over) has been an increase in mills closed or closing (11%) and the development of pine plantations (10%).

Impacts of decreased forestry activity on communities

Respondents were asked to imagine a decrease in the future use of forests by the timber industry in their area and to indicate what effect if any this might have on their community. Table 2.19 shows that an estimated 54% of respondents considered that a decrease in forestry activity would have an impact on their community.

Table 2.19. If there was a decrease in the future use of forests by the timber industry in your area, do you think this would affect your community? (North East Sample)

Response	Frequency	Percent
No	411	46.0
Yes	483	54.0
Total	**894**	**100.0**

Note: Ten respondents did not respond to this question
Source: EBC (1997).

As might be expected, there were significant regional variations in the perceived community impacts of a decrease in timber industry activity (Table 2.20), with the respondents in the Eastern sector most likely to report that decreased timber activity would affect their community, while the respondents in the North West sector were least likely to report a decrease in timber industry activity would affect their community.

The most significant and singularly important perceived change to the community from a decrease in future timber industry activity was the perceived increase in unemployment and

Table 2.17. In the last two years, has there been a change in the use of forests in your area by any industry which has affected the community in which you live? (Across all five sectors)

Response	Border sector	Eastern sector	North West sector	Central sector	South West sector
No	176	147	174	170	160
	80.7	*68.1*	*79.8*	*76.9*	*71.4*
Yes	42	69	44	51	64
	19.3	*31.9*	*20.2*	*23.1*	*28.6*
Total	**218**	**216**	**218**	**221**	**224**
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1997).

Table 2.18. Type of Changes in the Use of Forests which have Affected Communities (North East Sample)

Response	Frequency	Percent
Mill closed or closing	29	10.7
Pine plantations developed	28	10.3
Unemployment	16	5.9
New mills	16	5.9
Logging ceased or reduced	14	5.1
Increased employment	10	3.7
Increased pine logging	10	3.7
Excessive logging traffic	8	2.9
Increase in logging activity	8	2.9
Woodchipping plantation pine	5	1.8
Land degradation/erosion	5	1.8
Plantations took over farmland	5	1.8
Logging native timber now, not plantation	5	1.8
Road damage from trucks	5	1.8
Reduced milling	4	1.5
Conservation approach to forest use	4	1.5
Increase in tourism	4	1.5
No firewood collection/now need permit	4	1.5
Mining started	4	1.5
Factory manufacturing from timber	3	1.1
Unnecessary clear felling of properties in local area	3	1.1
Weed infestations	3	1.1
Mills forced to take chip quality timber	3	1.1
Conversion from State Park to National Park	3	1.1
Land clearing for housing development	3	1.1
Paper pulp industry	3	1.1
Planted a plantation	3	1.1
Closed native forest logging/due to fire risk	3	1.1
Tree planting has increased/by individuals	3	1.1
Number of large company's not small	3	1.1
Increased softwood harvesting	3	1.1
Less than 2 respondents	136	50.0
Total respondents	**272**	**100.0**

Note: This is a multiple response table where all rows are independent.
Source: EBC (1997).

Table 2.20. If there was a decrease in the future use of forests by the timber industry in your area, do you think this would affect your community? (Across all five sectors)

Response	Border sector	Eastern sector	North West sector	Central sector	South West sector
No	103	83	125	104	106
	47.7	*38.4*	*57.3*	*47.3*	*47.5*
Yes	113	133	93	116	117
	52.3	*61.6*	*42.7*	*52.7*	*52.5*
Total	**216**	**216**	**218**	**220**	**223**
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1997).

associated financial hardship. An estimated 83.1% of the North East population reported this as the most important community impact from a decrease in timber industry activity in their area.

Impacts of decreased forestry activity on families

In addition to respondents reporting the perceived impacts of decreased timber industry activity on their community, each respondent was also asked to indicate what impact, if any, such a decrease would have on their family. Table 2.21 shows that an estimated 17% of the North East sample perceived that a decrease in timber industry activity would have an impact on their family. There was no significant relationship between the perceived effects of a decrease in timber industry activity on families across the five sectors.

Table 2.21. If there was a decrease in the future use of forests by the timber industry in your area, do you think this would affect your family? (North East Sample)

Response	Frequency	Percent
No	742	82.9
Yes	153	17.1
Total	**895**	**100.0**

Note: Nine respondents did not respond to this question
Source: EBC (1997).

The most significant and singularly important perceived change to families from a decrease in future timber industry activity was the perceived increase in unemployment and associated financial hardship. An estimated 62.9% of those respondents who indicated a decrease in the future use of forests by the timber industry reported unemployment and associated family hardships as the most important family impact.

Stakeholder Perceptions of Change in Forest and Land Use

Timber industry

Social impacts arising from changes in forest policy are acutely felt by those employed in the timber industry. When surveyed, timber employees highlighted significant personal and family impacts. Personal impacts centred around uncertainty about employment and industry future. A reduction in employment has resulted in reduced family income and financial hardship.

> "Less work. Less money."

> "Uncertainty about my employment."

A further concern for forest workers relates to relocation. Some workers have been forced to move or travel for work because of mill closures.

> "Reductions in the availability of hardwood log has caused the close down of two mill I have worked at forcing me to move or travel."

> "Move to get work."

Timber workers also identified community impacts associated with changes in forest policies. Reduction in available logging areas and the closure of hardwood mills were viewed as having a substantial impact on the local community. It was felt that further reduction in jobs and employment opportunities would lead to a loss of income to the community and local businesses. It was also anticipated that people would move out of the community to seek employment opportunities elsewhere.

> "Any reduction in jobs (the closure of mills) must reduce the amount of money coming into communities and businesses in these communities."

"Loss of jobs by closures of mills in North East Victoria."

"Loss of employment opportunities. Lack of investment."

"downturn in forestry ... decrease in town's population."

"Drastic reduction in employment opportunities."

"People were afraid of the implications."

Harvesting and roading contractors highlighted similar concerns to timber workers: closure of hardwood mills and loss of jobs. One issue of particular concern to roading contractors was access to former 'through' roads.

Cattle graziers

A survey of cattle graziers in the North East provides current insight into the major impacts arising from changes in forest policy. For cattle graziers the most significant impact has been uncertainty of grazing tenure. Cattle graziers also mentioned wider community impacts which have resulted from changes in forest policy. The key issue raised was loss of local employment due to sawmill closure and uncertainty in the timber industry.

Miners and prospectors

Individual miners and prospectors reported a variety of impacts at the personal level through past and current forest policies including restricted access to prospecting areas, work delays, financial hardship and through unemployment or loss of income, stress and uncertainty over tenure.

"Restricted access to prospecting areas."

'I was refused the mining rights to a tailings dump."

"Loss of income and employment. Always living in uncertainty of tenure."

In relation to general community impacts, miners/prospectors raised the issue of increased hostility towards forest "managers". This appears to be borne out of frustration and uncertainty arising from access issues in addition to the perception of over regulation of activities which utilised forest resources. Concerns that mineral deposits would be locked up were also evident. Miners were also conscious of impacts on other sectors within the community which rely on forest resources.

"Increasing loss of freedom. Over regulated, unnecessarily. hostility towards "managers" from all sections of the community...."

"It seems that almost every family in the community has at least one member of the family excluded from something. The kids can't build a hut or ride a bike, pensioners are allowed firewood only if they are able to cut and carry themselves. The apiarists have been excluded, prospecting and panning is illegal, mining is banned ..... Small miners have been eliminated as undesirable."

"Delay in work opportunities."

"Insecurity due to uncertainty."

"Restricted access to historic areas."

Apiarists

For apiarists the most significant impact arising from changes in forest policies has been restricted access to bee sites. Limited access has meant a reduction in income for some. Apiarists also mentioned wider community impacts in relation to the non-economic values of the forest, for example, the long term impacts of deforestation.

3 Social Values

This section identifies the main groups and associations with an interest in the use and management of native forests within the north east region of Victoria.

This analysis is useful in predicting how groups may respond to different policy alternatives, and to determine the costs and benefits of particular policy options on these groups.

Scoping of issues and interests

As part of the social assessment process, the Forest Community Co-ordinator for Victoria has had ongoing discussions and consultations with the range of key stakeholder groups and individuals at a state, regional and local level who have had an interest in the forests within the North East region.

These discussions have led to the identification of key issues for each respective group. As may be expected, representatives from various groups articulate a diverse range of views. The issues reflect both the desire for future opportunities as well as concerns being experienced.

Stakeholder interests have been categorised into ten main interest group areas, with the issues raised by each group displayed below. The stakeholders have been identified as:

- Timber industry
- Tourism/ recreation
- Conservation
- Other forest uses (apiary, seed, firewood, craftwood, specialty timber, tree fern collection)
- Mineral production
- Landholders
- Local government
- Aboriginal groups
- Forest Agencies
- General community

This particular section of the report has been structured to identify the views of each group as expressed by those involved in discussions.

Timber Industry

Decision making
- Desire for a long term view and agreement
- Frustration at the need for yet another process
- Local knowledge and input is important
- Desire a balanced approach
- Desire to minimise conflict with conservation groups

Forest Practices
- Seeking recognition of increasing achievements
- Desire a more sensitive portrayal of industry
- Having already pursued value adding and won export contracts, want support to continue
- Sensible sustainable forestry approach
- Development of plantations on cleared land

Issues
- Uncertainty regarding timber resource access
- Uncertainty for industry workforce
- Forced to move or travel due to mill closure

- Employment loss in timber industry has wider community impacts
- Historically the perception of continued loss of resource available for production
- Want continued or increased wood flow to develop business opportunities
- Depend on road access and road maintenance

Opportunities
- Opportunities for expansion of wood products
- Development of new domestic and international markets
- Increased investment potential
- Increased opportunities for job creation
- Potential to replace imported wood products

Tourism/ Recreation

Visual impact/ Landscape
- Recognise importance of landscape values
- Visual impact of harvesting
- Question adequacy of clean up after logging in some areas
- Lack of long-term view of areas of tourism potential
- Need for buffer zones between tourist areas and harvested coupes

Forest Management
- Perceived loss of native animal numbers
- Potential increase in feral animal numbers
- Issues about management of important habitats in timber harvesting areas
- Support for increased forestry and forests based staff

Issues
- Reduction in the area suitable for multiple use activities within forest areas
- Problems associated with locked gates and permit regulations
- Need to be informed of forestry industry activities (eg. burn off, logging)
- Need to be informed of any restrictions on access to public forests
- Belief that trucks are destroying tourist roads
- Need for enforced speed limits for timber vehicles on local roads

Opportunities
- Further support for linkages between smaller tourism operators and larger ventures
- Good potential for eco-tourism
- Develop nature based tourism/ recreation opportunities
- Need for better education on forestry practices to educate tourists
- Need for more educational tours within industry and forest staff

Conservation

Decision making
- Question scientific assessment/ not subject to external scientific review
- Unsure of whether to participate in the process
- Uncertain whether their interests will be adequately covered in the RFA
- RFA assessment of World Heritage is not consistent with World Heritage criteria
- Concerned that they are being excluded from decision making

Forest Management
- Concern that some fuel reduction burning is ‘too hot’ for regeneration
- Industry practices are not sustainable - too much overcutting.
- Inadequate regeneration after logging.
- Wish to have a say in forest management and harvesting techniques used.
- Desire for more areas to be placed in National and State Parks and Reserves.
- Concerned that it continues to be easier and cheaper to use native hardwood.

Issues
- Concern with soil erosion and reduction in water quality.
- Concern over loss of old growth native forests.
- Concern over loss of wilderness values and biodiversity.
- Concern over weed infestation problems.

Opportunities
- Tourism is the economic future.
- Potential expansion of recreational use of Stanley forests.
- Greater reliance on plantations.
- Support for future environmental protection initiatives such as salinity works, wind breaks, water issues, wildlife protection and shift towards tree crops rather than native forest harvesting.
- Effective local environmental network and extensive landcare network in the North East.

***Other Forest Use** (Apiary, seed collection, firewood collection, crafts and specialty timber, tree fern collection, grazing)*

Decision making
- Desire to participate in the debate.
- Would like more say to get better outcomes.
- Desire more scientific research on apiary reliance on native forest.
- Consideration of issues raised by full spectrum of forest users.

Forest management
- Not enough recognition given to the excellent job of regeneration.
- Improved environmental guidelines are required for timber harvesting.
- Selective harvesting practices enable better retention of trees valuable for honey.
- Fuel reduction/ burning is at times excessive.
- Support for reafforestation

Issues
- Continued access to State and National Parks.
- Perceived loss of access to hive sites when forests are placed in reserve.
- Need for improved access to obtain additional forest produce (eg. tree ferns, seed craftwood).
- Depend on security of grazing licences.
- Wastage of timber left on the forest floor which could be used for other purposes (eg. firewood, craftwood).
- Need for protection of old growth forest trees.
- Over-harvesting of areas, impacts on forest ecology.
- Clearfelling practices are too severe on the environment.
- Concern over feral animals and weed infestation.

Opportunities
- Expansion of specialty timber/ craftwood market.
- Continued access for multiple forest users can be achieved with minimal environmental impacts.

Mineral Production

Decision making
- Request greater participation on Forest Management Advisory Committees.
- Increased public consultation on forest use and forest values is required.
- Question the existence of fauna species attributed to some forest blocks.

Forest Management
- Concern at reduction of maintenance of fire break access tracks.
- Belief that Fire Management Guidelines are not always in accordance with CFA guidelines.
- Perception that minimum 20m streamside reserves can inhibit good management practices.

- Improved forest management in relation to fire prevention and weed control.

Issues
- Uncertainty over access for mining/ prospecting, uncertainty for industry and workers.
- Need a minimum network of maintained track access.
- Perception that mineral rich areas are too often being 'locked up' in reserves.
- Need multiple use categories in the forests.
- The reference to old growth forests in mining areas needs to be revised.

Opportunities
- Possible to achieve outcomes which can satisfy industry and conservation goals.
- Look for substitutes in paper manufacture (eg hemp).

Landholders

Decision making
- Desire to participate in the debate.
- Would like more say to get better outcomes.

Forest Management
- Public/ private forest boundary issues are a concern due to weeds, fences, fire, wildlife.
- Concern regarding water quality as a result of harvesting technique.
- Concern about burn off practices (too many getting away).
- More information/ education about forest management on public and private land.

Issues
- Concern about the visual impact of harvesting.
- Buffer zones are needed to minimise visibility of harvested area.
- Improved access to use of forest residue.
- Should be a shared use of forests by forest related industry, tourism, recreation users etc.
- Damage of local roads by heavy log trucks.
- Speed of trucks on local roads.

Opportunities
- Need to increase plantations of native species on both public and private land.
- Commercial farm forestry and plantation potential.
- Opportunity for "off-farm" income in forest industries.

Forest Agencies

Decision making
- Desire involvement of all community in decision making process
- Balanced approach required
- Need for informed, rather than emotive input.

Forest management
- Range of views on the sustainability of current forest management practices.
- Need for a continued monitoring of water quality impacts.

Issues
- Maintenance of access roads and tracks.
- Adequate resources needed for management of native forest for commercial and non-commercial uses.

Opportunities
- Tourism development.
- Continued management of forest areas to protect natural values in the future to protect both Parks and State forests.

Local Government

Decision making
- Currently participating on several timber committees and wish to have further involvement.

Forest Management
- Sharing of roads by tourism and timber industries - both require different attention.
- See long-term views and planning for industry requirements.
- Planning controls need reviewing for public and private forestry.
- Clarification of gain or loss of rate revenue associated with forestry.
- Require substantial funding for road maintenance and upgrading

Issues
- Concern in relation to water quality.
- Environmental aesthetics of the area need to be protected.

Opportunities
- Require increased support from government for farm forestry.
- Economic benefits from industry through direct employment, value of goods produced and flow-on effects to the regional economy.
- Improved relationship between local government and timber industry.

Aboriginal Groups/ Communities

Decision making
- In relation to participation in decision making, more discussion is needed - not large written reports.

Forest Management
- Need for areas of significance to be understood and considered in Forest Management Plans.
- Need to understand that Aboriginal groups do not want to have some areas of Aboriginal cultural significance identified or listed on maps.
- Need for further training of forestry workers in identifying Aboriginal sites.
- More direct dialogue and greater participation in the development of forest management plans.
- Request that Aboriginal interests and perspectives are seen as separate issues rather than as an integral part of forest management and decision making.

Issues
- Foremost concern is Native Title and associated land claims.
- Desire greater recognition of need for Aboriginal communities to have access to the forests for traditional/ cultural purposes.
- Concern over logging in sensitive areas of historical/ cultural significance.
- Deterioration in water quality due to harvesting in some areas.

Opportunities
- Need for increased employment opportunities for Aboriginal people in forest management roles, regeneration of forested lands, and as cultural officers.
- Need to realise the potential for Aboriginal Cultural Tourism.
- Development of initiatives such as bush tucker, revegetation, cultural activities and tours.

GENERAL COMMUNITY

General community issues were obtained through the telephone survey undertaken for this assessment (See Section 1 Methodology). Sampling for the North East general community survey was based on the random selection of households from within five sub-regional areas, to enable comparison across the region.

In relation to the profile of the North East general community, 43.1% of respondents were male and 56.9% female. The majority fell within the 35-45 year age group (45.8%), with 7% in the 30-34 year, and 9.3% in the 55-59

age group. With the exception of the 15-29 year age which was underrepresented, the sample ranges were within 5% of the census percentages for the same age ranges.

An estimated 68% of the sample indicated that native forest occurred within 10km of their home. Proximity to native forest areas was particularly high in the Eastern (82%) and the Central sector (84%). In relation to involvement in forest management, planning and protection, 18% of the population in the North East considered themselves to have been actively involved. This involvement included tree planting (19%), fire prevention (10.8%) and membership of Landcare or other similar environmental groups (10.1%).

Thirty six percent of the North East sample indicated that they, or a member of their household, were employed in forest dependent industries (timber, tourism, mining, beekeeping, seed collection and grazing). A comparison of employment in forest related industries across the five sectors shows that the South West (76.3%) and North West (66.7%) sectors had the highest levels of respondents or family members employed in grazing industries. Employment in timber industries was highest in the Central sector (38.8%), while the highest percentage of employment in tourism industries occurred within the Eastern Sector (31.4%).

Thirty percent of respondents were concerned about changes to native forests in Victoria due to human use. The major issues raised by respondents in relation to their concern over the use of native forests included: logging (22%), clear felling of native forests (16%) and the destruction of native forests (7%). When asked to identify the most important issues in relation to the planning of native forest management, respondents nominated cattle grazing on the high plains (20%), regeneration of native forests after logging (19%) and the preservation and protection of native forests for future generations (17%).

Dependency and use values

Six four point agree-disagree scales were used in the assessment of forest dependency and use (Appendix A).

Table 3.1 shows that within the North East sample 40% of respondents indicated that the area in which they lived was very dependent on the timber and logging industry.

Table 3.1. The area in which I live is very dependent on the timber and logging industry (North East sample)

Response	Frequency	Percent
Strongly Agree	67	7.5
Agree	292	32.6
Disagree	453	50.6
Strongly Disagree	83	9.3
Total	**895**	**100.0**

Note: Nine respondents did not respond to this question.
Source: EBC (1998).

Table 3.2 indicates significant variation in perceived dependency on the timber and logging industry across sectors. The Eastern and Central sectors had the highest perceived dependency, while the Southern sector had the lowest perceived dependency.

While Tables 3.1 and 3.2 show the perceived dependency of the resident's local area on the timber and logging industry, Table 3.3 shows dependency of the respondent on the forest and timber industries. Throughout the North East region an estimated 10% of respondents perceives themselves to be dependent on the forest and timber industries to the extent that if these industries did not exist in their area they would have to 'live somewhere else'.

As might be expected there was a significant variation across the five sectors in the perceived dependency of the respondent on the

Table 3.2. The area in which I live is very dependent on the timber and logging industry (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	79	110	72	110	64
	36.4	*51.4*	*33.0*	*49.5*	*28.7*
Disagree	138	104	146	112	159
	63.6	*48.6*	*67.0*	*50.5*	*71.3*
Total	**217**	**214**	**218**	**222**	**223**
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'. Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.3. "If the forest and timber industries didn't exist in this area I would have to live somewhere else" (North East sample)

Response	Frequency	Percent
Strongly Agree	20	2.2
Agree	68	7.6
Disagree	598	66.5
Strongly Disagree	213	23.7
Total	**899**	**100.0**

Note: Five respondents did not respond to this question.
Source: EBC (1998).

forest and timber industries, with the Eastern and Central sectors having the highest levels of individual dependency when compared to all other sectors (Table 3.4)

Table 3.5 shows that 68% of respondents within the North East region indicated that one of the reasons they continued to live in the area was the natural beauty of the forest.

Table 3.6 shows the importance of the natural beauty of the forest, as a reason for continuing to live in the area, to be highest within the Eastern (80%) and Central (76%) sectors and lowest within the Border sector (59%).

