

# **Sustainable Tourism Development and Rural Community Values in Australia's Forest Regions**

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## Certification

I Stephen Schweinsberg certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Date: May 2009

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# Synopsis

## Background

The purpose of this inquiry is to assess the role of tourism as an agent of sustainable change in rural Australia. In many parts of rural Australia, tourism is a relatively new economic activity. Traditionally regional economies have relied on primary industries, such as agriculture, fishing and mining to sustain their populations. For a host of reasons many of these activities have been in decline or have ceased altogether in recent years. This may be due to the depletion of the resource, changes in the environmental ethic of the broader Australian population, or government policies such as Regional Forest Agreements (RFA). Whatever the reason, the consequences of a decline in, or loss of a region's economic base may have a profound impact on a rural community. There is thus pressure to find an alternative or supplementary economic base so that the community can be sustained.

A review of the literature pertaining to sustainable tourism, tourism planning and the socially constructed nature of "place" illustrates some of the complexity in using tourism as a means of societal renewal in rural Australia. Rural Australia is not a homogenous entity. The existence of complex/ localised landuse histories, combined with a diverse range of environmental ethics amongst residents mean that community members can variously accept or reject economic arguments made in favour of nature tourism development. While governments and other regional tourism stakeholders often position nature tourism as a more environmentally, economically and socially sustainable use of rural Australia's unique natural environments; the fact that nature tourism development often necessitates a fundamental re-organisation of a community's economic and social structure means that it can be both positively and negatively perceived by local community stakeholders.

## Research Design

This thesis explores new ways of assessing a rural community's response to a tourism development scenario in their area. The inquiry uses psychological values theories to interpret the attitudes and economic valuations of tourism development. The foundations of this new approach to values assessment, which is considered in this thesis is the contingent valuation method and the *Personal Construct Theory* (PCT) repertory grid. Contingent valuations are an economic survey based technique for eliciting preferences for non-market goods. Along with cost benefit analyses they provide tourism assessors with a means of determining the total economic value of a development proposal. Recently a number of authors have considered that a personal and diverse range of human values may underpin a willingness to pay (WTP) estimate in a contingent valuation survey. Various authors have made the connection between attitude and contingent valuation on the grounds that contingent valuation surveys are a form of economic consumerism where individuals make choices that are dependent upon their attitudes and beliefs.

The links that this thesis has made between contingent valuations and PCT repertory grids are built on this established body of contingent valuation attitude behaviour literature. Ajzen and Driver (1992a) who proposed a *Theory of Planned Behaviour*/contingent valuation model where beliefs about the consequences of an action were seen as directly influencing contingent valuation WTP. This thesis has utilised the principles of this model to the context of nature based tourism in a rural national park context. It then seeks to extend Ajzen and Driver's (1992a) model to include reference to existing landuse attitudes and their social context. Repertory grids, which have their basis in PCT principles, are used to provide a tool whereby social context can be interpreted.

The thesis research design and methodology involved the use of independent contingent valuation and repertory grid research instruments. Contingent valuation surveys and follow-up repertory grid interviews were distributed and undertaken in the Eden community on the NSW south coast, which functioned as the sole case study for analysis. Primary industries such as forestry have long been identified as being intrinsically connected to the working class character of the Eden area. Recently, however, in response to the effects of government RFA policies, local and regional stakeholders have come to investigate the potential role for nature tourism to contribute to Eden's future. This multifaceted landuse history has positioned Eden as an ideal exemplifying case with which to test a new economic psychology approach to tourism values assessment.

Research design was organised around three main research questions:

- 1. What is the non market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**
- 2. What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**
- 3. How may *Personal Construct Theory* based repertory grid methods aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?**

## **Key Findings**

### Research Questions 1 and 2

One hundred and ninety eight Eden residents took part in the contingent valuation survey, which represented approximately 18 percent of the total resident population of the Eden Township. Of the 198 respondents, 24 accepted the premise of the contingent valuation scenario and provided a WTP payment amount (1 respondent was unable to provide a payment amount). The mean WTP was \$93.54 per annum, which translates into a mean WTP of \$1216 per individual over the 13 year lifespan of the Eden RFA. The legitimacy of this data was discussed with respect to various content validity, criterion validity and construct validity measures.

While there was a majority opinion amongst the sampled population regarding their disinterest in the survey scenario, there was a plethora of rationales put forward to justify responses. Developing an understanding of these contingent valuation response justifications was an important concern in this thesis, given the focus on understanding the ways that resident attitudes may underpin contingent valuations. Amongst the 25 respondents who accepted the contingent valuation scenario, concerns for environmental protection were predominant. 83 percent of respondents who supported the scenario noted that they wanted to preserve native forests and national parks, and felt that reserve areas are an appropriate means to achieving this. Some 70 percent of the sample population also felt that Eden residents have a responsibility to be proactive in the area of environmental preservation. Amongst the residents who rejected the contingent valuation scenario, approximately 40 percent refused to provide a WTP on the grounds that they were satisfied with the existing land use balance in the Eden RFA area. This satisfaction with the existing land use arrangements in the Eden area does not assume negativity towards tourism but rather recognises the effect that higher exogenous factors such as government policy can have on tourism development.

### Research Question 3

Attitudinal questioning in the community contingent valuation survey was used in this inquiry to present generalised themes in landuse perception for the whole sample population. In a bid to consider ways in which the attitudes of individual community members can be better understood, this thesis has also completed personal repertory grid interviews with 22 Eden residents. Construct elicitation was designed to focus on cognitive dimensions associated with the residents' perception on the sustainability of a range of forest landuse elements. The primary industry and tourism landuses that were considered were bushwalking, 4 x 4 wheel driving, camping, woodchipping, plantation forestry and dairy farming. An untouched forest landuse element was also included.

As per the core principles of PCT, the constructs developed by Eden residents to describe the seven landuse elements varied from individual to individual. While there were some common themes across the different interview grids such as environmental sensitivity and potential for income generation, the way interviewees interpreted different forest landuses varied. In spite of this, the results that are presented in this study do illustrate that PCT techniques potentially have application in the field of landuse valuation.

In reference to the 3<sup>rd</sup> research question it was found that PCT repertory grid methods may aid understanding of the social context of WTP contributions in three ways. Firstly, repertory grids have been identified as providing an opportunity for researchers to observe how land use attitudes develop over time as residents gain more experience and knowledge of environmental debates. This is significant given that it has been illustrated that the opinion a community member attaches to forest usage is not static. Rather resident opinion will change over time based on the constantly evolving makeup of a community's social base. Secondly, it has also been shown that the generation of repertory grids around a set of resident formatted constructs has the potential to allow for the values of different residents to be given equal weight in land use discussions. PCT repertory grids conventions state that

interview participants, rather than investigators, are commonly responsible for defining the scope of the inquiry through construct development. Thus the chief advantage of PCT repertory grid methods is that no values position can be prioritised because the researcher does not come to a debate imposing his/her own hypotheses on a sample population. Rather, through the generation of cognitive constructs it is up to the individual respondents to define the issues that are relevant to them as they discuss sustainable landuses in the forests of Eden. Also, repertory grids allow researchers to see the extent to which the views of others in the community are likely to influence or be influenced by a contingent valuation decision. This is achieved through reference to the PCT sociality corollary. Understanding the power relationship between community members and other stakeholders in the Eden “community” has implications for the involvement of local residents in tourism development decisions.

### **Conclusion**

The central argument to emerge from this thesis with respect to the attitude behaviour relationship between contingent valuations and PCT repertory grids is that repertory grids can help provide an explanation of the various social context issues, which influence a resident’s contingent valuation WTP estimate. This thesis has proceeded on the assumption that *‘evaluative judgements [such as WTP] should be sensitive to features of proposed transactions that the respondents consider to be relevant’* (Welch & Fischhoff, 2001, p. 209). With this in mind; repertory grids, with their foundation in individually constructed interpretations of reality have been proposed as a structured methodological tool, which may, if properly implemented, allow researchers to avoid interpreting WTP responses on the basis of their own personal opinion and prejudice. Opportunities for future research in this area will focus on the development of adaptable repertory grid research tools, which can be employed across different rural populations.

## List of Publications Arising from the Thesis

Since research commencement the following papers and presentations have been published on different aspects of this study:

- Schweinsberg, S., Darcy, S. & Wearing, S. Resident Opinion of Increasing National Parks and Forest Reservations on the NSW Far South Coast: a Contingent Valuation study, *Journal of Environmental Management*, SUBMITTED
- Schweinsberg, S. (2007). Contributions to Economic Social Impact Assessment Methods from Psychological Values Analysis: a review, *Australian Planner*, vol. 44, no. 4, pp. 44-51 (Peer Reviewed)
- Schweinsberg, S. & Wearing, S. (2007). Exploring Community Sustainability Potential in Nature Based Tourism: The Far South Coast Nature Tourism and Recreation Plan, Proceedings of the 17th CAUTHE Annual Conference, McDonnell, I., Grabowski, S., March, R., (eds.) CD-ROM, University of Technology, Sydney (Peer Reviewed)
- Schweinsberg, S. C. (2006). Regional Forest Agreements as Catalysts for Change: Protected Areas, Rural Communities, Woodchips and Nature Tourism Development, CAUTHE 2006 Conference Melbourne, 6-9 February 2006



## Glossary

For the purpose of this thesis the following definitions are used.