Table 3.7 identifies the extent to which the respondent perceives that the protection of native forests will directly threaten their employment. Table 3.7 shows that an estimated 16% of respondents within the North East

Table 3.4. "If the forest and timber industries didn't exist in this area I would have to live somewhere else" (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	13	22	18	35	14
	5.9	*10.2*	*8.3*	*15.8*	*6.3*
Disagree	206	193	200	187	210
	94.1	*89.8*	*91.7*	*84.2*	*93.8*
Total	**219**	**215**	**218**	**222**	**224**
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'.
Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.5. "One of the main reasons I live in this area is the natural beauty of the forest" (North East sample)

Response	Frequency	Percent
Strongly Agree	196	21.9
Agree	414	46.3
Disagree	271	30.3
Strongly Disagree	14	1.6
Total	**895**	**100.0**

Note: Nine respondents did not respond to this question.
Source: EBC (1998).

Table 3.7. "Protecting native forests will threaten jobs for people like me" (North East sample)

Response	**Frequency**	**Response**
Strongly Agree	26	2.9
Agree	115	12.9
Disagree	601	67.4
Strongly Disagree	150	16.8
Total	892	100.0

Note: 12 respondents did not respond to this question.
Source: EBC (1998).

region believe that the protection of native forests will threaten their type of employment. The belief that the protection of native forests was likely to threaten employment, was found to be highest in the Eastern and Central sectors, where 22% of respondents hold this belief. This compares to an estimated 10% of the population in the Border sector who hold this belief (Table 3.8).

Table 3.9 shows that an estimated 65% of respondents hold views associated with both the protection and use of native forests. The analysis of responses to this question (Table 3.9), indicates that the population is not necessarily polarised in respect to the protection and use of native forests, but that individuals hold concurrent beliefs about the need for forest protection and the need to use native forests as a source of employment. As such Table 3.9 provides evidence that the popular view of a polarised community (protection vs. use) may be inappropriate and that the majority of the population hold both protection and use values equally. An analysis of this question across the five sectors indicated no significant difference amongst the five sectors in response to this question.

Table 3.9. "I sometimes feel torn between the need for jobs and the need to preserve native forests" (North East sample)

Response	Frequency	Percent
Strongly Agree	110	12.4
Agree	463	52.3
Disagree	275	31.0
Strongly Disagree	38	4.3
Total	**886**	**100.0**

Note: 18 respondents did not respond to this question.
Source: EBC (1998).

Table 3.6. "One of the main reasons I live in this area is the natural beauty of the forest" (Across the five sectors)

Response	**Border sector**	**Eastern sector**	**North Western sector**	**Central sector**	**Southern sector**
Agree	130	173	140	167	142
	59.1	*80.1*	*64.5*	*75.6*	*64.5*
Disagree	90	43	77	54	78
	40.9	*19.9*	*35.5*	*24.4*	*35.5*
Total	**220**	**216**	**217**	**221**	**220**
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'. Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.8. "Protecting native forests will threaten jobs for people like me" (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	22	47	27	48	27
	10.1	*22.0*	*12.4*	*21.8*	*12.2*
Disagree	195	167	190	172	195
	89.9	78.0	87.6	78.2	87.8
Total	217	214	217	220	222
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'. Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.10. "Forest conservation and protection directly threatens the economic well being of the Victorian community" (North East sample)

Response	Frequency	Percent
Strongly Agree	39	4.6
Agree	343	40.1
Disagree	413	48.2
Strongly Disagree	61	7.1
Total	**856**	**100.0**

Note: 48 respondents did not respond to this question.
Source: EBC (1998).

Table 3.10, however, shows that approximately 45% of respondents hold the belief that forest conservation and protection directly threatens the economic well being of the Victorian community. A comparison of this belief across the five sectors, indicated no significant differences across sectors.

Forest management

Three questions were used, based on four point agree-disagree scales, to assess views about forest management.

Table 3.11 identifies the interest respondents have about the management and use of native forests in Victoria. It is estimated that 87% of respondents express a high level of interest in the management and use of native forests. There was no significant difference in the level of interest across the five sectors.

Table 3.11. "I am very interested in the management and use of native forests in Victoria"(North East sample)

Response	Frequency	Percent
Strongly Agree	197	22.0
Agree	579	64.6
Disagree	114	12.7
Strongly Disagree	6	0.7
Total	**896**	**100.0**

Note: Eight respondents did not respond to this question.
Source: EBC (1998).

Table 3.12 shows that 65% of respondents believe that "we are not managing our native forests very well".

Table 3.12. "I don't think we are managing our native forests very well" (North East sample)

Response	Frequency	Percent
Strongly Agree	140	16.3
Agree	416	48.5
Disagree	293	34.1
Strongly Disagree	9	1.0
Total	**495**	**100.0**

Note: 46 respondents did not respond to this question.
Source: EBC (1998).

Table 3.13 shows that the belief about how well native forests are being managed varies significantly across the five sectors. Within the Central sector, respondents are least likely to agree with the statement when compared to the remaining sectors.

Table 3.13. "I don't think we are managing our native forests very well" (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	134	140	132	118	150
	66.0	*67.0*	*63.5*	*55.1*	*69.1*
Disagree	69	69	76	96	67
	34.0	*33.0*	*36.5*	*44.9*	*30.9*
Total	203	209	208	214	217
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'. Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.14. "Forest industries should have more say in how forests are managed" (North East sample)

Response	Frequency	Percent
Strongly Agree	134	15.4
Agree	442	50.7
Disagree	241	27.6
Strongly Disagree	55	6.3
Total	**872**	**100.0**

Note: 32 respondents did not respond to this question.
Source: EBC (1998).

In relation to forest management there is often disagreement expressed within the community about the extent to which major forest users, including industry, should be involved in decision making. However, within the sample of the North East region, Table 3.14 shows that 66%, or an estimated two-thirds of respondents, believe that forest industries should have more say in how forests are managed. There were no statistically significant differences in response to this question across the five sectors.

Forest ecosystem values

A common view within the community is concern for ecological values associated with ecosystem health and integrity. Two statements were used to identify the strength of this view within the North East region.

Table 3.15 shows that 89% of respondents believe that forest ecosystems are "delicate and easily upset".

Table 3.15. "The balance of a forest ecosystem is delicate and easily upset" (North East sample)

Response	Frequency	Percent
Strongly Agree	261	29.2
Agree	531	59.5
Disagree	99	11.1
Strongly Disagree	2	0.2
Total	**893**	**100.0**

Note: Eleven respondents did not respond to this question.
Source: EBC (1998).

Across the five sectors, more people agreed with this view within the more urban Border sector than other sectors (Table 3.16).

Ninety-seven percent of respondents within the North East region agreed with the statement that trees are important for their own sake. As might be expected given the high levels of agreement with this statement, there was no significant variation across the five sectors (Table 3.17).

Legislative control

Two statements were used to assess views about legislative control and protection of native forests.

Table 3.16. "The balance of a forest ecosystem is delicate and easily upset" (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	208	188	188	192	190
	95.4	*87.0*	*88.7*	*87.8*	*85.6*
Disagree	10	28	24	27	32
	4.6	*13.0*	*11.3*	*12.3*	*14.4*
Total	218	216	212	219	222
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'. Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

Table 3.17. "Trees are important for their own sake" (North East sample)

Response	Frequency	Percent
Strongly Agree	342	38.3
Agree	522	58.5
Disagree	26	2.9
Strongly Disagree	2	0.2
Total	**892**	**100.0**

Note: Twelve respondents did not respond to this question.
Source: EBC (1998).

Table 3.18. "Better laws are needed to protect the use of native forests" (North East sample)

Response	Frequency	Percent
Strongly Agree	159	18.5
Agree	487	56.7
Disagree	206	24.0
Strongly Disagree	7	0.8
Total	**859**	**100.0**

Note: Forty-five respondents did not respond to this question.
Source: EBC (1998).

Table 3.18 identified whether the community saw a need for "better laws to protect the use of native forests". As shown in this table, 75% of respondents within the North East agreed with the need for better laws to protect the use of native forests.

The need for better laws to protect the use of native forests showed significant variation across the five sectors (Table 3.19). Within the Border sector approximately 84% of respondents saw a need for better laws to protect the use of native forests as compared to

Table 3.19. "Better laws are needed to protect the use of native forests" (Across the five sectors)

Response	Border sector	Eastern sector	North Western sector	Central sector	Southern sector
Agree	173	150	158	148	166
	83.6	72.5	76.7	69.2	76.5
Disagree	34	57	48	66	51
	16.4	27.5	23.3	30.8	23.5
Total	207	207	206	214	217
	100.0	***100.0***	***100.0***	***100.0***	***100.0***

Note: In this analysis the response categories 'strongly agree' and 'agree' have been combined as has the response categories 'strongly disagree' and 'disagree'.
Numbers in italics are percentages.
A statistically significant association exists between sector and agreement with this question.
Source: EBC (1998).

only 69% of respondents within the Central sector.

The extent to which legislative controls to protect native forests are perceived to directly effect an individuals freedom and personal choices is shown in Table 3.20, where 27% of respondents in the North East region believed that such controls did effect their freedom and personal choices. This view appears to be consistent across the North East region.

Table 3.20. "Laws to protect native forests limit my freedom and personal choices" (North East sample)

Response	Frequency	Percent
Strongly Agree	36	4.1
Agree	206	23.2
Disagree	541	61.0
Strongly Disagree	104	11.7
Total	**887**	**100.0**

Note: Seventeen respondents did not respond to this question.
Source: EBC (1998).

4 Forest Industry Activity and Linkages

This chapter provides an analysis of the results of industry surveys conducted as part of the Social Assessment (CRA) for the North East RFA region. The purpose of this report is to identify communities which are reliant on forest industry activity in the region and to identify significant relationships between specific areas of forest resource in the North East region and communities dependent on that resource.

Methodology

The methods used in the collection of data for this report include: mail surveys of timber processing industries, timber industry contractors, timber industry employees, tourism businesses and other forest industries including apiarists, graziers and mining and prospecting businesses; and secondary data from the Australian Bureau of Resource Economics (ABARE, 1998). Employment and expenditure catchment analysis has also been undertaken to assist in determining the relationship between forest resource and towns and communities dependent upon that resource within the North East RFA region.

Surveys were distributed to timber processing industries, timber industry contractors, timber industry employees, tourism businesses, apiarists, cattle graziers and mining and prospecting industries. The number of surveys distributed and the response rate is given in Table 4.1. As the surveys are not a census, caution needs to be used in generalising or extrapolating survey data to specific industry groups as a whole.

Timber processing industries were identified through discussions with peak industry bodies in Victoria. Timber industry contractors were defined as all contractors operating in North East Victoria and involved in timber harvesting, trucking, roading, snigging and felling. Postal addresses for contractors employed by timber processing industries were used to identify timber harvesting and some trucking contractors. Apiary, mining and prospecting businesses were identified through the relevant industry organisations. Tourism businesses were identified through consultations with regional tourism associations in North East Victoria.

Throughout this chapter, the term timber processing industry included all sawmills, while the term forest industry included all industries and businesses using forest areas in the North East region.

Table 4.1 Sample Size and Response Rates for Industry Surveys

Sample group	Number of Surveys Administered	Response Rate
Timber processing industries and contractors	60	13 (21.7%)
Cattle graziers *(licence holders)*	320	25 (7.8%)
Apiarists	27	15 (55.5%)
Mining industries	64	18 (29.6%)
Timber industry employees	426	271 (63.6%)
Tourism businesses *(licence holders)*	115	12 (10.4%)

Source: EBC (1998)

Given that timber contractors and other forest users were identified from mailing lists, it is possible that the estimates of the number of contractors and other forest users is conservative. In addition, the total contractor employee and family dependents estimates do not of course include those businesses and individuals who may be sub contracted by the contractor.

Two core problems with the use of mailing lists are (a) that mailing lists may not necessarily include all contractors and other forest users and (b) the postal address reported on the mailing list may well be different from the actual business location of the contractor or forest user. These factors may contribute to lower response rates associated with mail surveys (standard response rate of approximately 10%). However, consultation with industry in the development of the mailing lists used in this analysis is likely to have assisted in making the mailing lists as comprehensive as possible.

Information on employment levels for contracting businesses and other forest users was derived from survey research and was used to identify the mean employment size of each business. In addition, while existing databases identify the postal address for many businesses, it has been assumed that these locations are the same as or in close proximity to the location of the business.

Profiles of Forest Industry Employees

This section provides a descriptive profile of forest industry employees within the North East region of Victoria. Forest industry employees were defined as any employee working in forest-related activities. Of those responding to the survey, over 50% were involved in the sawmilling or wood processing industries. Table 4.2 outlines the main activities of the businesses in which respondents were employed.

Table 4.2. What are the main activities of the business you currently work for?

Response	Frequency	Percent
Harvesting contractor	9	3.4
Park management (Parks Victoria)	20	7.5
Craft and specialty timbers	8	3.0
Firewood collector	9	3.4
Sawmill or wood processing business	146	54.9
Mining or prospecting business	19	7.1
Roading contractor	4	1.5
Forest management (NRE)	39	14.7
Seed collector	4	1.5
Apiarist business	12	4.5
Cattle grazing	24	9.0
Total	**258**	**100.0**

Note: *This is a multiple dichotomy table. Tourism figures are not included in this table as employees did not respond to the questionnaire.*
Source: *EBC (1997).*

Survey respondents were also asked to provide demographic details. The following table highlights the key characteristics of all forest and timber industry workers, and due to the high percentage of workers employed in timber processing and sawmilling, a separate profile of this occupational group is also provided.

It is evident from an examination of the profile, that forest industry employees are largely employed on a full-time basis, have worked in their business and the industry for quite considerable time, many (approximately 50%) have had little work experience in other industries, and the majority have a high school education or have attained TAFE/Trade certificates.

The majority of forest industry employees are male, over 50% are married, and approximately 60% have partner's who are also employed. The mean age is 40 and the average family size is 3. Approximately 35% are young-middle aged families with pre-school or primary school aged children, with

Table 4.3. Profile of Forest and Timber Processing Industry Employees

Characteristics	All Forest Industry Employees	Timber Processing Industry Employees
Employment		
Percent full employment	88.2	90.9
Percent part time employment	11.8	9.1
Mean number of years working for current business	10.6	8.3
Mean number of years working in industry area	13.2	11.4
Percent who have only worked in current industry area	45.9	52.1
Percent who have moved town to retain employment in industry	28.7	19.4
Median number of town moves to retain employment in industry	3.0	2.0
Home Ownership Characteristics		
Mean number of years resident in current town	17.1	17.7
Home Ownership *(percent)*		
Rent home	29.4	33.1
Own their home	41.2	34.6
Paying off a mortgage	29.4	32.3
Mean value of current residence ($)	131,960	139,529
Percent paying mortgage on another property	15.6	11.7
Highest Level of Education *(percent)*		
Primary School	1.5	2.1
Year 8	7.3	7.1
Year 9	7.3	7.8
Year 10	18.3	25.5
Year 11	13.7	17.0
Year 12	13.7	18.4
Trade of TAFE certificate	16.8	17.0
Degree or diploma	21.4	5.0
Marital Status *(percent)*		
Married	59.8	53.8
Separated but not divorced	2.3	0.7
Widowed	1.1	1.4
Never married	26.3	30.3
Divorced	3.0	4.1
Defacto	7.5	9.7
Percent with partner employed (only married & defacto)	57.9	60.2
Percent with partner employed in timber industry	15.4	18.4
Mean age of employee	39.9	37.0
Percent males	89.4	91.7
Percent females	10.6	8.3
Family Size	2.9	3.0
Lifecycle Age Profile *(percent)*		
0-4 years (pre-school)	8.4	7.3
5-12 years (primary school)	13.7	12.8
13-17 years (high school)	9.1	11.0
18-24 years (young singles/couples)	11.5	16.2
25-39 years (young/middle families)	24.8	23.3
40-49 years (mature families)	18.3	18.6
50-64 years (pre-retirement)	11.7	9.9
65+ (elderly)	2.6	0.8
Number of community groups or organisations actively involved in	2.5	2.6

about 18% being slightly older more mature families with high school children. Employees have resided within their respective communities for considerable periods of time (average of 17 years), and are seen to participate in about two community groups on average.

Forest Use and Recreation

In terms of the frequency of use of native forests, within the last year an estimated 65% of all forest industry employees were found to have visited native forests in Victoria (Table 4.4).

Table 4.4. During the last year have you or your family visited areas of native forest in Victoria, for reasons other than work? (Forest Industry Employees)

	Forest Ind. Employees	
Response	**Frequency**	**Percent**
No	94	35.3
Yes	172	64.7
Total	**266**	**100.0**

Note: Forest industry employees included all employees who respondend to the survey of forest industry employees.
Source: EBC (1997).

Table 4.5 shows the frequency with which forest industry employees had visited native forests within the last year.

Table 4.5. How often have you visited these [native] forests? (Forest Industry Employees)

	Forest Ind. Employees	
Response	**Frequency**	**Percent**
Once a month or more	81	48.2
Once every three months	46	27.4
Once every six months	24	14.3
Once a year	17	6.3
Total	**168**	**100.0**

Note: Based on only those respondents who indicated they had visited native forests within the last year.
Source: EBC (1997).

In addition to identifying the frequency of use of native forests, respondents were also asked to identify up to four areas of native forest that they had visited or used within the last year. As Table 4.6 illustrates, the three most common forest areas visited within the last year included Mount Buffalo (18%), Alpine National Park (16%) and Bogong (8%).

Table 4.6. What was the name of the forest you visited? (Forest Industry Employees)

	Forest Ind. Employees	
Response	**Frequency**	**Percent**
Mount Buffalo	29	17.8
Chiltern	5	3.1
Alpine National Park	26	16.0
Beechworth	7	4.3
Warby Ranges	7	4.3
Strathbogie	7	4.3
Bogong	13	8.0
Stanley	7	4.3
Falls Creek	3	1.8
Grampians	2	1.2
Barmah	4	2.5
Mount Pilot	3	1.8
Kosciosko National Park (NSW)	1	1.6
Mansfield State Forest	9	5.5
Mount Hotham	9	5.5
Bright	11	6.7
Mount Beauty	7	4.3
Mount Samaria	10	6.1
Jamieson State Forest	7	4.3

Note: Towns are used to identify the nearest location of the forest used. Includes the 12 most frequently mentioned forest areas from within the North East sample and the forest industry employees sample.
Source: EBC (1997).

Respondents were asked to indicate the type of activity undertaken when they visited native forests. As evident in Table 4.7, the majority of respondents reported a wide range of recreational uses. Amongst forest industry employees the three most common uses of native forest areas were walking or bushwalking (54%), sightseeing (49%) and fishing (31%).

Forest Industry and Employee Catchments

This section examines the location and

Table 4.7. Type of Activity in Victorian native forests (Forest Industry Employees)

Response	Forest Ind. Employees Frequency	Percent
Walking or bushwalking	89	53.9
Picnics or BBQs	17	10.3
Sight seeing	80	48.5
Camping	26	15.8
Fishing	51	30.9
Driving (inc. 4WD)	20	12.1
Skiing (snow)	17	10.3
Recreation (general)	10	6.1
Work related	9	5.4
Horse riding	5	3.0
Bird watching	4	2.4
Live there	0	0.0
Hunting	19	11.5
Cycling	13	7.9
Swimming	16	9.7
Firewood collection	7	4.2
Wildflowers collection	2	1.2
Enjoy nature	3	1.8
Photography or painting	15	9.1
Holiday	1	0.6

Note: Includes the 20 most frequently mentioned ctivities within the North East sample and the forest industry employees sample.
Source: EBC (1997).

employment catchments for forest industries and employees. For the purpose of this analysis, timber processing industries include all sawmills that draw their hardwood resource from the North East RFA region. A survey of timber processing industries in North East Victoria indicated the range of processing activities in which these industries are involved (Table 4.8).

Timber industry contractors were defined as all contractors involved in timber harvesting or logging, felling, snigging, timber trucking and roading. This does not of course always include all contractors and sub contractors involved in the timber industry, but only those contractors who were identified from existing databases and mailing lists. For instance, the survey of contractors indicated that 33% of

Table 4.8. Timber Processing Industries: Type of Processing and Value Adding Activity

Response	Frequency	Percent
Green sawmilling	5	71.4
Green sawmilling and dry milling	5	71.4
Chipping	4	57.1
Moulding and machining	4	57.1
Laminating	1	14.3
Pulping	0	0.0
Paper manufacture	0	0.0
Truss manufacture	0	0.0
Total	**7**	**100.0**

Note: The information presented in this table is based on a survey of timber processing industries. The percentages will not add to 100% as several industries were involved in multiple activities.
Source: EBC (1998).

contractors use sub contractors as part of their business.

Table 4.9 shows, from the survey of contracting and other forest user businesses, the main activity of businesses in the North East RFA region. Not all activities are independently performed by a specific business, as for example many timber processing industries were also directly involved in timber harvesting and transport.

Industry Location

Timber Processing Industries

Table 4.10 shows the town location of timber processing industries that draw a percentage of their resource from the North East RFA region.* This table identifies the number of timber processing industries based within specific towns and the percentage of the hardwood resource they obtain from the three Forest Management Areas (FMAs) within the RFA region. Table 4.10 also shows that of the

**: The analysis of timber processing industries in the North East includes the Bell mill at Jamieson which has since closed its operations.*

Table 4.9. Forest Industry Contractors and Other Forest Users: Type of Activity

Main Activity	Frequency	Percent
Cattle grazing	25	34.7
Mining	18	25.0
Apiarists	15	20.8
Prospecting	12	16.7
Sawmilling or timber processing	10	13.9
Timber harvesting or logging	8	11.1
Timber trucking	5	6.9
Roading	4	5.6
Firewood collection	4	5.6
Snigging	3	4.2
Felling	3	4.2
Seed Collection	0	0.0
Total	**72**	**100.0**

Note: The percentages will not add to 100% as several contractors were involved in multiple activities.
Source: EBC (1998).

nine main resource dependent industries, seven (77.8%) are located within the boundaries of the region. Timber processing industries at Murrindindi and Seymour, which are located outside the North East RFA region, draw 16.6% of their resource from the region and Swifts Creek, which is also located outside the RFA region, draws 28.6% of its resource from the region.

Of note in relation to Table 4.10 are the timber processing industries located at Benalla and Myrtleford which are industries which draw less than 10% of their total intake from hardwood resources from the North East region. While industries at Benalla and Myrtleford do not have a major and direct dependence on hardwood resource from the North East region, these industries are

Table 4.10. Town Location of Timber Processing Industries and Percentage Resource Drawn from Forest Management Areas within the North East

Town Location of	Number Industries	Forest Management Areas Within the North East: Benalla-Mansfield	Wodonga	Wangaratta	Outside Region
MAIN RESOURCE DEPENDENT INDUSTRIES					
Located Within the RFA Region					
Jamieson	1	100.0	0.0	0.0	0.0
Mansfield	1	100.0	0.0	0.0	0.0
Benalla	1	14.5	0.0	0.0	85.5
Corryong	2	0.0	100.0	0.0	0.0
		0.0	26.3	0.0	73.7
Mt Beauty	1	0.0	0.0	100.0	0.0
Whitfield	1	13.5	0.0	22.3	64.2
Total Industries	7				
Located Outside the Region					
Murrindindi/Seymour	1	16.6	0.0	0.0	83.4
Swifts Creek	1	0.0	28.6	0.0	71.4
Total Industries	2				
LIMITED RESOURCE DEPENDENT INDUSTRIES					
Myrtleford	1				
Benalla	1				
Total Industries	**2**				
TOTAL INDUSTRIES	**11**				

Note: Main Resource Dependent Industries include those industries that directly access over 10% of their hardwood resource from the NE Region. Limited Resource Dependent Industries are located within the NE region and draw less than 10% of their hardwood resource from the NE Region or are dependent on hardwood residues. Carter Holt and Harvey located at Myrtleford obtained 8% of the hardwood resource from the NE Region. Monsbent at Benalla also draw hardwood residue from the NE region
Source: Adapted from ABARE (1998, unpublished) and includes additional information from the timber processing industry survey. Where two or more industries within a town draw different levels of resource from each of the Forest Management Areas (FMA), they have been identified as separate rows in the table.
Prepared by: EBC (1998)

significant in terms of the large number of employees within these industries.
Some indication of the employment dependence of towns in which timber processing industries are found is shown in Table 4.11, where the total number of timber industry employees within a town has been identified and proportionally distributed across the three FMAs. Within the North East RFA, Mt Beauty is the most significant workplace location for timber processing industry employees who are dependent upon resource drawn from the region, with timber processing industries located at Mt Beauty very dependent upon the resource drawn from the Wangaratta FMA. Table 4.11 shows that across towns within the North East Region, the Wangaratta FMA contributes the greatest employment, followed by the Benalla-Mansfield FMA. Timber processing industries located at Myrtleford and Benalla within the North East Region also have a high number of timber processing industry employees however these industries are less than 10% dependent upon hardwood resource drawn from the North East Region.
Although Table 4.11 shows the relationship between workplace locations and resource drawn from the three FMAs, the relationship between the percentage of resource drawn from an FMA and consequent employment dependency levels is clearly not a direct relationship as other factors such as the grade and type of resource, the mills processing capacity and the type of timber processing and value adding activities necessarily influence this relationship.

The relationship between the town location of the timber processing industry and the percentage of resource drawn from the three FMAs within the North East Region (Tables 4.10 and 4.11.) indicates a spatial relationship exists between the timber processing town and specific FMAs. Table 4.12 shows the grouping of towns relying on resource from specific FMAs. What is apparent from Table 4.12 is

Table 4.11. Number of Timber Processing Industry Employees Associated with Forest Management Areas

Town		Forest Management Areas Within the North East			
Location of	Number Employees	Benalla-Mansfield	Wodonga	Wangaratta	Outside Region
MAIN RESOURCE DEPENDENT INDUSTRIES					
Located Within the RFA Region					
Jamieson	12.0	12.0	0.0	0.0	0.0
Mansfield	7.0	7.0	0.0	0.0	0.0
Benalla	27.5	4.0	0.0	0.0	23.5
Corryong	32.0	0.0	18.7	0.0	13.3
Mt Beauty	62.0	0.0	0.0	62.0	0.0
Whitfield	21.0	2.8	0.0	4.7	13.5
Total Employees	**161.5**	**25.8**	**18.7**	**66.7**	**50.3**
Located Outside the RFA Region					
Murrindindi/Seymour	67.0	11.1	0.0	0.0	55.9
Swifts Creek	23.0	0.0	6.6	0.0	16.4
Total Employees	**90.0**	**11.1**	**6.6**	**0.0**	**72.3**
LIMITED RESOURCE DEPENDENT INDUSTRIES					
Myrtleford	350.0				
Benalla	210.0				
Total Employees	**560.0**				
TOTAL TABLE	**811.5**	**36.9**	**25.3**	**66.7**	**122.6**

Note: *Timber processed at Swifts Creek is also processed further at Heyfield indicating further employment generation at Heyfield.*
Source: *Adapted from ABARE (1997, unpublished) and includes additional information from the timber processing industry survey.*
Prepared by: *EBC (1998).*

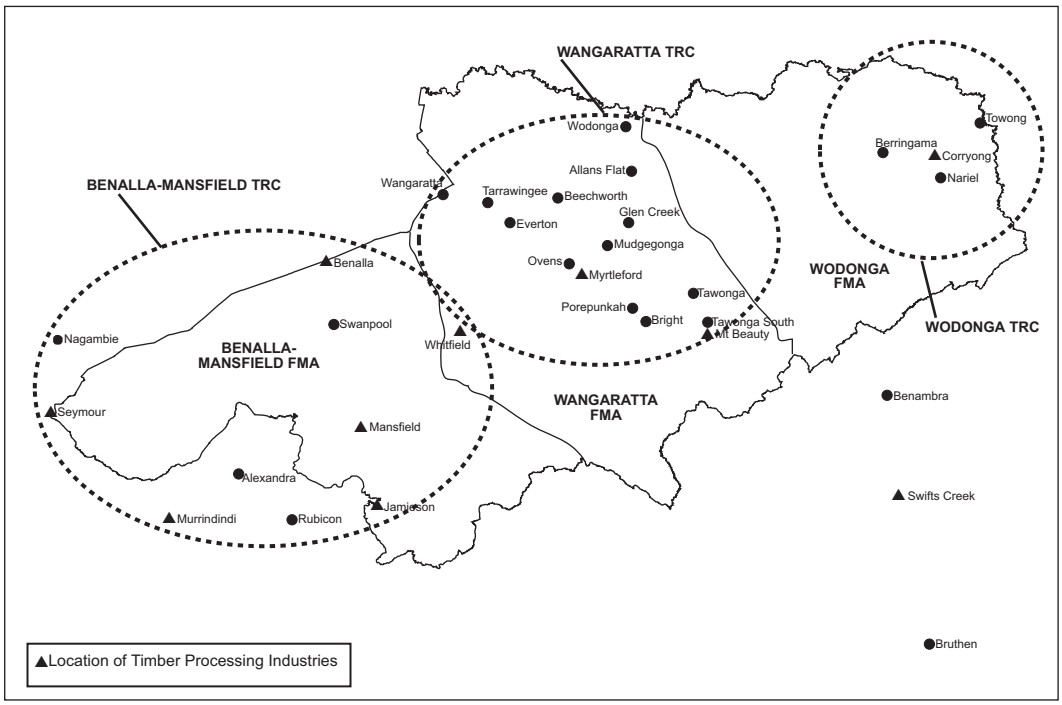


Figure 4.1 - Map of Town Resource Clusters

that there is a cluster of towns which are geographically distinct and which draw resource from the Benalla-Mansfield FMA (Figure 4.1).

For instance, the Benalla-Mansfield town resource cluster (TRC) consists of several towns with timber processing industries drawing resource from the Benalla-Mansfield FMA. The Wodonga TRC consists of one timber processing town, Corryong, which draws resource from the Wodonga FMA, while the town of Mt Beauty within the Wangaratta TRC, is dependent upon resource drawn from the Wangaratta FMA. With the exception of the town of Whitfield, all towns are most dependent upon resource from the FMA in which they are located. The town of Whitfield draws 13.5% of its resource from the Benalla-Mansfield FMA and 22.3% from the Wangaratta FMA, however the town is located within the Benalla-Mansfield TRC as it is more dependent upon towns within this TRC than towns within the Wangaratta TRC.
In addition, Table 4.12 also shows that the timber processing industry of Monsbent which is located at Benalla, within the Benalla-Mansfield TRC draws limited resource directly from the North East RFA region, but nevertheless has 210 employees within Benalla. Similarly, Carter Holt and Harvey located at Myrtleford, within the Wangaratta TRC, draws limited hardwood resource directly from the North East RFA region, but nevertheless has 350 employees working at Myrtleford.

The information provided in Table 4.12 provides some indication that change in resource availability within each FMA, may directly affect specific towns and town resource clusters consisting of towns which are geographically proximate. The location of the three identified Town Resource Clusters (TRCs) and the three FMAs are shown in Figure 4.1.

Timber Contracting Businesses

Each timber processing industry located in the

Table 4.12. Timber Processing Industry Employment and Towns Reliant on Resource from FMAs

Town Location of	Number Employees	Forest Management Areas Within the North East Benalla-Mansfield	Wodonga	Wangaratta	Outside Region
MAIN RESOURCE DEPENDENT INDUSTRIES					
Located Within the RFA Region					
Benalla-Mansfield TRC					
Jamieson	12.0	12.0	0.0	0.0	0.0
Mansfield	7.0	7.0	0.0	0.0	0.0
Benalla	27.5	4.0	0.0	0.0	23.5
Whitfield	21.0	2.8	0.0	4.7	13.5
Total Employees	67.5	25.8	0.0	4.7	**37.0**
Wodonga TRC					
Corryong	32.0	0.0	18.7	0.0	13.3
Total Employees	32.0	0.0	18.7	0.0	13.3
Wangaratta TRC					
Mt Beauty	62.0	0.0	0.0	62.0	0.0
Total Employees	62.0	0.0	0.0	62.7	0.0
TOTAL WITHIN RFA	**161.5**	**25.8**	**18.7**	**66.7**	**50.3**
Located Outside the RFA Region					
Murrindindi/Seymour	67.0	11.1	0.0	0.0	55.9
Swifts Creek	23.0	0.0	6.6	0.0	16.4
TOTAL OUTSIDE RFA	**90.0**	**11.1**	**6.6**	**0.0**	**72.3**
LIMITED RESOURCE DEPENDENT INDUSTRIES					
Myrtleford	350.0				
Benalla	210.0				
TOTAL TABLE	**811.5**	**36.9**	**25.3**	**66.7**	**122.6**

Source: EBC (1998).

North East RFA region identified the number of harvesting and transport contractors that were associated with each industry and the town location of the harvesting and transport contractor. Table 4.13 shows for timber processing industries within each of the three TRCs, the town location of the contracting business, the number of contracting businesses within each town and an estimate of the number of employees associated with contracting businesses with each town. An estimate of the number of employees associated with each harvesting and transport contracting business is based on survey data collected in the Central Highlands and the North East RFA regions, where a mean employment size of 6.1 was identified for timber harvesting and transport businesses. Where survey data is available for specific contractors in the North East RFA region the exact employment size of the contractor has been used.

In relation to Table 4.13, timber processing industries within the Benalla-Mansfield TRC contracted 23 timber harvesting and transport businesses who had 140 employees and were located in the towns of Benalla, Mansfield, Alexandra, Wangaratta, Myrtleford and Whitfield. Table 4.13 also shows that of the 140 employees of harvesting and transport contractors dependent upon timber processing industries that draw their resource from the Benalla-Mansfield FMA, 122 (87.1%) are employed by contracting businesses located within the Benalla-Mansfield TRC.

In relation to the Wodonga TRC, timber processing industries located within this TRC and who draw their resource from the Wodonga FMA use harvesting and transport contractors who have a total of 55 employees. Of the 55 employees, 30 (60%) are employed by contracting businesses located within the Wodonga TRC.

Table 4.13 shows that there are an estimated 24 employees of harvesting and transport contractors dependent upon timber processing industries that draw their resource from the Wangaratta FMA. All employees are employed by contracting businesses located within the Wangaratta TRC.

Table 4.13 also shows that timber processing industries located outside the North East RFA region, and who draw their resource from the region, employ six contracting businesses located within the region (Mansfield) and who have an estimated 37 employees.

Table 4.13. Town Location of Timber Contracting Businesses Contracted by Timber Processing Industries Associated with Each Town Resource Cluster

Town Location of Contractors	Number of Contracting Businesses	Total Number or Employees
MAIN RESOURCE DEPENDENT INDUSTRIES		
Located Within the RFA Region		
Benalla-Mansfield TRC		
Mansfield	9	54.9
Benalla	5	30.5
Alexandra	3	18.3
Whitfield	3	18.3
Wangaratta	2	12.2
Myrtleford	1	6.1
Total	**23 (20)**	**140.3 (122.0)**
Wodonga TRC		
Corryong	2	12.2
Berringama	1	6.1
Wodonga	1	6.1
Nariel	1	6.1
Towong	1	6.1
Orbost	1	6.1
Benambra	1	6.1
Bruthen	1	6.1
Total	**9 (5)**	**54.9 (30.5)**
Wangaratta TRC		
Wodonga	2	12.2
Tawonga South	2	12.2
Total	**4 (4)**	**24.4 (24.4)**
Located Outside the RFA Region		
Mansfield	6	36.6
Benambra	1	6.1
Total	**7**	**42.7**
LIMITED RESOURCE DEPENDENT INDUSTRIES		
(Includes only contractors based in the NE RFA Region)		
Benalla	4	24.4
Myrtleford	3	46.2
Mansfield	2	12.2
Mount Beauty	1	6.1
Corryong	1	6.1
Total	**11**	**95.0**
TOTAL TABLE	**54**	**357.3**

Note: Table is based on the location of timber processing industries. For instance, timber processing industries located within the Benalla-Mansfield TRC use contractors at Benalla and Mansfield. In addition the limited resource dependent industries also use contractors located in Benalla and Mansfield.
Numbers in parentheses indicate the number of businesses and the number of employees located within the TRC
Source: EBC (1998).

The limited resource dependent timber processing industries who draw less than 10% of their hardwood resource from the North East Region or who utilise hardwood residuals, employ 11 contractors who are located within the region and who have a total of 95 employees.

Table 4.14 shows in summary the number of employees of timber processing, harvesting and transport contractors with their workplace towns associated with each of the three TRCs. Within the Benalla-Mansfield TRC there are 37 timber processing and contracting industries, with an employment of 283, that are

Table 4.14. Summary Table of Timber Processing and Contracting Businesses Dependent on Resource from the North East RFA Region.

Town Location of Industry & Business	Number of Industries & Businesses	Total Number or Employees
WITHIN THE RFA REGION		
Main Resource Dependent Industries		
Benalla-Mansfield TRC		
Mansfield	18	110.7
Benalla	10	82.4
Myrtleford	4	52.3
Jamieson	1	12.0
Whitfield	4	25.8
Total	**37**	**283.2**
Wodonga TRC		
Corryong	5	37.0
Berringama	1	6.1
Nariel	1	6.1
Towong	1	6.1
Total	**8**	**55.3**
Wangaratta TRC		
Mt Beauty	2	68.1
Wodonga	3	18.3
Wangaratta	2	12.2
Tawonga South	2	12.2
Total	**9**	**110.8**
Total Within the Region	**54**	**449.3**
LOCATED OUTSIDE THE RFA REGION		
Alexandra	3	18.3
Benambra	1	6.1
Orbost	1	6.1
Benambra	1	6.1
Bruthen	1	6.1
Murrindini/Seymour	1	11.1
Swifts Creek	1	6.6
Total Outside the Region	**9**	**60.4**
Limited Resource Dependent Industries		
Benalla-Mansfield TRC		
Myrtleford	1	350.0
Benalla	1	210.0
Total	**2**	**560.0**
TOTAL TABLE	**65**	**1069.7**

Note: Does not include those timber processing industries outside the region at Murrindindi, Seymour and Swifts Creek.
Source: EBC (1998).

dependent upon resource from the North East RFA region. If those industries which are not primarily dependent upon hardwood resource from the North East Region are also included within this TRC, the total number of timber industry and contracting employees within this TRC is 843. Approximately 26% of employees who have their workplace within the Benalla-Mansfield TRC are directly dependent upon hardwood resource drawn from the North East Region, with Mansfield and Benalla being the primary workplace location of employees.

Within the Wodonga TRC there are eight timber processing and contracting business with 55 employees. All these industries and businesses are dependent upon resource drawn from the North East Region, with Corryong being the primary workplace location of employees.

Within the Wangaratta TRC all industries and businesses are dependent upon resource drawn from the North East region. There are an estimated 9 timber processing industries and businesses located within this TRC with 110 employees. Mt Beauty is the primary workplace town within this TRC with 68 employees.

Other Forest Users

Of the 135 grazing licence holders, whose business address is within the North East region, Table 4.15 shows that the majority are located within the Wangaratta TRC, particularly the towns of Wodonga, Wangaratta and Rutherglen.

Table 4.16 shows the town location of apiarists whose business address is within the North East region, and of these, all appear to be located within the Wangaratta TRC and in particular the town of Wangaratta. A further 10 apiarists who have licences in the North East live outside the region.

Table 4.15. Town Location of Holders of Grazing Licences

Town Location of Industry & Business	Number of Industries & Businesses
Benalla-Mansfield TRC	
Mansfield	9
Benalla	4
Merrijig	3
Warrenbayne	2
Other Towns	6
Total	**24**
Wangaratta TRC	
Wodonga	13
Wangaratta	11
Rutherglen	10
Myrtleford	9
Bright	7
Barnawartha North	4
Mitta Mitta	4
Mt Beauty	3
Wandiligong	3
Murmungee	2
Ovens	2
Peechelba East	2
Porepunkah	2
Tawonga South	2
Yackandandah	2
Other Towns	14
Total	**90**
Wodonga TRC	
Tallangatta	8
Eskdale	6
Corryong	2
Koetong	2
Other Towns	3
Total	**21**
Table Within the Region	**135**
Total Located Outside the Region	**185**
TABLE TOTAL	**320**

Source: *Natural Resources and Environment (NRE)*
Prepared by: *EBC (1998).*

Table 4.17 shows the town location of licensed tourism operators with businesses within the North East region. Of the 40 licensed tourism operators within the region, 25 are located within the Wangaratta TRC.

Table 4.16. Town Location of Apiarists

Town Location of Business	Number of Businesses
Benalla-Mansfield TRC	
Total	**0**
Wangaratta TRC	
Wangaratta	9
Beechworth	2
Milawa	2
Other Towns	3
Total	**16**
Wodonga TRC	
Total	**0**
Table Within the Region	**16**
Total Located Outside the Region	**10**
TABLE TOTAL	**26**

Source: *North Eastern Apiarists' Association of Victoria Inc.*
Prepared by: *EBC (1998).*

Table 4.17. Town Location of Tourism Operators (with Licences for Forest Activities)

Town Location of Business	Number of Businesses
Benalla-Mansfield TRC	
Mansfield	6
Benalla	2
Merrijig	2
Total	**10**
Wangaratta TRC	
Bright	5
Beechworth	3
Mount Beauty	3
Porepunkah	2
Falls Creek	2
Germantown	2
Other Towns	8
Total	**25**
Wodonga TRC	
Corryong	2
Other Towns	3
Total	**5**
Table Within the Region	**40**
Total Located Outside the Region	**73**
TABLE TOTAL	**113**

Source: *NRE and Parks Victoria.*
Prepared by: *EBC (1998).*

Table 4.18 shows that there are 129 NRE and Parks Victoria employees located within the North East RFA region, with the towns of Mansfield, Benalla, Wodonga and Bright being the primary workplace locations of these employees.

Employee Town of Residence

While previous analyses identified a relationship between FMAs and the town location of timber industry and timber contracting businesses, this is not necessarily the town location of employees in these industries and businesses. This section identifies the relationship between the towns in which the timber industry is located and the town in which employees reside.

Timber Processing Industries

On the basis of the survey of forest industry employees, a profile was established which showed the relationship between the town location of the timber processing industry and the town location of employees. Given that information was available on the employment size of all timber processing industries, the employee profile developed from the survey could be used to establish the proportion of employees living within specific towns. Table 4.19 shows the residential town locations of all employees for timber processing industries located within each TRC. For instance, when considering the employees of all timber processing industries located within the Benalla-Mansfield TRC, 30 reside in the town of Benalla. However, if the limited dependent timber processing industries are included, the number of employees in Benalla increases by 171 to 201.

An examination of Table 4.19 shows that the majority of towns in which employees reside are located within the same TRCs in which the timber processing industry in which they are employed is also found.

Table 4.18. Town Location of NRE and Parks Victoria Employees Within the North East Region

Town Location	Number of Employees
Benalla-Mansfield TRC	
Mansfield	21
Benalla	20
Eildon	7
Whitfield	2
Total	**50**
Wangaratta TRC	
Wodonga	18
Bright	15
Myrtleford	8
Wangaratta	7
Mt Buffalo	6
Mt Beauty	4
Chiltern	3
Mitta Mitta	2
Total	**63**
Wodonga TRC	
Tallangatta	11
Corryong	5
Total	**16**
TABLE TOTAL	**129**

Source: NRE and Parks Victoria
Prepared by: EBC (1998).

Table 4.19 also indicates the approximate number of employees and family dependants who reside within each town. This is based on a survey of forest industry employees which indicated a family dependancy multiplier of 2.94 including the employee or 1.94 excluding the employee.

In addition, while Table 4.19 shows that Carter Holt and Harvey located at Myrtleford and Monsbent located at Benalla have only a minimal and direct reliance on native hardwood forests in the North East region the number of employees and family dependants reliant on these industries is over four times that of all timber processing industries in the North East with a direct reliance on native hardwood forests.

Timber Contracting Businesses

Table 4.20 shows the minimum, maximum and mean employment sizes for different types of forest contracting businesses. The survey on which this table is based shows considerable range in the minimum and maximum employment sizes for timber harvesting and trucking business, suggesting that the application of the mean employment size for these contracting business should be interpreted with some caution.

Given that the workplace towns of contractors was identified primarily through information obtained from specific timber processing industries and the greater dispersion of workplace towns when compared to the location of timber processing industries, it is not possible to identify precisely the towns in which employees of contractors reside. In this instance, the employees town of residence is inferred from the assumed workplace town of the contractor.

An estimate of the employee and family dependants located within each town is shown in Table 4.21. This table shows that within the North East RFA region there are an estimated 1,014 employees and family dependants of timber industry contractors. In addition, there are 125 employees and family dependants of forest contractor businesses located within the North East RFA, who reside outside the region. Across all timber industry contractors who are dependent upon resource from within the North East RFA region and where the business is based within the region, there are 357 direct employees or 1,139 employees and family dependants.

Table 4.22 provides a summary table of the inferred town of residence of timber processing industry employees and contractors who access their timber resource from the North East region. It is estimated that there are 1,336 employees and their family dependants in timber processing and contracting businesses,

Table 4.19. Employee Town of Residence for Timber Processing Industries

Employee Town of Residence	Number of Employees	FamilySize (inc. employee)
MAIN RESOURCE DEPENDENT INDUSTRIES		
Benalla-Mansfield TRC		
Benalla	30.0	88.2
Mansfield	22.0	64.7
Jamieson	12.0	35.3
Corowa	2.5	7.3
Total	**66.5**	**195.5**
Wodonga TRC		
Corryong	32.0	94.1
Total	**32.0**	**94.1**
Wangaratta TRC		
Mt Beauty	40.0	117.6
Tawonga South	8.0	23.5
Bright	7.0	20.6
Porepunkah	3.0	8.8
Myrtleford	2.0	5.9
Tawonga	2.0	5.9
Rubicon	1.0	2.9
Total	**63.0**	**185.2**
TOTAL	**161.5**	**474.8**
LIMITED RESOURCES DEPENDENT INDUSTRIES		
Located at Myrtleford		
Myrtleford	231.5	680.6
Bright	26.0	76.4
Mudgegonga	13.5	39.7
Porepunkah	13.5	39.7
Wangaratta	13.5	39.7
Allans Flat	6.5	19.1
Beechworth	6.5	19.1
Everton	6.5	19.1
Glen Creek	6.5	19.1
Greendale	6.5	19.1
Nagambie	6.5	19.1
Ovens	6.5	19.1
Tarrawingee	6.5	19.1
Located at Benalla		
Benalla	171.0	502.7
Swanpool	13.0	38.2
Wangaratta	13.0	38.2
Corowa	13.0	40.3
Total	**560.0**	**1646.4**
TOTAL TABLE	**721.5**	**2121.2**

Note: A survey of 271 forest industry employees indicated the family size to be 2.94. Excluding the employee, the family dependents multiplier would be 1.94, which is similar to the multiplier of 2.06 used by AGC Woodward-Cldye Pty Ltd in a study of the timber industry in the Upper Yarra Valley.

Source: EBC (1998).

Table 4.20. Mean Employment Size for Forest Contracting Businesses

Main Activity Employment	Minimum Employment	Maximum Employment	Mean
Timber harvesting	1.5	34.0	7.7
Transport (trucking)	1.0	34.0	4.6
Roading	2.0	12.0	5.7
Seed collection	0.5	8.0	3.2
Firewood collection	0.5	4.0	1.5
Average Employment Size	**0.5**	**34.0**	**4.9**

Note: Based on surveys of timber contracting businesses within the Central Highlands and North East RFA region
Source: EBC (1998).

who draw over 10% of their resource from the North East region. When those timber processing industries and contractors who also draw limited direct hardwood resource from the North East region are also included, the direct estimate of employees and family dependants within the North East region is estimated to be 3,262. For reasons discussed previously, it is likely that this estimate is conservative as the total does not include those businesses and individuals who may be sub-contracted, or additional contractors and small businesses who have not been included in this survey.

Lifecycle Age Profiles

The previous analyses provide some indication of the number of timber processing industry and contractor employees and their family dependents within each of the three Town Resource Clusters. However, an indication of the extent of dependency of all forest industry families on social and community infrastructure services can only be examined through an analysis of the age structure and profile of forest industry families. An examination of the family lifecycle age profiles across all forest industry employees and those within the three Town Resources Clusters is shown in Table 4.23.

Across all forest industry families, the majority appear to consist of young to middle age families, with 14% of the members of all forest industry families being of primary school age. The percentage of primary school children appears to be highest within the Wodonga TRC when compared to the remaining two Town Resource Clusters.

School Locations

Primary and secondary school locations were identified from the survey of forest industry employees. Table 4.24 shows the location of primary and secondary schools attended by family members of forest industry employees within each of the town resource clusters (TRCs).

Table 4.24 shows that within the Benalla-Mansfield TRC, 92% of primary school aged children use schools located in Mansfield, Benalla and Whitfield, with Mansfield and Benalla also being the main locations for children attending secondary school. Within the Wangaratta TRC 36% of children attend a primary school at Myrtleford, with 49% of all secondary school aged children also attending a secondary school at Myrtleford. Within the Wodonga TRC it appears that Corryong is the main location for children attending both primary and secondary school.

Household Expenditure

While the previous analyses provide some indication of the degree of town dependence on

Table 4.21. Employee Town of Residence for Forest Contracting Businesses

Employee Town of Residence	Number of Employees	Family Size (inc. employee)
MAIN RESOURCE DEPENDENT INDUSTRIES		
Located Within the RFA Region		
Benalla-Mansfield TRC		
Benalla	30.5	89.7
Mansfield	18.3	53.8
Alexandra	18.3	53.8
Wangaratta	12.2	35.9
Myrtleford	6.1	17.9
Total	**85.4**	**251.1**
Wodonga TRC		
Corryong	12.2	125.5
Berringama	6.1	17.9
Wodonga	6.1	17.9
Nariel	6.1	17.9
Towong	6.1	17.9
Orbost	6.1	17.9
Benambra	6.1	17.9
Bruthen	6.1	17.9
Total	**54.9**	**250.8**
Wangaratta TRC		
Mansfield	36.6	107.6
Whitfield	18.3	53.8
Wodonga	12.2	35.9
Tawonga South	12.2	35.9
Total	**79.3**	**233.2**
Located Outside the RFA Region		
Mansfield	36.6	107.6
Benambra	6.1	17.9
Total	**42.7**	**125.5**
LIMITED RESOURCE DEPENDENT INDUSTRIES		
(Includes only contractors based in the NE RFA Region)		
Myrtleford	46.2	135.8
Benalla	24.4	71.7
Mansfield	12.2	35.9
Mount Beauty	6.1	17.9
Corryong	6.1	17.9
Total	**95.0**	**279.2**
TOTAL TABLE	**357.3**	**1139.8**

Source: EBC (1998).

direct employment levels within different forest industries, employees will purchase goods and services from the town in which they reside but also from other regional centres. As such town dependency on forest industry activity is often broader than simply identifying the number of timber industry employees within a town. In some instances, a town may have no forest industry employees resident, but the town has some reliance upon forest industries through income and further employment generated from the supply of

Table 4.22. Summary Table: Employee Town of Residence for Forest Processing and Forest Contracting Businesses

Employee Town of Residence	Number of Employees	Family Size (inc. employee)
MAIN RESOURCE DEPENDENT INDUSTRIES		
Located Within the RFA Region		
Benalla-Mansfield TRC		
Benalla	60.5	177.9
Mansfield	40.3	118.5
Alexandra	18.3	53.8
Wangaratta	12.2	35.9
Jamieson	12.0	35.3
Myrtleford	6.1	17.9
Corowa	2.5	7.3
Total	**151.9**	**446.6**
Wodonga TRC		
Corryong	44.2	219.6
Berringama	6.1	17.9
Wodonga	6.1	17.9
Nariel	6.1	17.9
Towong	6.1	17.9
Orbost	6.1	17.9
Benambra	6.1	17.9
Bruthen	6.1	17.9
Total	**86.9**	**344.9**
Wangaratta TRC		
Mt Beauty	40.0	117.6
Mansfield	36.6	107.6
Tawonga South	20.2	59.4
Whitfield	18.3	53.8
Wodonga	12.2	35.9
Bright	7.0	20.6
Porepunkah	3.0	8.8
Myrtleford	2.0	5.9
Tawonga	2.0	5.9
Rubicon	1.0	2.9
Total	**142.3**	**418.4**
Located Outside the RFA Region		
Mansfield	36.6	107.6
Benambra	6.1	17.9
Total	**42.7**	**125.5**
TOTAL MAIN RESOURCE DEPENDENT	423.8	1335.4
LIMITED RESOURCE DEPENDENT INDUSTRIES		
(Includes only contractors based in the NE RFA Region)		
Myrtleford	277.7	816.4
Benalla	195.4	574.4
Bright	26.0	76.4
Wangaratta	26.0	76.4
Mudgegonga	13.5	39.7
Porepunkah	13.5	39.7
Corowa	13.0	38.2
Swanpool	13.0	38.2
Mansfield	12.2	35.9
Allans Flat	6.5	19.1
Beechworth	6.5	19.1
Everton	6.5	19.1
Glen Creek	6.5	19.1
Greendale	6.5	19.1
Nagambie	6.5	19.1
Ovens	6.5	19.1
Tarrawingee	6.5	19.1
Mount Beauty	6.1	17.9
Corryong	6.1	17.9
Total	**655.0**	**1927.5**
TOTAL TABLE	**1078.8**	**3262.9**

Source: EBC (1998).

goods and services to forest industry employees located in other towns. There is no intention in the following analyses to identify local or sub regional income and employment multipliers derived from the household expenditure of forest industry employees. The analyses which are presented simply provide some indication of the magnitude of household expenditure by forest industry employees across towns in the region, and the location of towns in which household goods and services are purchased.

The locational pattern and magnitude of household expenditure by forest industry employee households is modelled using primary data collected from this survey of forest industry employees and information collected as part of the Australian Bureau of Statistics (ABS) Household Expenditure Survey, which was undertaken in 1993-1994.

The survey of forest industry employees identified the town location from which commodities or services were purchased, with respondents identifying the main town in which purchases occurred and other towns from which they purchased commodities or services. The identification of main towns and other towns associated with household purchases provided some indication of both primary and secondary catchments for the purchase of household items, as clearly a single household item would not always be purchased from one location. Table 4.25 shows the range of household commodities and services identified in the survey.

While the survey was used to identify the location of expenditure on household services and commodities, the ABS Household Expenditure Survey was used to provide an indication of the magnitude of the expenditure. Two important issues need to be considered when using information from the Household Expenditure Survey (HES). Firstly, the HES provides dollar values for items of household expenditure for 1993-1994 and since this time changes in the costs of household items have occurred. Secondly, the HES is not specific to any one industry or occupational group, but provides average weekly household expenditure for the State of Victoria. As such, the average weekly household expenditure maybe different to the level of household expenditure within specific industries and occupational groups.

Individual commodities or services identified in the HES were aggregated to the classification used and identified in Table 4.25. In addition to the information presented in

Table 4.23. Lifecycle age Profiles for Forest Industry Employees Across Three Town Resource Clusters

Age (years)	Lifecycle Ages	All Forest Industry Employees	Benalla-Mansfield TRC	Wangaratta TRC	Wodonga TRC
0-4	Pre-school	8.36	11.94	7.48	3.45
5-12	Primary School	13.69	16.35	10.47	20.69
13-17	High School	9.08	8.18	9.23	10.34
18-24	Young singles/couples	11.53	8.80	14.71	6.90
25-39	Young/middle families	24.78	28.30	23.94	27.59
40-49	Mature Families	18.30	17.61	20.20	6.90
50-64	Pre-Retirement	11.67	6.29	12.22	24.14
65+	Elderly	2.59	2.52	1.75	0.00
Total		**100.00**	**100.00**	**100.00**	**100.00**

Note: Percentages are based on the number of forest industry employees and their dependants.
Source: EBC (1998).

Table 4.24. Location of Primary Schools Attended Across the Three Town Resource Clusters

Location of Primary Schools	Benalla-Mansfield TRC	Wangaratta TRC	Wodonga TRC
PRIMARY SCHOOLS			
Mansfield	38.5	2.8	
Benalla	26.9		
Whitfield	26.9		
Alexandra	7.7		
Myrtleford		36.1	
Bright		16.7	
Mt Beauty		11.1	
Wandiligong		8.3	
Porepunkah		8.3	
Tallangatta		5.5	
Tawonga		5.5	
Wangaratta		2.8	
Wodonga		2.8	
Corryong			100.0
Total Percentage	**100.0**	**100.0**	**100.0**
SECONDARY SCHOOLS			
Mansfield	42.9		
Benalla	42.9		
Wangaratta	7.1	8.6	
Alexandra	7.1		
Myrtleford		48.6	
Mt Beauty		28.6	
Bright		11.4	
Albury		2.9	
Corryong			100.0
Total Percentage	**100.0**	**100.0**	**100.0**

Source: EBC(1998).

Table 4.25 household expenditure on telephone charges was allocated to Melbourne and rates to local government authorities were allocated to the town in which local authority offices were located. In distinguishing between main household grocery shopping and minor purchases of food and groceries, the total expenditure on food and grocery items was proportionally distributed to towns associated with each category, with towns associated with main household grocery purchases allocated 0.66 of the total food and grocery expenditure, while towns associated with minor purchases of food and groceries were allocated 0.34 of the total food and grocery expenditure. Towns identified within the primary catchment for household expenditure were also allocated 0.66 of the item's expenditure, while towns in the secondary catchment were allocated 0.34 of the expenditure for that item. Only eight percent of household expenditure items could not be allocated to a specific town location. In this case the average annual household expenditure on these items was distributed proportionally across all other towns where expenditure occurred.

A further issue which needs to be addressed in the use of HES data and its application to the households of forest industry employees, is that the source of income for the household may not be solely dependent upon one forest industry employee and that the average annual expenditure for the household may be dependent on other income earners within the household who were not employed within forest industries. Clearly the direct application of household expenditure data to households where there is only one employee within the forest industry may overestimate the contribution of forest industry employees to regional household expenditure as there maybe

Table 4.25. Household Commodities and Services Identified in the Forest Industry Employee Survey Research

Items	Items
Main household grocery purchases	Car repairs and service
Minor purchases of food and groceries	Petrol or diesel for car
Hairdressing (men's and women's)	Power (electricity or gas)
Chemist goods, toiletries & cosmetics	Accounting
Take away food	Banking
Tools and hardware	Legal expenses
Clothing	Insurance (inc. house, car or medical)
Books or magazines	Medical (inc. doctors, dentists)
Electrical goods	Mortgage payments
Furniture or carpets	Rental payments
Household repairs and maintenance	School fees and costs
Cars (new and/or used)	Recreation, sporting and entertainment

Source: EBC (1998).

other members of the household not employed in the forest industry which provides a basis for this expenditure. The survey of forest industry employees had shown that 56.1% of partners or spouses in households were employed in addition to the forest industry employee. The current survey of forest industry employees also showed that 15.7% of employees had spouses who also worked in forest industries. In order to address these issues, and provide an estimate of the magnitude of household expenditure attributable directly to employment in the forest industry, the following formula was used to adjust the total annual household expenditure for partners and spouses in the workforce and who may also be employed in the forest industry.

HF= HE * ((0.5 + SF) + (0.5 + (1 - SE)))/2
Where:
HF = Household expenditure attributable to the forest industry
HE = Annual average household expenditure (ABS)
SF = Proportion of spouses employed in forest industries
SE = Proportion of spouses employed

The use of this formula indicates that the total annual household expenditure as identified in the ABS HES survey, needs to be adjusted by 0.798 to arrive at that proportion of household expenditure attributable to employment in forest industries.

Timber Processing Industries

Table 4.26 shows the magnitude of annual household expenditure generated by specific towns with timber processing industries. Processing industries located within the North East region, through their employees were found to generate $23 million in annual household expenditure, with timber processing industries in the Benalla-Mansfield TRC dependent upon resource from the North East region generating $2 million in annual household expenditure. The limited resource dependent industries located at Myrtleford and Benalla, contribute $16 million in annual household expenditure. When all town locations for timber processing industries are considered $23 million in annual household expenditure is generated directly through employees within these industries.

Table 4.26 shows that if only those timber processing industries located within each of the three TRCs are considered, which includes industries located in the region and which have a significant dependence on hardwood resource from the region, these industries generate $5 million in annual household expenditure

amongst their employees.

Timber Contracting Businesses

Table 4.27 shows the magnitude of annual household expenditure generated by contracting businesses located in different towns. Timber contracting business dependent upon hardwood resource from the North East region are estimated to generate $10 million in annual household expenditure. Through the timber processing industries within the Benalla-Mansfield TRC, timber contracting businesses generate $4 million in annual household expenditure alone.
Tables 4.26 and 4.27 show that the timber industry which relies on resource from the North East Region makes a significant contribution to the local and regional economy, with an estimated $33 million in employee household expenditure generated by these industries and businesses each year. However, it is important to separate those processing and contracting businesses with a limited dependence on hardwood resources from those industries which have a strong dependence on hardwood resources sourced from the region. The limited hardwood resource dependent processors and contractors, located mainly at Myrtleford and Benalla, generate approximately $18.32M in annual household expenditure. Alternately, the main hardwood

Table 4.26. Annual Household Expenditure by Location of Timber Processing Industry (Sawmill employees)

Location of Employee Industry	Number of Employees	Annual Household Expenditure($) (exc. tax)
MAIN RESOURCE DEPENDENT INDUSTRIES		
Located within the RFA Region		
Benalla-Mansfield TRC		
Jamieson	12.0	336,000
Mansfield	7.0	196,000
Benalla	27.5	769,000
Whitfield	21.0	587,000
Annual Household Expenditure		**1,888,000**
Wodonga TRC		
Corryong	32.0	895,000
Annual Household Expenditure		**895,000**
Wangaratta TRC		
Mt Beauty	62.0	1,734,000
Annual Household Expenditure		**1,734,000**
Total Direct Employees	**161.5**	
Located Outside the RFA Region		
Murrindindi/Seymour	67.0	1,873,000
Swifts Creek	23.0	643,000
Total Direct Employees	**90.0**	
Annual Household Expenditure		**2,516,000**
LIMITED RESOURCE DEPENDENT INDUSTRIES		
Myrtleford	350.0	9,787,000
Benalla	210.0	5,872,000
Total Direct Employees	**560.0**	
Annual Household Expenditure		**15,659,000**
TOTAL DIRECT EMPLOYEES	**811.5**	
TOTAL HOUSEHOLD EXPENDITURE		**22,692,000**

Source: EBC (1998)

Table 4.27. Annual Household Expenditure by Location of Timber Contracting Businesses

Location of Employee Industry	Number of Employees	Annual Household Expenditure($) (exc. tax)
MAIN RESOURCE DEPENDENT INDUSTRIES		
Located Within the RFA Region		
Benalla-Mansfield TRC		
Mansfield	54.9	1,535,000
Benalla	30.5	853,000
Alexandra	18.3	512,000
Whitfield	18.3	512,000
Wangaratta	12.2	341,000
Myrtleford	6.1	171,000
Total Direct Employees	**140.3**	
Annual Household Expenditure		**3,924,000**
Wodonga TRC		
Corryong	12.2	341,142
Berringama	6.1	171,000
Wodonga	6.1	171,000
Nariel	6.1	171,000
Towong	6.1	171,000
Orbost	6.1	171,000
Benambra	6.1	171,000
Bruthen	6.1	171,000
Total Direct Employees	**54.9**	
Annual Household Expenditure		**1,538,000**
Wangaratta TRC		
Wodonga	12.2	341,000
Tawonga South	12.2	341,000
Total Direct Employees	**24.4**	
Annual Household Expenditure		**682,000**
Located Outside the RFA Region		
Mansfield	36.6	1,023,000
Benambra	6.1	171,000
Total Direct Employees	**42.7**	
Annual Household Expenditure		**1,194,000**
LIMITED RESOURCE DEPENDENT INDUSTRIES		
(Includes only contractors based in the NE RFA Region)		
Benalla	24.4	682,000
Myrteford	46.2	1,292,000
Mansfield	12.2	341,000
Mount Beauty	6.1	171,000
Corryong	6.1	171,000
Total Direct Employees	**95**	
Annual Household Expenditure		**2,657,000**
TOTAL TABLE	**357.3**	
TOTAL HOUSEHOLD EXPENDITURE		**9,995,000**

Note: *The same town may appear in different TRCs, as timber contracting businesses located in the town maybe contracted by timber industries located in different TRCs.*

Source: *EBC (1998).*

dependent industries generate approximately $14.4M in annual household expenditure, mainly reflecting the expenditure patterns of sawmill employees.

While Tables 4.26 and 4.27 show the location of processing industries and contracting businesses that directly generate household expenditure by employees, they do not indicate the town location of that expenditure.

Table 4.28 shows the inferred town location and amount of household expenditure for all timber processing and contracting employees located within each of the TRCs identified in Table 4.22. When those industries that are directly reliant on hardwood resource are considered, within the Benalla-Mansfield TRC, employees of timber processing industries and contractors spend over $2 million in the towns of Benalla and Mansfield, while in the Wodonga TRC the primary location for household expenditure is Corryong ($1 million annually). In the Wangaratta TRC, Mt Beauty, Mansfield and Wodonga are the primary locations for household expenditure. When those industries with limited dependence on hardwood resource are also considered there is significant additional household expenditure generated by employees within the towns of Myrtleford ($6 million), Benalla ($4 million) and Wangaratta ($3 million).

Location of Industry Expenditure

In the survey of forest contractors and forest user businesses each industry was asked to indicate the town from which they purchased goods and services within the last 12 months.

Table 4.29 shows for all forest contractor and forest user businesses located within the Benalla-Mansfield TRC, the location of their expenditure on business goods and services. Mansfield and Benalla are clearly the two major town locations from which the majority of businesses and industries within this TRC purchase goods and services. Melbourne and Wangaratta are also important industry expenditure locations particularly for legal and insurance purchases and the purchase of major equipment and vehicles. Given the previous analyses and the analysis presented in Table 4.29, any significant change to resource availability in the Benalla-Mansfield FM will affect not only the towns in which the businesses and employees are located, but also the towns of Mansfield and Benalla which supply goods and services to these industries.

Table 4.30 shows the location of industry expenditure for those forest contractor and forest user businesses located within the Wangaratta TRC. What is significant in relation to Table 4.30 is that there is no expenditure drawn from the Benalla-Mansfield TRC and that forest industry expenditure is primarily constrained to the Wangaratta TRC, which includes the major expenditure town locations of Wodonga, Wangaratta, Myrtleford and Beechworth. What is apparent from Table 4.30 is that if there is a change in resource availability within the Wangaratta FMA which directly affects forest industries, the towns primarily affected will include towns within the Wangaratta TRC, and towns with high levels of industry expenditure (Wodonga, Wangaratta, Myrtleford and Beechworth).

Table 4.31 shows for those forest industries within the Wodonga TRC, the towns in which expenditure occurs for these forest industries. From Table 4.31 it is evident that Corryong and to a lesser extent Wodonga are the towns in which the majority of industry expenditure occurs. Although Corryong is within the Wodonga TRC, Wodonga is located in the Wangaratta TRC and while Wodonga provides many goods and services to forest industries within the Wodonga TRC it also supplies goods and services to forest industries within the Wangaratta TRC.

Table 4.28. Town Catchments of Annual Household Expenditure for all Timber Processing and Contracting Industry Employees within Town Resource Clusters *(Based on Employment in Table 4.22)*

Location of Employee Household Expenditure	Annual Household Expenditure ($) (exc. tax)
MAIN RESOURCE DEPENDENT INDUSTRIES LOCATED WITHIN THE RFA REGION	
Benalla-Mansfield TRC	
Benalla	1,272,000
Mansfield	930,000
Wangaratta	487,000
Melbourne	464,000
Alexandra	316,000
Shepparton	310,000
Jamieson	139,000
Myrtleford	122,000
Towns less than $100,000 (15 towns)	203,000
Total	**4,243,000**
Wodonga TRC	
Corryong	1,057,000
Albury	487,000
Wodonga	144,000
Towns less than $100,000 (6 towns)	57,000
Total	**1,745,000**
Wangaratta TRC	
Mt Beauty	769,000
Mansfield	685,000
Wodonga	618,000
Albury	498,000
Wangaratta	418,000
Melbourne	218,000
Bright	155,000
Benalla	140,000
Whitfield	117,000
Towns less than $100,000 (25 towns)	361,000
Total	**3,979,000**
Located Outside the RFA Region	
Mansfield	685,000
Benalla	136,000
Benambra	107,000
Towns less than $100,000 (9 towns)	266,000
Total	**1,194,000**
LIMITED RESOURCE DEPENDENT INDUSTRIES	
(Includes only contractors based in the NE RFA Region)	
Myrtleford	5,511,000
Benalla	3,616,000
Wangaratta	2,782,000
Albury	1,370,000
Melbourne	1,150,000
Shepparton	933,000
Mansfield	819,000
Bright	624,000
Wodonga	485,000
Beechworth	393,000
Corryong	103,000
Towns less than $100,000 (27 towns)	498,000
Total	**18,284,000**

Note: The towns of Orbost, Benambra and Bruthen (Table 4.22) have been excluded from the calculation of household expenditure for the Wodonga TRC as they are outside the area and no additional information is available on these towns. Based on employment information presented in Table 4.22.
The same town may appear in different TRCs, as timber contracting businesses located in the town maybe contracted by timber industries located in different TRCs.

Source: EBC, (1998).

Table 4.29. Benalla-Mansfield TRC: Location of Forest Contractor and Forest User Business Expenditure

Goods and Services	Primary Catchment	Secondary Catchment	Tertiary Catchment
Usual Business Expenses			
Power (electricity, gas)	Benalla	Mansfield	Seymour
Fuel	Benalla	Mansfield	
Freight (general business freight)	Mansfield	Benalla	
Freight (timber haulage)	Mansfield	Melbourne	
Accounting	Mansfield	Benalla	Melbourne**
Legal expenses	Benalla	Mansfield*	Wangaratta
Insurance	Benalla	Melbourne*	Wangaratta
Office supplies	Benalla	Mansfield	
Advertising & marketing	Benalla	Melbourne	
Banking	Benalla	Mansfield	
Printing	Benalla	Mansfield	
Repairs and Maintenance			
Machinery or equipment	Benalla	Mansfield	Seymour**
Vehicles	Benalla	Mansfield	
Building and office	Benalla		
Major Equipment or Asset Purchases			
Machinery, plant or equipment	Melbourne	Tasmania	Seymour**
Vehicles	Melbourne	Benalla*	
Computing equipment	Benalla	Melbourne	
Extensions or alterations to buildings	Benalla	Melbourne*	Seymour**
New building or land purchases	Benalla	Mansfield	Seymour**
Council rates	Benalla	Mansfield	Seymour**
Log Costs			
Royalties and related levies	Mansfield	Alexandra*	
Harvesting and log cartage	Mansfield	Traralgon	

Note: **Indicates equal importance to the primary and secondary catchment locations.*
***Indicates equal importance to the secondary and tertiary catchment locations.*
Source: EBC (1998).

While Tables 4.29-4.31 show the location from which items of business expenditure are sourced for forest industries within each of the TRCs, it does not provide any indication of the size of that expenditure. Each forest industry was asked to indicate for each item of expenditure whether the item was less than 10% of their total expenditure or greater than 10% of their total expenditure.

Table 4.32 shows the percentage of industries and businesses indicating the level of expenditure for specific goods and services to be over 10% relative to their total annual expenditure. In relation to items identified as usual business expenses, expenditure on these items are high within the timber industry, timber industry contractors and cattle grazing businesses, while they are relatively lower amongst apiarist and mining and prospecting businesses. Expenditure on repairs and maintenance tends to be high amongst the timber industry and apiarist businesses and relatively lower amongst mining, prospecting and cattle grazing businesses. Expenditure on major equipment or asset purchases is relatively high across all industry groups, particularly the mining and prospecting industries.

Table 4.30. Wangaratta TRC: Location of Timber Processing Industry and Forest Industry Expenditure

Goods and Services	Primary Catchment	Secondary Catchment	Tertiary Catchment
Usual Business Expenses			
Power (electricity, gas)	Myrtleford	Wodonga	Wangaratta
Fuel	Myrtleford	Beechworth	
Freight (general business freight)	Beechworth	Myrtleford	Wodonga**
Freight (timber haulage)	Mt Beauty	Wodonga*	
Accounting	Wangaratta	Myrtleford	Wodonga**
Legal expenses	Beechworth	Wangaratta	Myrtleford
Insurance	Albury	Wangaratta	Melbourne**
Office supplies	Wangaratta	Beechworth	Wodonga**
Advertising & marketing	Wangaratta	Beechworth	
Banking	Wangaratta	Myrtleford*	Beechworth**
Printing	Beechworth	Wangaratta	Wodonga
Repairs and Maintenance			
Machinery or equipment	Albury	Beechworth*	Wangaratta**
Vehicles	Beechworth	Myrtleford	Wangaratta**
Building and office	Beechworth	Mt Beauty	
Major Equipment or Asset Purchases			
Machinery, plant or equipment	Myrtleford	Wangaratta	
Vehicles	Wangaratta	Wodonga	Albury
Computing equipment	Wangaratta		
Extensions or alterations to buildings	Beechworth	Mt Beauty	Myrtleford
New building or land purchases	Mt Beauty		
Council rates	Wangaratta	Bright	Wodonga
Log Costs			
Royalties and related levies	Wodonga		
Harvesting and log cartage	Mt Beauty		

Note: **Indicates equal importance to the primary and secondary catchment locations.*

***Indicates equal importance to the secondary and tertiary catchment locations.*

Source: EBC (1998).

Table 4.31. Wodonga TRC: Location of Timber Processing Industry and Forest Industry Expenditure

Goods and Services	Primary Catchment	Secondary Catchment	Tertiary Catchment
Usual Business Expenses			
Power (electricity, gas)	Corryong	Wodonga*	Shepparton
Fuel	Wodonga	Corryong	Shepparton
Freight (general business freight)	Corryong	Wodonga*	
Freight (timber haulage)	Corryong		
Accounting	Wodonga		
Legal expenses	Wodonga		
Insurance	Albury	Melbourne	
Office supplies	Corryong		
Advertising & marketing	Corryong		
Banking	Corryong	Wodonga	
Printing	Corryong	Albury*	
Repairs and Maintenance			
Machinery or equipment	Corryong	Albury	
Vehicles	Corryong	Wodonga	
Building and office	Corryong		
Major Equipment or Asset Purchases			
Machinery, plant or equipment	Corryong	Melbourne	Shepparton**
Vehicles	Wodonga	Shepparton	Corryong**
Computing equipment	Albury	Wangaratta	Corryong**
Extensions or alterations to buildings	Corryong	Tallangatta	
New building or land purchases	Corryong		
Council rates	Tallangatta	Corryong	Shepparton
Log Costs			
Royalties and related levies	Corryong	Alexandra*	
Harvesting and log cartage	Corryong		

Note: **Indicates equal importance to the primary and secondary catchment locations.*

***Indicates equal importance to the secondary and tertiary catchment locations.*

Source: EBC (1998).

Table 4.32. Forest Contractor and Forest User Businesses: Relative Levels of Business Expenditure

Commodity	Level of Relative Expenditure Over 10%				
	All Forest Contractor and Forest User Businesses	Timber Industry & Contractors	Apiarists	Mining and Prospecting	Cattle Grazing
Usual Business Expenses					
Power (electricity, gas)	17.9	45.5	0.0	7.1	23.5
Fuel	50.7	54.5	78.6	57.9	30.0
Freight (general freight)	13.3	44.4	0.0	7.7	14.3
Freight (timber haulage)	53.8	77.8	0.0	0.0	100.0
Accounting	8.2	8.3	0.0	0.0	21.1
Legal	4.3	9.1	0.0	0.0	12.5
Insurance	14.3	18.2	7.7	18.8	20.0
Office supplies	3.9	9.1	0.0	0.0	15.4
Advertising & marketing	10.0	11.1	12.5	20.0	20.0
Banking	19.0	33.1	30.8	0.0	19.0
Printing	8.3	10.0	11.1	10.0	20.0
Median Relative Expenditure	**13.3**	**18.2**	**0.0**	**7.1**	**20.0**
Repairs and Maintenance					
Machinery or equipment	30.2	50.0	41.7	35.7	13.3
Vehicles	31.7	45.5	53.8	18.8	26.3
Building and office	10.3	0.0	40.0	0.0	20.0
Median Relative Expenditure	**30.2**	**45.5**	**41.7**	**18.8**	**20.0**
Major Equipment or Asset Purchases					
Machinery, plant or equip.	48.7	77.8	44.4	58.3	11.1
Vehicles	48.8	55.6	63.6	66.7	33.3
Computing equipment	8.8	0.0	0.0	22.2	14.3
Extensions to buildings	19.2	0.0	14.3	0.0	80.0
New building/land purchases	46.7	20.0	50.0	50.0	100.0
Median Relative Expenditure	**46.7**	**20.0**	**44.4**	**50.0**	**33.3**
Rates					
Council Rates	11.1	8.3	7.7	0.0	27.8
Log Costs					
Royalties and related levies	100.0	100.0			
Harvesting and log cartage	100.0	100.0			
Median Relative Expenditure	**100.0**	**100.0**			

Note: Small levels of relative expenditure were defined as being less than 10% of total expenditure, while large levels of relative expenditure were defined as being greater than 10% of total expenditure.

Source: EBC (1998).

5 Community Case Studies

The North East region of Victoria is comprised of a diverse range of communities (See Figure 5.1). These communities vary in terms of their population characteristics, industries and employment, infrastructure, and community vitality. Communities that may be more sensitive to change may be characterised by: small populations; high unemployment; limited political representation; a small number of community groups and events; distance from major centres; limited services; and in the current context, a high proportion of people employed in forest related industries.

Within the North East region, a total of six case study communities were selected to provide a more detailed analysis of communities within the region and their linkage to the forest resource. Communities were selected according to the following criteria:

- population characteristics
- forest linkage.

Population Characteristics

Population characteristics are critical in determining a community's capacity to adapt to and manage change (Sorensen, 1990). Larger, growing centres with a young population are likely to be more resilient to economic change. In contrast, smaller, declining centres with an ageing population are more likely to be vulnerable to change. The communities selected varied in population size (small,

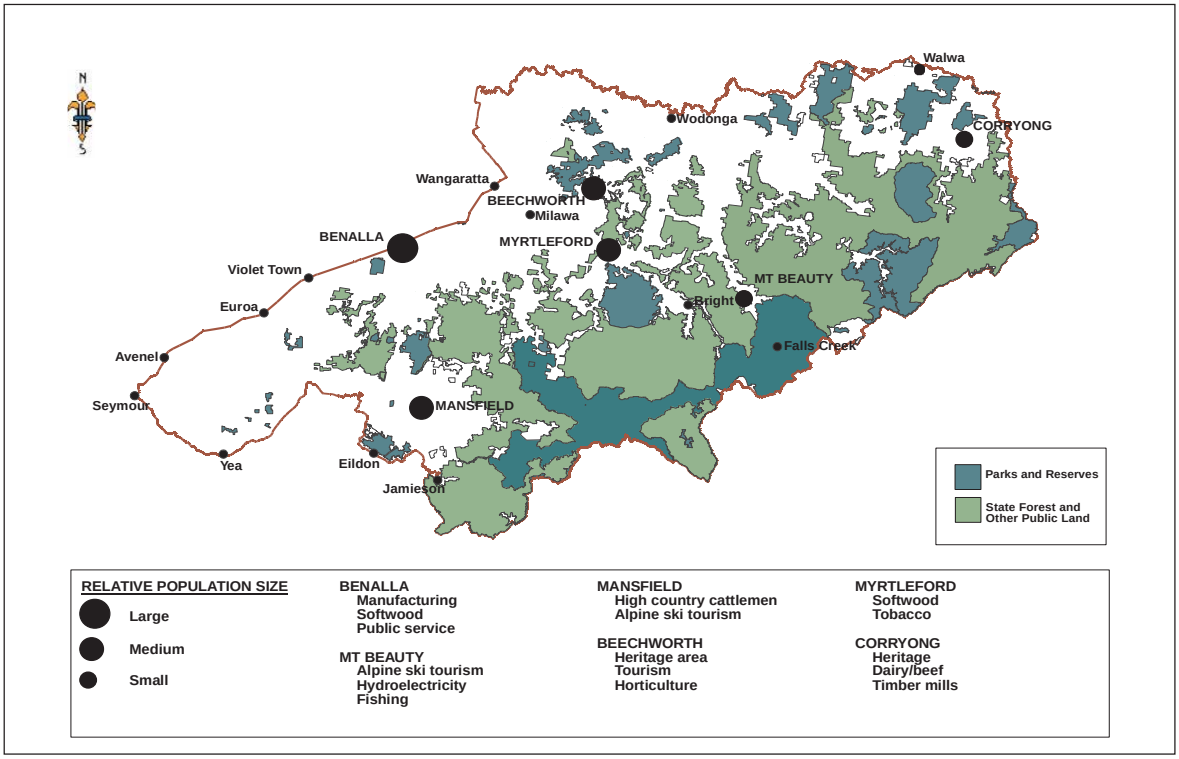


Figure 5.1. Location of Community Case Studies
Source: EBC, 1997.

medium, large), population change (growth, decline), residential mobility (low, medium, high) and population structure (young or ageing).

Forest Linkage

In relation to land use and forest policy, the community's linkage with the forest and the community's economic dependence on the forest resource are critical indicators of the degree to which a community will be affected by changes in forest policy and the nature of potential impacts. The communities selected varied in terms of their forest linkage (timber, tourism, education, historical/cultural ties) and their level of economic dependence on forest resource.

Community Profiling

The term 'community' in this context is used in a broad sense and includes not only residents in the district but also service providers, local, State and Commonwealth government authorities, local community groups and other organisations and individuals who have significant expertise or local knowledge of their area.

A variety of methods was employed to develop a detailed profile of each case study area including an assessment of the socio-economic structure of communities, an historical assessment of significant events in the community and community concerns and aspirations. Information was collected through secondary data sources such as ABS statistics, shire reports, government publications, community service directories and extensive fieldwork undertaken by the Victorian Forest Community Coordinator.

Where possible, the methods employed attempt to afford the community ownership of their data and allow active participation in the assessment process.

Community Workshop Process

To gain a better appreciation of how individuals view their communities, community workshops were conducted at a central location within each case study area. Representatives from a range of sectors within each area were invited to attend the workshops. The sectors from which representatives were invited are listed in Table 5.2.

The workshop forum was used to address a range of social criteria which included:

- Historical response to change
- Community Attachment
- Community Identity
- Attitudes and values relating to forest use

Maps were used to record the range of community values and activities associated with public land and native forest in the region, identified by workshop participants.

The workshops were conducted by trained facilitators and the outcomes of the discussion were recorded and then brought back to the group to be discussed in plenary sessions. Scribes were also present at each workshop to record additional information discussed. Participants were required to complete an evaluation form on the completion of the workshop. It was agreed that the results obtained in the workshop would be fed back to participants by mail to obtain their comments on the accuracy of the data collected.

Comparative Analysis

Data presented in this section is based on ABS statistics and documentary analysis of shire reports. Community descriptions are based on data derived from community workshops and fieldwork in the region (Table 5.1).

Table 5.1. Comparative Analysis of Case Studies

Township	Population Characteristics			Socio-demographics			
	Size	Stability	Residential Mobility	Age structure.	Ethnicity	Median. Income	Depend. (<14 yrs & >65yrs)
Benalla	8,582	limited decline	medium	young families/ aged	low	$17,909	40.57 %
Beechworth	2,953	growth	medium	young families	low	$18,066	41.25 %
Corryong	1,215	limited decline	low	mature families/ aged	low	$17,576	43.35 %
Mansfield	2,526	growth	high	teenage families	low	$18,090	36.50 %
Mt Beauty	1,649	decline	low	young adults/ mature families	medium	$19,559	38.19 %
Myrtleford	2,705	decline	low	young adults	medium	$18,094	36.74 %

Township	Labour Force		
	Unemployed	Occupation	Education Level*
Benalla	7.86	white collar	medium
Beechworth	10.95	white collar	high
Corryong	9.44	white/ blue collar	medium
Mansfield	9.41	white/ blue collar	medium
Mt. Beauty	18.84	white collar	high
Myrtleford	4.38	blue/ white collar	low

Township	Industry/Forest Linkage				
	Main	Agri./Forerstry	Timber	Forest-related	Forest Issues
Benalla	Wholesale	2.61 %	2 mills -manuf.	arts/crafts tourism	• access • restructuring of NRE • water quality
Beechworth	Community service	2.11 %	-	arts/ crafts tourism	• protection • sustainability • tourism
Corryong	Wholesale	6.71 %	2 mills - traditional pallets	tourism	• unemploy/ stability • better forest practices
Mansfield	Wholesale	4.61 %	1 mill	recreation tourism education	• local benefits • local input • Tourism
Mt Beauty	Community service	1.99 %	1 mill - value add, export	recreation alpine-tourism	• multiple use/ balance • access • better forest practices
Myrtleford	Manufact.	7.45 %	major softwood mill, plywood, tissue	recreation alpine-tourism	• better forest practices • multiple use/ multiple values

Township	Community Characteristics	
	Events & change	Community attachment and identity
Benalla	• privatisation of govt agencies • decline in farm profit • progressive	• social/caring • good infrastructure
Beechworth	• shift from agri & govt service economicbase to tourism	• diverse, tolerant, outward looking • active, energised
Corryong	• closure of Snowy River construction & maintenance • isolated	• close knit/ familial ties • safe, peaceful
Mansfield	• decline in timber industry • growth in tourism	• caring/ voluntary effort • quality of lifestyle
Mt Beauty	• downsizing of hydro • 1939 bushfires	• strong sense of community • safe • variety of recreation
Myrtleford	• integration of NRE • growth in tourism	• multicultural • variety of recreation

Note: Education level ranking relates to proportion of the population with vocational training and tertiary education: low=predominantly vocational training, limited tertiary education; medium= average level of vocational training, average level of tertiary education; high = predominantly tertiary education.

Table 5.2 Sectors of the community from which workshop participants were selected

Industry	Apiarists, Contractors/ Subcontractors, Mill workers, Mill management, Unions, Seed collectors, Firewood collectors, Tourist operators, Other forest users
Forest Agencies	Regional staff
Conservation	Local environmental groups
Community Infrastructure	Commerce/Finance, Education, Health, Religion, Housing, Recreation, Tourism, Transport, Communications, Emergency services, Retail and trade services, Other local services/ businesses, Shire
Indigenous Communities	Land councils, Local residents
Landholders	Local farmers, Landcare

Benalla Case Study Area

Benalla is a major regional centre in North East Victoria with a mixed agricultural, administrative, and manufacturing economic base. It is located 190 kilometres north of Melbourne, along the Hume Corridor. Situated at the junction of the Hume Freeway and the Midland Highway, and alongside the Melbourne/Sydney railway, Benalla benefits from good transport links to the major cities and ports.

Benalla became a prominent trading centre and changing place for Cobb and Co horses during the Victorian goldrush era in the 1850s. Prospectors heading towards the goldfields of Bathurst, Ballarat and Bendigo, and the Ovens passed along Sydney Road and through Benalla. The towns regional significance was further established with the arrival of the railway in 1873. The railway provided the Benalla farming district with access to Melbourne's ports and markets.

Major Industries

Benalla is a major administrative base for public sector services, particularly health and education. It was formerly the third largest public service employer per capita outside Canberra and Darwin, prior to the restructuring of government departments in the late 1980s. Between 1986 and 1991, there was a 30% decline in employment in public administration and utilities. Despite contraction in the public sector, Commonwealth and State government agencies have retained a significant presence in Benalla. In 1991 there were 528 people or 9.9% of the workforce employed in public administration and utilities. It is also the local government administrative base for the Shire of Delatite.

Benalla farming district is predominantly utilised for grazing livestock and crop production. The main livestock enterprises include beef cattle, wool, milk and sheep, and principal crops include wheat, cereals and legumes. Sown pasture, pasture seed, and hay production are important secondary enterprises. There is growing interest in horticultural crops such as peaches, nectarines and cherries, and there are a number of small vineyards.

Delatite's Economic Development Board which is comprised of business and community representatives, was established to foster the region's economic strengths. The Council has

also supported the establishment of an industrial estate, 'Enterprise Park', to promote development incorporating a combination of administrative centres, manufacturing industries, training facilities and associated business services.

The local economy has benefited from the relocation of retail and manufacturing companies to the district. In 1991, 9.8% of the Benalla labour force were employed in the manufacturing sector. This represents a total of 527 employees. The manufacturing sector is dominated by eight companies, most of which employ more than 50 people: A.D.I., Benalla Spinners, A.S.E.T., Monsbent, Centique Industries, Wall Truss, Lambkin, and Strikers Sportswear.

In 1991, 189 people, 6.25%, were employed in the 'Recreation and Personal' industries and 588 people, 19.44%, were employed in the 'Community Service' industry. In relation to tourism development, the Delatite Shire has recently adopted a new tourism strategy, to promote the region's attractions and support new initiatives such as the proposed Bushranger Hall of Fame. The Benalla Art Gallery, opened in 1975, has an extensive permanent collection and attracts high profile travelling exhibitions. Benalla is host to the annual Australia Felix Art Festival which focuses on contemporary art works. Benalla's reputation as the Rose City is derived from its well maintained Rose and Botanical gardens, and is celebrated by an annual Rose Festival in November.

Timber industry

The timber industry has undergone significant restructuring over the past decade. A reduction in the number of sawmills has been accompanied by an expansion in private farm forestry and large scale softwood plantations. In Benalla, the timber industry has diversified in terms of value-adding, and is processing/ manufacturing based, eg the production of particle board at Monsbent.

In 1991, 2.61% of the population were employed in the agriculture and forestry sector. The two timber mills are major employers in Benalla. Monsbent employs 210 people and 10 contractors, half of these contractors are based in the North East. Ryan and McNulty employ 27 people and 7 contractors, 4 of whom are based in Benalla.

Community services and infrastructure

Benalla has a wide range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Benalla and District Memorial Hospital
	Community health centre
	Medical centre
	Dentist
	Aged care
Education	Child care/ Playgroups
	Kindergartens
	Four primary schools
	Two secondary schools
	Benalla Campus of Wangaratta College of TAFE

Regional offices for the Department of Human Services and Education Victoria are based in Benalla.

Community change

Participants at the Benalla community workshop, reported that the community had experienced substantial change in recent years. Participants identified the shift from a predominantly white collar public sector

employment base, to a manufacturing industry base as the most significant economic change. This shift has entailed the restructuring of government agencies and the privatisation of public services. Participants reported that government contracts are increasingly being won by people outside the community with little direct employment benefits. This in turn has led to a loss of local expertise and workers with practical experience. The centralisation of education has also had significant impacts in surrounding small towns where local schools have been closed.

Participants reported that the major change within the agricultural sector in recent years has been the decline in farm profitability. This has resulted in a breakdown of generational farms as young family members pursue more profitable and financially secure careers. The average age of working farmers is approximately sixty years. This decline has also led to an increase in off-farm work, with approximately 83% of farm families supplementing their income. Women have been particularly affected. Women are more likely to pursue off-farm work, and to extend their responsibilities by adopting more traditional male roles in the community and on the farm. This has led to a shortage of volunteer workers and carers in the community.

Community attachment

Workshop participants expressed high levels of community attachment and emphasised the social, caring and cooperative nature of Benalla. Strong social networks are evident in the community despite some break down in familial ties. The high level of infrastructure, including transport, health, education, is also a feature of Benalla. When talking about their community, participants highlighted attractions such as access to water, mountains and snow, employment opportunities, and high level of political efficacy.

Identity within the region

Community identity is linked to individuals' perceptions of their own community, and perceptions of their own community in relation to other communities in the region. An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East. The following organising frameworks are based on data obtained at the Benalla community workshop.

In Benalla, defining characteristics of towns in the region were:

- presence of horse racing/equine recreational activities
- people work in town, but live elsewhere;
- outward approach
- agricultural identity.

Benalla participants strongly relate to the development of the racing industry, transient residents, outward approach, and agricultural identity. The descriptions nominated by Benalla residents, reflects Benalla's position as a large regional centre that has a stable, diverse and progressive economy.

The racing industry is one example of Benalla's regional strengths, with many

Benalla Workshop

calendar events. In addition, there are a wide range of horse related activities such as polo, pony club, trail riding. Benalla has experienced some contraction in its traditional industries, but its mixed economy has provided a stable base for further economic diversification. In recent years, the shire council and business leaders of Benalla have worked at identifying potential growth industries, and have recognised the need for rural communities to diversify and focus on niche markets.

The second factor, transient residents, taps into social changes within Benalla and North East communities in general. An increased reliance on off-farm income and recent contraction in public sector employment, has encouraged people to commute outside the local township for work. Benalla and surrounding townships have also experienced an increased number of rural retirees moving to the area. The notion of transient residents also illustrates the contradiction between Benalla as a close and supportive rural community, and Benalla as a large, regional centre.

Benalla residents are outward looking and attuned to external events. Factor three, outward approach, emphasises Benalla's capacity to look beyond the region for economic and political direction.

Despite this external focus, factor four, agricultural identity, suggests that Benalla also exhibits pride in its traditional rural character. Benalla farming district is predominantly utilised for grazing livestock and crop production. There is growing interest in horticultural crops such as stone fruits, and within the district there are a number of small vineyards which produce quality table and fortified wines.

Benalla Workshop

Benalla is a community that has varied priorities and a diverse identity compared to smaller townships.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: fire management, access, salinity, water quality, use of pesticides and sprays, more education about local environment, safety issues and damage resulting from recreational use, weed control, maintenance of road network, biological diversity, sustainability, and the restructuring of the Department of Natural Resources and Environment.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.2.

Beechworth Case Study Area

Beechworth is a historic goldmining town established during the Victorian goldrush in the 1850s. Located at the base of the Stanley plateau, Beechworth is a small rural township that benefits from close proximity to the major regional centres, Wangaratta and Wodonga. It is an agricultural district that has experienced considerable diversification, particularly an expansion in horticulture opportunities, in recent years. Beechworth has numerous cultural and heritage tourism advantages, in addition to its natural scenic landscape.

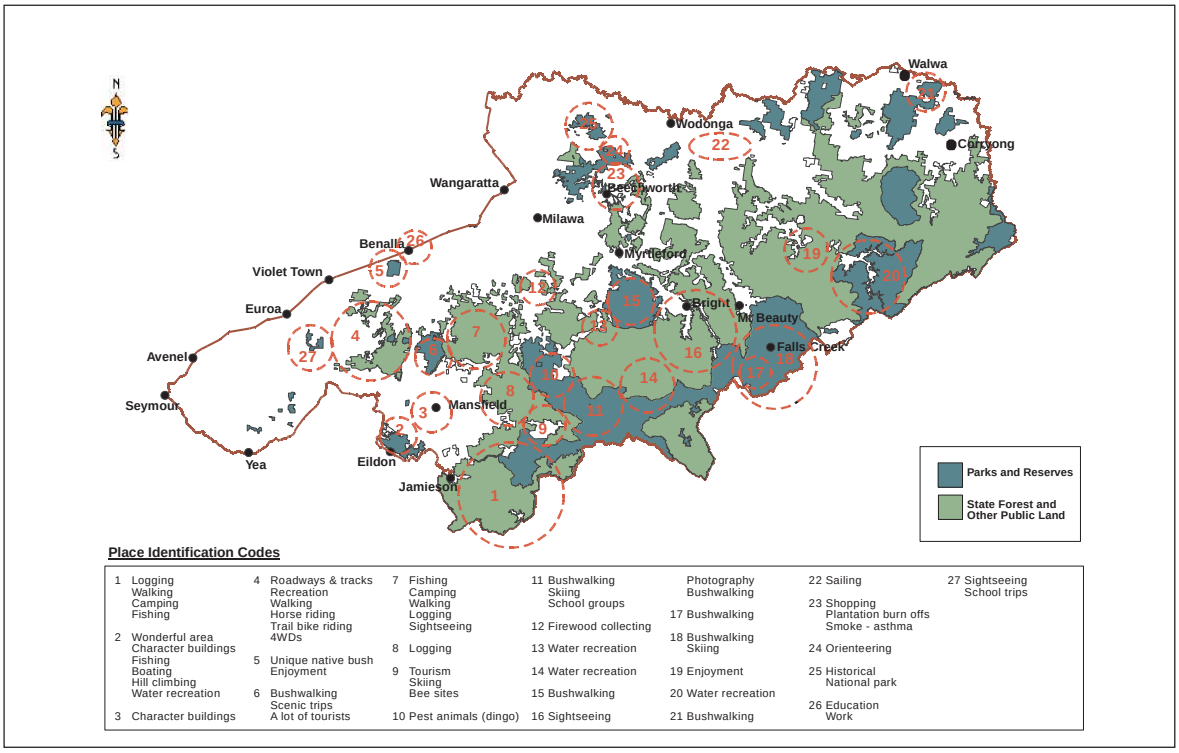


Figure 5.2. Forest use and values identified by Benalla Workshop participants
Source: EBC, 1997.

Major Industries

According to ABS figures, in 1991, the major industry in the Beechworth township was Community Services, 49.95%. This reflects the significant role of Beechworth as a health service provider, particularly mental health. In recent years, the closure of the Mayday Hill mental health institution, and the subsequent establishment of La Trobe University has resulted in an employment shift from health to the education sector.

In the North East's tourism development plan, Beechworth is identified as a focus of cultural tourism. There are over thirty classified National Trust buildings in the township, and the township's historic development during the Victorian goldrush era is documented in the Burke museum. The theatre on the Latrobe University Beechworth Campus is identified as a potential site for future festivals and performances, which will compliment the existing Beechworth baroque music festival. While in the past Beechworth has been a mining and timber town, today there are no active sawmills and mining is restricted to small scale prospecting. In 1991, 2.11% of the population were employed in the agriculture and forestry sector. The timber industry's presence is primarily focused around large scale plantations and farm forestry activity, and some resource is currently being extracted from the Stanley plateau by mills outside the district.

Beechworth's linkage with the forest is increasingly based on tourism and recreation activities. Cultural heritage is a particular focus in the Beechworth district, eg heritage gold mining tours and small scale prospecting in the region.

There is an active environmental group network, particularly in nearby Stanley. Members have been active in their support for:

the protection of the Stanley Plateau; monitoring of environmental management issues such as water quality and pollution; and promotion of the district's natural environment to visitors.

Community services and infrastructure

Beechworth has a range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Beechworth District Memorial Hospital
	Community health centre
	Medical centre
	Dentist
	Aged Care
Education	Child care/ Playgroups
	Kindergartens
	Three primary schools
	One secondary school
	Latrobe University Campus

Community change

Participants at the Beechworth community workshop reported that the community had experienced substantial change in relation to both demographic structure and industry base. Since the 1970s, Beechworth has experienced a substantial influx of new residents relocating predominantly from urban centres. These new residents have contributed to a more diverse population and have introduced new values and ideas to the community. New residents are also inclined to establish hobby farms, which has lead to subdivision of surrounding agricultural land.

Accompanying this demographic change has been a more recent and distinctive shift in the local economy from an agricultural and government service base to tourism. In the past, Beechworth has relied on the health sector for local employment, this sector being particularly important in providing skilled work for women. However, the rationalisation of health and education services and the amalgamation of local government has resulted in a substantial loss of local public sector employment. This has been particularly pronounced with the closure of the Mayday Hills mental health institution. This decline in local public sector employment opportunities has encouraged residents to travel to larger regional centres for work such as Wangaratta and Wodonga. The effect has been higher levels of commuting by local residents and a shift in after work social activity outside the community.

Despite a decline in the health sector, the local Beechworth economy has benefited from emerging opportunities in the tourism sector. For local residents this has entailed both positive and negative impacts. On the positive side, there has been a growth in employment opportunities, a significant expansion of small local businesses reliant on tourist trade (eg craft shops), and an increased recognition and promotion of Beechworth's heritage. The drawbacks have included resentment towards intrusive visitors, and the redirection of energy towards service provision for tourists, and the subsequent neglect of local youth services and local people's cultural needs. Local residents recognised that the unanticipated rate of growth in this sector has also resulted in insufficient time to formulate a strategic plan for the community.

Further economic opportunities in the region include the establishment of a Latrobe University campus on the old Mayday Hills site, and further agricultural diversification as outlined above.

Community attachment

High levels of community attachment are evident in this small, but diverse community. Participants at a community workshop emphasised community spirit, high levels of participation and a collective energy. Participants also spoke of the friendly, open and tolerant nature of the community. Although a particular emphasis was placed on the social fabric, issues such as the beauty of the environment, the peaceful lifestyle and good work opportunities were also raised. Participants felt that Beechworth had a balance between the benefits offered by larger regional centres such economic opportunity, services, diverse population, and the relaxed, rural, lifestyle and small, supportive networks associated with isolated country townships.

Identity within the region

An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East.

In Beechworth, the defining characteristics of towns in the region were:

- larger centre and outward focus;
- village atmosphere;
- ethnicity.

Beechworth participants strongly relate to population size, village atmosphere, and ethnicity. The social and cultural aspects of community life are emphasised by the workshop participants.

The descriptions nominated by Beechworth workshop participants, are indicative of Beechworth's current demographic transition. New residents who retain urban values and expectations have contributed to an active arts community and encouraged a more diverse mix in terms of population structure, level of education and ethnicity. Such residents are attracted to the village atmosphere and rural lifestyle which Beechworth and the surrounding townships afford, but are attuned to external events and open to change.

Beechworth Workshop.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: incompatibility between logging practices and local community needs; incompatibility between logging and tourism; value of native forests on Stanley plateau; support for multiple use of forests, rather than hardwood logging; other communities in the region reliant on native hardwood resource from Stanley plateau; ecosystems on Stanley plateau under threat; forests are a renewable resource; portable sawmills is providing an opportunity for harvesting small wood lots; tourism employment as valuable as timber industry employment; alternative approaches to forest management including planting of diverse species and rehabilitation of harvested sites; development of value-adding; think about global context - Australia's forest practices are more sustainable than other countries; encourage farm forestry, preferable to large scale plantation; grazing has contributed to

clearing of forest land; recognition of non-economic value of forests; integrate local and scientific knowledge.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.3.

Corryong Case Study Area

Corryong is a small community, situated in the far North East corner of the region. It is a traditional agricultural district based on dairy farming, and cattle and sheep livestock production. Corryong's rich history is focused around the legends of the high country, and it is the site of the original Jack Riley ride immortalised in Banjo Patterson's poem 'The Man from SnowyRiver'. The Corryong Racecourse, used in the film Phar Lap, is 126 years old.

Main Industries

According to 1991 ABS figures, the major industry sectors in Corryong include Wholesale (25.06%) and Community Service (23.27%). The Towong Shire Council has identified forestry and tourism/ recreation as potential growth industries (Annual Report 1995/96).

The tourism industry in Corryong is centred on cultural tourism and nature based recreation opportunities. The Man from Snowy River legend is celebrated annually with the Man from Snowy River Bush festival, and memorabilia is on display at the Snowy River museum in Corryong (Panell Kerr Forster, 1997). The Towong Shire's recently completed Municipal Recreation Plan recognises Towong's strength as a regional recreation provider. Corryong's advantages include its

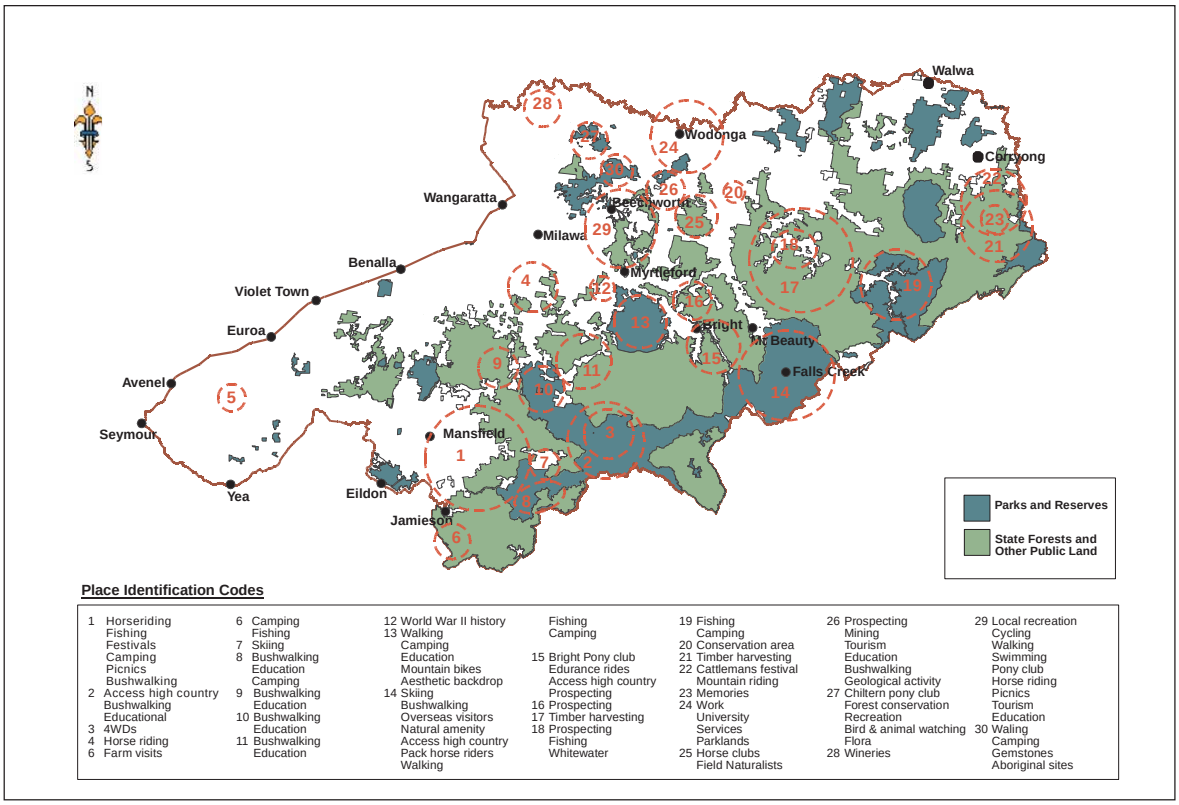


Figure 5.3. Forest use and values identified by Beechworth Workshop participants
Source: EBC, 1997.

unspoilt and spectacular environment, and its proximity to National, State and regional parks, the Murray and Mitta Rivers and Lakes Dartmouth and Hume.

In 1995/96 the Towong Council supported the establishment of a locally based economic development organisation, the Upper Murray Development Board. Current priorities include the development of existing infrastructure such as the Corryong Saleyards Complex and the Corryong Aerodrome.

Timber Industry

In the past, Corryong's economic base was largely dependent on the timber industry. The number of sawmill operations have declined in recent years. The two remaining hardwood sawmill businesses are relatively small scale and make a modest contribution to the local economy.

In 1991, 7.54% of Corryong's labour force were employed in agriculture and forestry. In 1995/96, the Towong Council identified the co-ordination of infrastructure as a priority in order to facilitate forestry development in the region. The establishment of the large scale Shelley plantation indicates future growth in softwood and value-adding timber production.

Community services and infrastructure

Corryong has a range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Recently, Corryong has experienced some decline in service provision (eg loss of local GPs). Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Hospital - Upper Murray Health and Community Services
	Medical centre
	Dentist
	Aged Care
Education	Child care/ Playgroup
	Kindergarten
	Primary school
	Secondary school

Community change

Corryong has experienced a series of economic withdrawals associated with the: Snowy River scheme and closure of the local railway service, the butter factory, the local air service, and sawmills. Participants at the community workshop indicated that these economic outflows have had a negative cumulative effect on the local population. Economic and social impacts identified by participants include population loss, change in population structure, loss of migrant employment and subsequent change in cultural identity, decline in local businesses, closure of primary school, and greater pressure on the voluntary sector. Participants also recognised some positive elements of this economic decline such as an increasing resourcefulness, a less divided community, more lateral thinking, the emergence of new leadership, the adoption of new strategies, and economic diversification.

Community attachment

Community attachment in Corryong is characterised by the strong bonds established amongst long term residents, and substantial familial ties. This close knit and supportive community is currently experiencing an outflow of younger family members, and young families, in search of employment opportunities elsewhere. Despite Corryong's

distance from larger centres, workshop participants indicated general satisfaction with their access to services and appreciate the safe and peaceful lifestyle Corryong offers.

Identity within the region

An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East.

In Corryong the defining characteristics of towns in the region were:

- the presence of the timber industry;
- access to a regional centre and economic wealth;
- industry development.

Corryong participants relate strongly to traditional industry identity (timber and hydro electricity), proximity to commercial centres, and industry development.

The first factor nominated by Corryong residents recalls the community's traditional economic base, the timber industry and State hydro-electricity. These two industries have been the town's economic mainstays and have provided local employment for multiple generations. Contraction in both these industries over the past decade has narrowed Corryong's economy.

With a decline in the timber and hydro-electricity industries, Corryong's economic independence has been further undermined. Consequently, Corryong residents have looked to major commercial centres for potential economic opportunities and employment. Proximity to commercial centres, factor two, has become increasingly critical to the economic well being of Corryong.

Factor three, industry development, specifically the shift from the timber industry to the tourism industry, is also focused on Corryong's economic fate. In combination, these three factors, indicate that Corryong residents presently understand their region through economic filters, an indication of their economic vulnerability, but also the community's determination to survive cumulative economic impacts.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: potential increase in unemployment and population loss if reduction in timber resource; greater access to resource would stimulate employment; plantation development is both positive - increase in employment - and negative - buying of farms has resulted in population loss; town cannot absorb further impacts arising from loss of resource; social impacts from past agricultural and forestry practices (eg pollution, poor water quality, chemical usage); need for stable long term employment; limited value-adding at present; road damage and noise pollution from log trucks; improved plantation industry planning; need for better community education in regard to plantation development.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.4.

Mansfield Case Study Area

Mansfield is an agricultural district with a traditional focus on timber production and mining. In recent years, there has been an expansion in the local tourism industry, with a particular emphasis on the surrounding high country for both its heritage value and recreational potential.

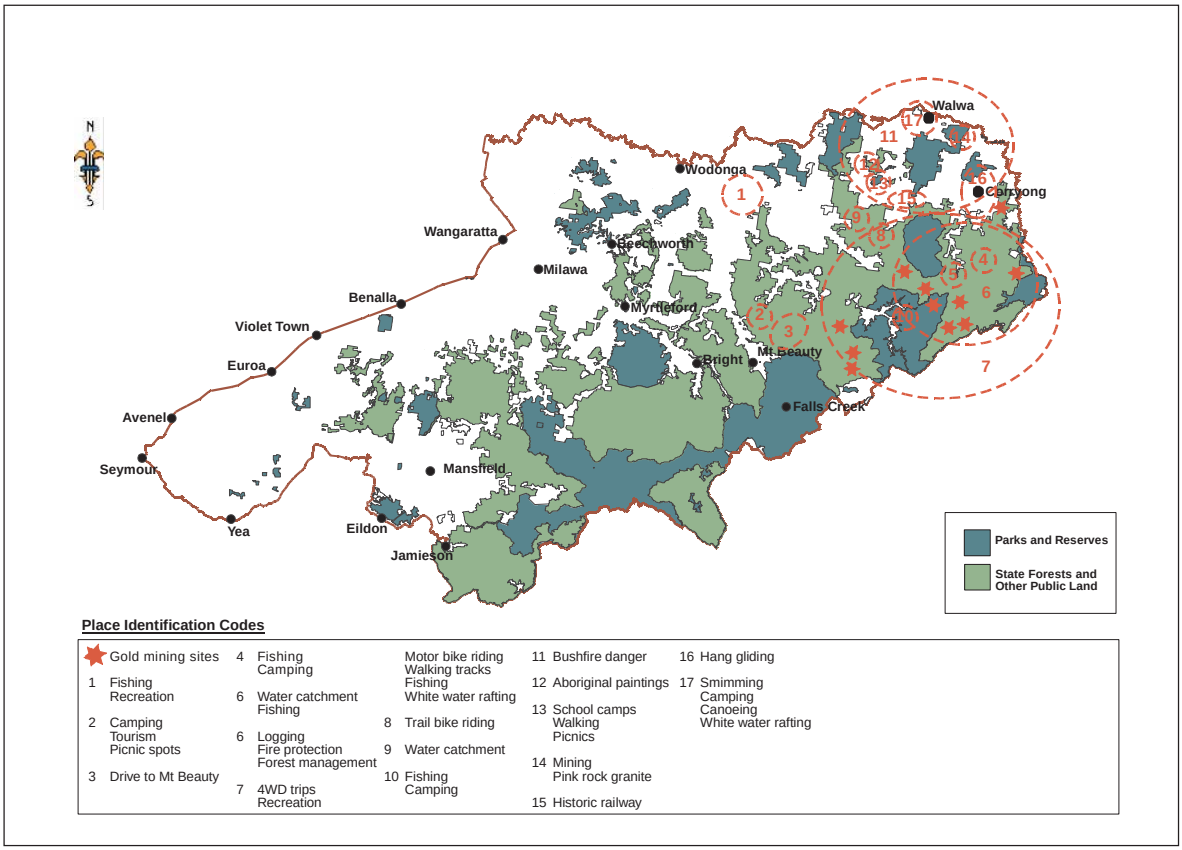


Figure 5.4. Forest use and values identified by Corryong Workshop participants
Source: EBC, 1997.

Main Industries

According to ABS figures, in 1991 the major industries in the township of Mansfield were Wholesale (24.57%), Community Service (14.88%) and Recreation and Personal (16.15%).

Mansfield farming district is predominantly utilised for grazing beef cattle and sheep. The Mansfield district is recognised as one of Victoria's premier cattle breeding grounds. The well drained hill country around Mansfield is also ideal for the production of fine and medium fine Merino wools.

The Delatite Shire has been active in the promotion of agribusiness opportunities. A report on agribusiness opportunities in the Mansfield district identified key areas for potential expansion including the wine industry, pasture seed, hay, horse industries, and the timber industry, particularly farm forestry. At present, the major horticulture enterprises in the district are the production of chestnuts and walnuts on the Tolmie Plateau. In recent years, there has been some expansion in berry and vegetable produce, particularly hydroponic and organic vegetables (Pickett Agricultural Services Company, 1996).

Since the 1970s, there has been an increase in hobby farmers, primarily relocating from urban centres. An increase in hobby farmers, combined with a growing number of retirees relocating to the area, has encouraged further subdivision of agricultural land. Although this has encouraged agricultural diversification, it has also diminished the viability of farm properties.

Mansfield is well situated to take advantage of growth in tourism, particularly recreational tourism. It is within close proximity to Victoria's alpine region and major ski resorts, as well as, Lake Eildon, a popular fishing and boating holiday destination. Mansfield is also strongly associated with the high country and the traditional lifestyle of mountain cattlemen. The contribution of the mountain cattleman to the district's economic and cultural development is celebrated in the annual Great Mountain Race.

The filming of the Man from Snowy River in the Mansfield district has been important in the promotion of the region and has encouraged new visitors. Craig's Hut has become the second most popular four wheel drive destination in Victoria.

Mansfield's tourism industry is seasonal with a peak in visitor numbers in winter (ie people en route to the ski fields) and during holiday periods, summer and Easter. Although Mansfield's tourism industry is seasonal, it attracts visitors across the calendar year.

Timber Industry

In 1991, 4.61% of the population were employed in agriculture and forstry in Mansfield. Agriculture and forestry have historically been the two major industries in the district and have provided local employment for several generations.

In the past eight years, Mansfield has experienced a dramatic decline in its existing timber industry base, from twelve active sawmills to one. The existing mill, DSM Timber Mill, employs approximately 7 people. There are presently 6 harvesting and/or logging transport contractors based in the district. In addition, there are a number of private plantations developed in the district by landowners.

This decline in the hardwood timber industry has been accompanied by an increase in tourism, particularly forest-related recreation based tourism such as commercial trail riding and four wheel driving.

Community services and infrastructure

Mansfield has a range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Mansfield District Hospital Community health centre Medical centre Dentist Aged Care
Education	Child care/ Playgroup Kindergarten Two primary schools Secondary school

Mansfield is recognised for its strong educational focus. A number of educational institutions, such as Geelong Grammar School and Lauriston Girls School, have established bush campuses in the district.

Community change

The most significant change in Mansfield has been a decline in the timber industry, accompanied by a rise in tourism, particularly nature based tourism. According to participants at the Mansfield community workshop, the making of the 'Man from Snowy River' has made a significant contribution to this process by popularising local tourist destinations such as Craig's hut, and promoting the district's cultural and natural heritage. Participants identified both the benefits and the drawbacks

associated with tourism. Despite increased economic opportunities, participants identified several problems associated with tourism development: longer and more irregular working hours are required; casual employment is preferable due to the seasonal nature of the tourism industry; employment loss in timber industry is not readily absorbed into tourism sector; tourism attracts a large transient population; and there is a duplication of local businesses.

Mansfield has also experienced an influx of retirees relocating from major urban centres. This has resulted in further pressure on the health and welfare sector, and has encouraged further subdivision of agricultural land.

The sale of land for subdivision is also attributed to a general decline in agricultural productivity. Many farms in the district are small and of marginal viability with only about 20 farms relying on farm income alone.

Community attachment

Attachment in Mansfield is associated with a small, self-contained caring community. A high level of community activity is evident in relation to service delivery, voluntary work and successful local businesses. Although Mansfield residents acknowledge increasing economic pressures in their region, they appreciate their proximity to the bush and the quality of life it affords.

Mansfield Community Workshop.

Identity within the region

An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East.

In Mansfield, the defining characteristics of towns in the region were:

- hideaway country;
- township relocation;
- dependence on ski-tourism.

Mansfield is geographically isolated and situated within close proximity to Victoria's alpine region and major ski resorts. Mansfield is strongly associated with the high country and the traditional lifestyle of mountain cattlemen.

Factor one, hide-away country, relates to the isolated and remote geographic location of Mansfield, but also the parochial nature of the community, and the community's resistance to outside intrusions. Mansfield's economic independence acts as a buffer to changes and events imposed from outside. Factor two, township relocation, reflects a commitment to stability and fixed identity. Factor three, alpine tourism, reflects the community's simultaneous reliance on and resistance to tourism. While there is a recognition of the district's tourism potential and the associated economic benefits of an increase in tourist visitors, there is some apprehension about intrusion from outsiders.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: limit wastage in timber production; continual

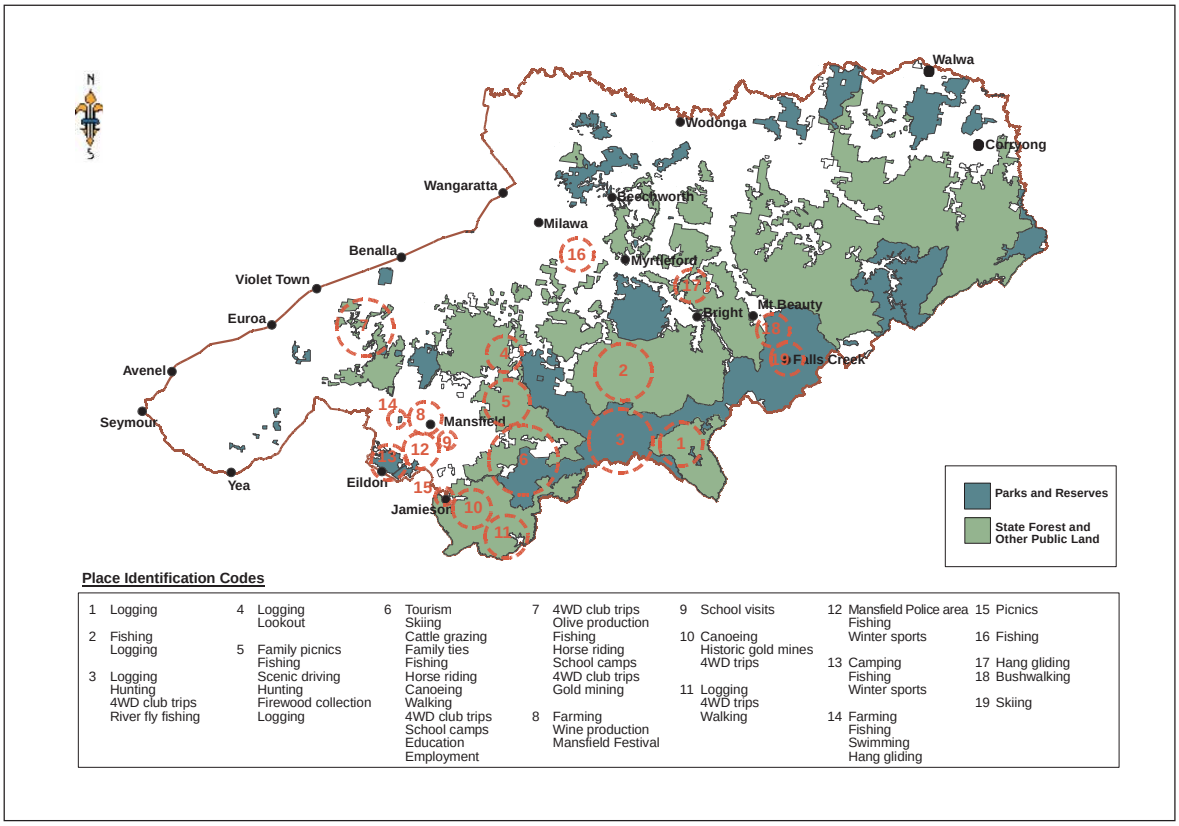


Figure 5.5. Forest use and values identified by Mansfield Workshop participants
Source: EBC, 1997.

reduction of resource availability; logging/ transport contractors being employed outside local area; communities lack power in decision making; governments lack political courage and fail to tackle real issues; Department of Natural Resources and Environment lacks resources; limits on visitor entry to National parks; whether or not tourism can generate the same level of government revenue as the timber industry.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.5.

Mount Beauty Case Study Area

Mt Beauty is situated on the eastern portion of the Great Dividing Range, at the foot of Victoria's highest peak, Mt Bogong (1,983m).

The township was established in 1947 to house SEC workers and their families who had relocated to work on the Kiewa Hydro-Electricity Scheme.

Mt Beauty is the last stop en route to the Falls Creek ski resort. It is home to international ski and hangliding events, and attracts visitors to its annual Bogong Moth festival.

Industry

According to 1991 ABS figures, 21.38% of Mt Beauty's population are employed in the Community Service industry. In comparison to other townships in the region, Mt Beauty has a relatively large proportion of people employed in the Electrical industry, 12.75%. This reflects the historical role of the State Electricity Corporation within the township.

Timber Industry

In 1991, 1.45% of Mt Beauty's labour force were employed in agriculture and forestry. There is one sawmill in the district, Mount Beauty Timber, which employs 55 workers and 1 contractor. The mill makes a significant contribution to the regional timber industry: the mill produces timber for export, has introduced measures to minimise wastage, and is currently pursuing value-adding opportunities.

Community services and infrastructure

Mt Beauty has a range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Hospital: Alpine health - Mt Beauty campus
	Community health centre
	Medical centre
	Dentist
	Aged Care
Education	Child care/ Playgroup
	Kindergarten
	Primary school
	Secondary school
	Tertiary - Campus of Wodonga TAFE

In the distance, Mt Beauty township.

Community change and perceived impacts

The most significant change in Mt Beauty's recent development is the downsizing of the hydro-electricity operations. In the past, the Kiewa Hydro-Electric Scheme played a critical role in Mt Beauty's economic development. The scheme which commenced in the 1940s provided local employment opportunities and encouraged an influx of migrant workers to the township. Over the years, the SEC has continued to provide local employment on specific hydro-electric projects.

The downsizing of Mt Beauty's hydro-electric operations has resulted in direct employment loss and a loss of job security for those who have retained their job. At a community workshop, local residents spoke of the impact of this downsizing process: diminished job opportunities for future generation; increased pressure on the voluntary sector as people work harder; a decline in local business; and less access to equipment and services provided by the SEC. On a positive note, the downsizing did not lead to a direct population outflow. Instead people stayed and created new employment opportunities, which has resulted in a more diverse economic base and fostered a more resourceful attitude amongst the community.

Mt Beauty Timbers.

Community attachment

Participants at the Mt Beauty community workshop, expressed a strong sense of community. The township has in the past been quite self-contained with employment available in the local district. This has changed with the increase in visitors to the region and the opportunity to mix with people from diverse backgrounds.

The town is viewed by workshop participants as safe and free from the social problems associated with urban areas. The natural beauty of the area and the variety of outdoor recreational pursuits available are viewed as significant advantages. Lack of political representation and influence is identified as the major drawback of living in a small, isolated rural township.

Identity within the region

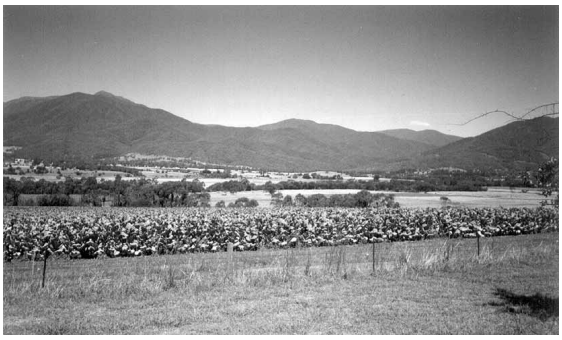
An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East.

In Mt Beauty the defining characteristics of towns in the region were:

- history of town;
- presence of timber industry;
- whether or not town is a regional centre;
- loud, large influx of visitors and more tourism development.

Mt Beauty participants relate strongly to history of town, loss of timber industry, township size and tourism identity.

The first two descriptions nominated by Mt Beauty residents refer to the town's historical ties and the economic structural changes



Tobacco Crop near Mt Beauty.

experienced by rural communities. Mt Beauty was an important hydro-electricity town, with a strong timber industry. Mt Beauty's diverse ethnic base is a product of the influx of migrants workers that accompanied the development of the snowy hydro scheme. Over the past decade, both these industries have experienced substantial contraction, however, the expansion in alpine tourism has provided new employment opportunities.

Mt Beauty is located at the base of the Falls Creek ski fields. Its geographic isolation is an advantage in terms of alpine tourism, but a disadvantage in terms of proximity to the regional commercial centres which offer services and employment. Factors three and four, township size and tourism identity, refer to the town's potential tourism role. For visitors to the region, particularly to the ski fields, Mt Beauty is often viewed as the smaller, quieter, more scenic, option to Bright.

Mt Beauty Workshop.

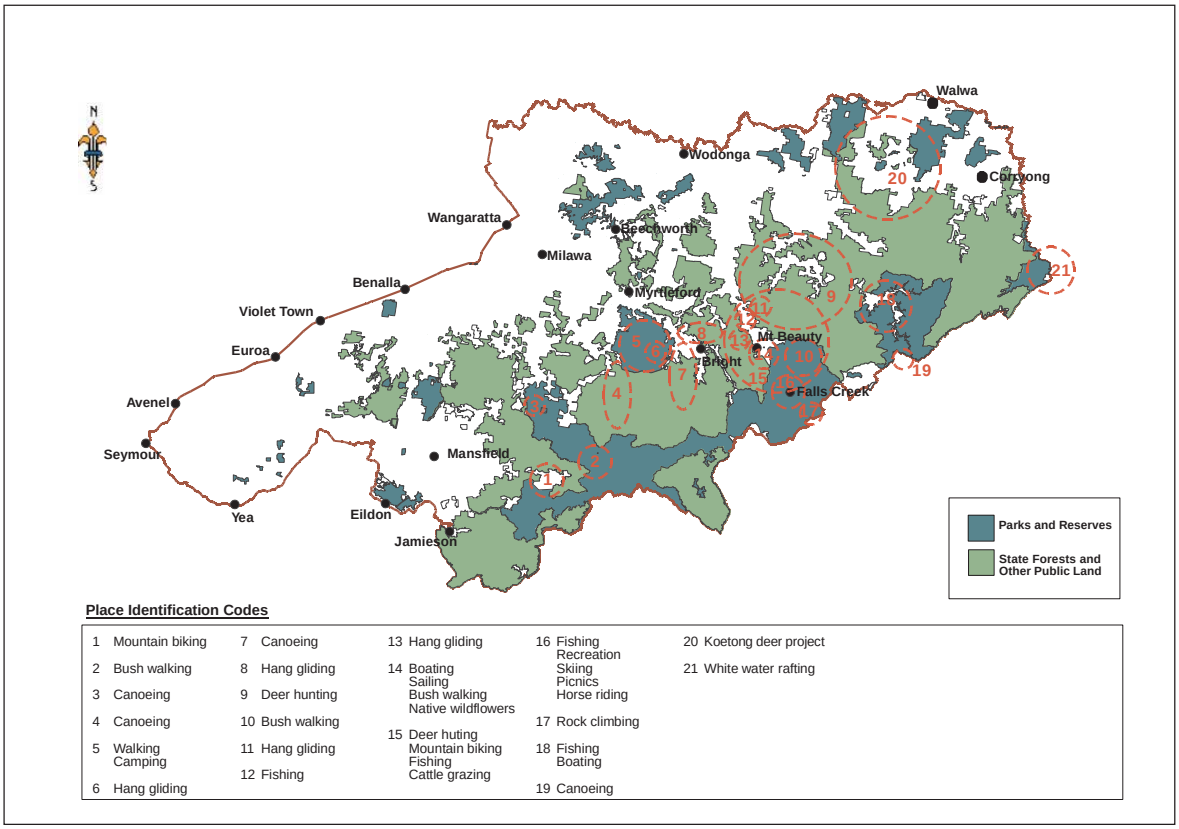


Figure 5.6. Forest use and values identified by Mt Beauty Workshop participants
Source: EBC, 1997.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: forests are a renewable resource; need to educate urban population of the impacts of changes in forest use on local communities; access for recreation; access for timber industry; encourage farm forestry; control vermin/ weeds; water quality; fire protection; resource security linked to employment security; adequate funding to ensure sustainable forest practices; multiple use regime; Mt Beauty has achieved balance between protection and production, further resource loss not desirable.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.6.

Myrtleford Case Study Area

Located at the base of Mt Buffalo National Park, Myrtleford's advantages include: a mixed industrial, commercial and agricultural economic base; access to a range of recreational opportunities; and an ethnically diverse community. The agricultural and cultural strengths of the district are celebrated in the annual Tobacco, Timber and Hops Festival and the International Festival.

The establishment of the tobacco industry in the 1960s represents a significant stage in Myrtleford's historical development. Tobacco farming was established by people who had been detained in migrant camps in the North East, particularly Italian immigrants. Many of these families have remained in Myrtleford.

Tobacco Centre.

Carter Holt Harvey Mill, Myrtleford.

Main Industries

According to 1991 ABS figures, 21.90% of Myrtleford's population are employed in the Manufacturing industry, and 17.20% of the population are employed in Wholesale.

In comparison to other townships in the region, Myrtleford has a higher proportion of people employed in primary and secondary industries and a lower proportion of people employed in the service based, tertiary sector.

In recent years, there has been some attempt to maximise employment opportunities in the tourism industry. The Alpine Shire has established an independent tourism body 'Alpine High Country Tourism' to develop a marketing plan for the alpine region.

Timber Industry

In 1991, 7.39% of the Myrtleford population were employed in agriculture and forestry. In comparison to other townships in the North East, Myrtleford has the highest proportion of people employed in forestry.

The softwood industry is a major employer in the Myrtleford district. Based in Myrtleford, Carter Holt Harvey is the largest processing mill in the North East region.

Community service and infrastructure

Myrtleford has a range of community services including support groups, counselling, home care, community transport services, library facilities, adult education, and charity organisations. Service provision in relation to the two major community service sectors, health and education, is detailed below.

Service sector	Present Infrastructure
Health	Hospital: Alpine health - Myrtleford campus
	Community health centre
	Medical centre
	Dentist
	Aged Care
Education	Child care/ Playgroup
	Kindergarten
	Two primary schools
	Two secondary schools

Community change

The most significant economic change in Myrtleford has been the development of tourism in the area. Promotion of alpine tourism, including the renaming of the highway as the Great Alpine Road, has assisted tourism development in Myrtleford. Participants at a community workshop emphasised the benefits of tourism to the local economy: increased employment; increased viability of small townships; greater range of tourism/ recreation activities; greater range of services; increased entertainment opportunities; and an increase in

the local population as more people relocate from urban centres. However, tourism has also placed pressures on local infrastructure and resources.

With specific reference to forestry, the integration of the Forest Commission into a larger government department in 1985 had a considerable impact on forest management in the district. The loss of local forestry employees and a dispersion of their expertise, combined with a reduction in resources, resulted in a decline in effective forest management.

Community attachment

Community attachment in Myrtleford is related to the multiple strengths of the community. It is a small, friendly community which exhibits pride in its outstanding environment and the range of recreational opportunities available. The multicultural identity of Myrtleford is celebrated in active social clubs and annual community events.

Identity within the region

An examination of the defining characteristics nominated by a particular community to describe towns in their region illustrates the priorities of a community, and contextualises the community's identity within the North East.

In Myrtleford the defining characteristics of towns in the region were:

- the landscape in terms of agricultural value;
- history of town and heritage landscape;
- high altitude;
- town development and tourism development.

Myrtleford participants strongly relate to agricultural identity, heritage, alpine tourism, and industry development. The descriptions

Myrtleford Workshop.

nominated by Myrtleford's residents, reflect its economic development and the heritage value of the region.

Myrtleford is a traditional farming district. The establishment of the tobacco industry in the 1960s represents a significant stage in Myrtleford's agricultural and cultural development. Tobacco farming was established by new arrivals who had been living in migrant camps in the North East, particularly Italian migrants. Many of these families have remained in Myrtleford.

While farming remains Myrtleford's economic mainstay, the township has benefited from growing tourism interest in the region, particularly alpine tourism. Factors three and four, refer to this development in the tourism industry. Myrtleford is particularly well positioned in terms of access to nature based recreational opportunities.

Forest Linkage

Participants at a community workshop were asked to list key issues and concerns about forest use and management in their region. Issues raised by participants included: correct forest management - sustainability, minimised wastage, regeneration; global and local timber supply; agroforestry; adequate reserve system; conservation of native vegetation/ biodiversity;

recognise non-economic value of habitat; global oxygen supply; forest management - fire/ fuel risk, vermin/ weed control, water quality; access to forest areas; local employment; alpine summer grazing; protection of landscape's aesthetic values; recreation; ecotourism.

Areas of forest nominated by participants as places of significance to themselves and their families are represented spatially in Figure 5.7.

Myrtleford Workshop.

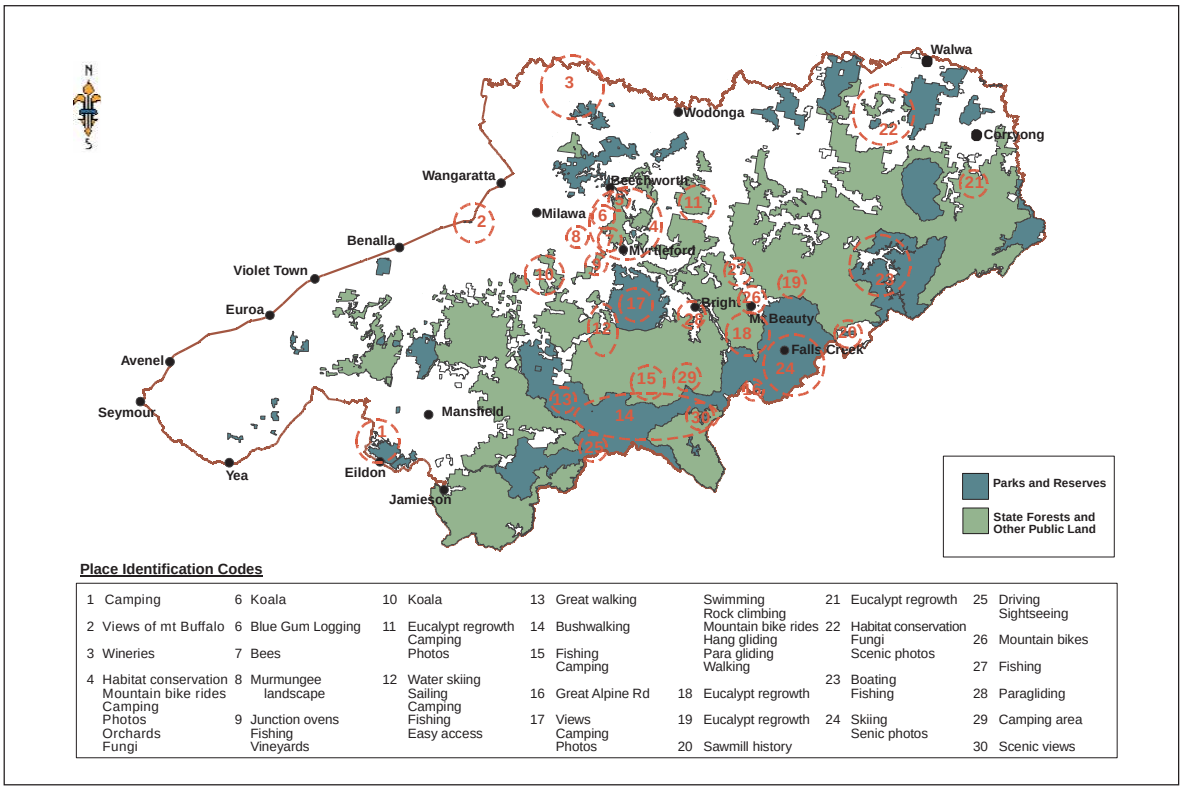


Figure 5.7. Forest use and values identified by Myrtleford Workshop participants
Source: EBC, 1997.

6 References

Alpine Resorts Commission (1996) *Alpine Resorts Commission Annual Report 1995/96.*

Armour. A. (1990) Integrating impact assessment into the planning process. *Impact Assessment Bulletin*, 8(1/2), 3-14.

Bachelard, EP and Groves, KW (1983) *Implications of Final Recommendations, Land Conservation Council, on the Timber Industry in the Alpine Area.*

Bengston, D.N. (1993). Changing forest values and ecosystem management. *Society and Natural Resources, 7*, 515-533.

Boutland, A. (1992), in B. Scougall, *Cultural Heritage of the Australian Alps*, AALC, Canberra.

Burgess, R. (1984). *In the field: An introduction to field research.* London: George Allen and Unwin.

Carley, M.J. and Bustelo, E.S. (1984) *Social impact assessment and monitoring: A guide to the literature*. Boulder, Colardo: Westview Press.

Coakes, S.J., & Fenton, D.M. (1998). Assessing community change within the forest sector: The development of the Community Sensitivity Index (Manuscript in preparation).

Colfer, C.P. (1995). Who counts most in sustainable forest management? Working Paper No.7, *Centre for International Forestry Research*, Indonesia.

Commonwealth of Australia (1992) *National Forest Policy Statement: A New Focus for Austrlaia's Forests.* Australian Government Publishing Service.

Dale, A. and Lane, M.B. (1994). *Strategic perspectives analysis: A procedure for participatory and political social impact assessment*. Society and Natural Resources, 7, 253-267.

D'Amore, L.J. (1978) An overview of SIA: In F.S. Tester and W. Mykes (eds.). *Social impact assessment: Theory, method and practice* (pp. 366-373). Calgary, Canada: Detselig.

Department of Conservation and Environment (1992) *Alpine National Park Management Plan*. Melbourne.

Department of Infrastructure (1997) *Regional Victoria and Future*. Melbourne.

Department of Human Services (1997) *Annual Report 1996-97.* Melbourne.

Ecoconsult (Australia) Pty Ltd (1991) *LCC Wilderness Special Investigation - A Social and Economic Assessment of Candidate Areas.*

Flood, J., (1980) *The Moth Hunters: Aboriginal Prehistory of the Australian Alps*, Canberra.

Gardner, P. (1992) 'Aboriginal History in the Victorian Alpine Region' in B. Scougall, *Cultural Heritage of the Australian Alps*, AALC, Canberra.

Gibson, IA, Battersby, WF and Rogers, GC (1978) *A Survey of the Employment Base of Alpine Towns.*

Gleisler, C (1993) "Rethinking SIA: Why Ex Ante Research Isn't Enough" *Society and Natural Resources* vol 6: 327-338.

Goulburn Broken Catchment and Land Protection Board (1995) *The next step - Goulburn Broken Dryland Salinity Management Plan: five year review 1990-1995 and future direction*.

Goulburn Water quality Working Group (1996) *Draft Goulburn Broken Catchment Water Quality Strategy, a component of the Goulburn Broken Regional Catchment Strategy.*

Government of Victoria (1986). *Victoria Timber Industry Strategy: Government Statement.* Melbourne.

Government of Victoria (1989) *The Code of Forest Practices*. Melbourne.

GP McGowan and Associates Pty Ltd (1977) *Alpine Grazing Study.*

Jones, R., & Tonts, M. (1995). Rural restructuring and social sustainability: Some reflections on the Western Australian Wheatbelt. *Australian Geographer*, 26(2), 133-155.

Kapferer, J. (1990). Rural myths and urban ideologies. *Australian and New Zealand Journal of Sociology,* 26(1), 87-105.

LCC (1977) *Report on the Alpine District, Volume 1*. Melbourne.

LCC (1981) *Final Recommendations North Eastern Area*. Melbourne.

LCC (1982) *Alpine Area Special Investigation*. Melbourne.

LCC (1986*) North-Eastern Area (Benalla-Upper Murray) Review*, Melbourne.

LCC (1991) *Rivers and Streams Special Investigation Final Recommendations.* Melbourne.

LCC (1991) *Wilderness Special Investigation Final Recommendations*. Melbourne.

Lauer, R.H. (1982). *Perspectives on social change*. Boston: Allyn and Bacon.

Lawrence, G. (1996). Rural Australia: Insights and issues from contemporary political economy. In G.Lawrence, K.Lyons, & S.Momtaz (eds)., *Social change in rural Australia* (pp.332-349). Rockhampton, Qld: Rural Social and Economic Research Centre.

Low, S.M. and Altman, I. (1992) Place attachment: A conceptual inquiry. In I.Altman and S. Low (eds.) *Place Attachment. Human Behaviour and Environment. Advances in Theory and Research Volume 12* (pp.1-11). New York: Plenum.

Moore, W.E. (1974). *Social change* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

North East Agribusiness Forum (1996) *Industry Reports - Regional Profile*.

Parnell Kerr Forster (1997) *Tourism Development Plan for Legends Wine and High Country*.

Pickett Agricultural Services Company (1996) *Agribusiness Opportunities - Manfield and District.*

Public Health Unit Hume Region (1996) *A Report on Health Status in the Hume Region.*

Read Sturgess and Associates and Midas Consulting (1990) *Social and Economic Appraisal of the Draft Proposed Recommendations for the Rivers and Streams Special Investigation.*

Read Sturgess and Associates and Henshall Hansen Pollock Associates (1995) *Recreational Use of Victoria's State Forest* prepared for Department of Conservation and Natural Resources.

Rogers, E.M. (1983). *Diffusion of innovations* (3rd ed.). New York: Free Press.

Rolston, H., & Coufal, J. (1991). A forest ethic and multivalue forest management. Journal of Forestry, 89(4), 35-40.

Ross, H. (1990). *Community social impact assessment: A framework for indigenous peoples.* Environmental Impact Assessment, 10, 185-193.

Sinclair Knight Merz (May 1996) *Mount Stirling Environment Effects Statement* prepared for the Department of Infrastructure, Office of Planning and Heritage.

Shaughnessy, J.J. and Zechmeister, E.B. (1990). *Research method in psychology.* New York: McGraw Hill.

Smith, A. (1976). Social change. London: Longman.

Sorenson, A.D. (1990) Ch4 "Virtuous cycles of growth and vicious cycles of decline: Regional economic change in Northern NSW" in *Change and adjustment in Northern NSW* ed. DJ Walmsley, University of New England.

Spradley, J. (1980). *Participant observation.* New York: Holt, Reinhart and Winston.

State Plantations Impact Steering Committee (May 1990) *State Plantations Impact Study: Report and Recommendations,* Melbourne.

Taylor, C.N., Bryan, C.H., and Goodrich, C.G. (1990) *Social assessment: Theory, process and techniques.* Centre for Resource Management, Lincoln University, New Zealand.

Thomas, D., & Veno, A. (1992). *Psychology and social change*. Palmerston North, NZ: Dunmore Press.

Tonts, M., & Jones, R. (1996). Rural restructuring and uneven development in the Western Australian Wheatbelt. In G.Lawrence, K.Lyons, & S. Momtaz (eds.), *Social change in rural Australia* (pp.139-153). Rockhampton, Qld: Rural Social and Economic Research Centre.

Tourism Victoria (1995) *Tourism Victorian Regional Travel Survey*.

Tourism Victoria and Alpine Resorts Commission (1996) *Ski and Snowfields Visitation Markets.*