- **Contingent Valuation**

*'A research methodology used to estimate the economic value of a ... resource not sold through conventional markets. It produces an economic value for a good by asking subjects to respond to a scenario describing the current amenity or resource, plausible changes to the amenity or resource ... and how much they are willing to pay for it'* (Crotts, 2000, p. 108).

- **Community**

*'Those [people that are] immediately adjacent to forestland or those with a high economic dependence on forest-based industries, including tourism as well as timber (sic)'* (Kusel, 1996, p. 367)

- **National Park**

The NSW National Parks and Wildlife Service defines a national park as *'a natural area of land and/or sea, designated to: a) protect the ecological integrity of one or more ecosystems for present and future generations; b) exclude exploitation inimical to the purpose of the dedication of the area and c) provide a foundation for the spiritual, educational, recreational and visitor opportunities all of which must be environmentally and culturally compatible'* (New South Wales National Parks and Wildlife Service, 1997, p. 15)

- **Nature Tourism (NSW Far South Coast Stakeholder Definition)**

*'All [sustainable] tourism in natural areas... [focusing on] the natural and cultural features of a site and education rather than just the activities undertaken'* (Shepherd, Dodds, Robinson, Moore, & Department of Lands, 2004).

- **Personal Construct Theory (PCT)**

PCT is a theory of individual and group processes that takes a constructivist position in modeling human knowledge but bases this on a positivist scientific position (Shaw, 1992). It provides a fundamental framework for both theoretical and applied studies of knowledge acquisition, attitude measurement, personality trials and cognitive mapping. George Kelly conceived this theory, explaining that a person is capable of applying alternative constructions or meanings to any events in the past, present and future (Mena, 2001).

- **Regional Forest Agreement**

*'Regional Forest Agreements (RFAs) are 20-year plans for the conservation and sustainable management of Australia's native forests. There are 10 RFA's in four States: Western Australia, Victoria, Tasmania and New South Wales. Each of these agreements provides certainty for forest-based industries, forest-dependent communities and conservation'* (Department of Agriculture Fisheries and Forestry, 2004b).

- **Repertory Grid Method**

Repertory Grid Method represents the technique George Kelly, the founder of *Personal Construct Theory*, developed to identify and map an individual's personal experience constructs in a grid setting (Borell, Espwall, Pryce, & Brenner, 2003; Coakes, Fenton, & Gabriel, 1999; Hankinson, 2004).

- **Social Impact Assessment:**

*'A tool that, through the systematic gathering and analysis of social data, can be used to assist in predicting the impacts of alternative courses of action on human societies'* (Hough 1991, p. 274 in Fortin & Gagnon, 1999, p. 203)

- **State Forest**

Forests NSW's goal is to provide best management of forest areas and ensure the widest range of benefits to future generations of people in NSW. At present 9 percent of forests in NSW are managed as multiple use forests (allowing for both timber harvesting and recreation). Approximately 16 percent are managed as conservation reserves (Spencer, 2008). Performance success for State Forests is defined in terms of:

- **Commercial efficiency** - the returns generated from the marketing of forest products
- **Environmental care** - ecologically sustainable management of native and planted forests to protect and enhance environmental values including flora and fauna, water and soil quality and scenic attraction , and;
- **Social contribution** – helping to generate social and economic benefits for the people of NSW, including recreation and regional employment opportunities. (Department of Primary Industries - Forests, 2005)

## List of Abbreviations

<b>Abbreviation</b>	<b>Full Description</b>
EIA	Environmental Impact Assessment
ESD	Ecologically Sustainable Development
IUCN	International Union for the Conservation of Nature
NSW	New South Wales
NPWS	National Parks and Wildlife Service
PCT	<i>Personal Construct Theory</i>
RFA	Regional Forest Agreement
SIA	Social Impact Assessment
STCRC	Sustainable Tourism Cooperative Research Centre
WTP	Willingness to Pay (in a contingent valuation)

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# **Chapter 1: Introduction and Thesis Overview**

## **1.1 Introduction**

This chapter will situate the current research into forest based nature tourism development in the context of the changing nature of landuse in rural Australia<sup>1</sup>. As the aim of this inquiry is to contribute to our understanding of how residents of a rural community perceive different forest landuses in their locality, this opening section will consider some of the complexities in nature tourism and rural landuse diversification. With the research context established reference will then be made to research aims and associated research questions. This section will include an overview of the research methodology as it relates to the various psychological and economic theories, which underpin the research. The chapter will then conclude with an outline and diagrammatic representation of the thesis structure.

## **1.2 Situating the Research Problem**

The purpose of this inquiry is to address the general issue of how best to manage the process of change within a rural community, arising from the emergence of nature tourism as a significant part of the community's economic base<sup>2</sup>. Tourism is a relatively new form of economic activity in many parts of rural Australia. Traditionally rural communities have relied on primary industries such as agriculture, forestry, fishing and mining to sustain local economies and shape their social identity. In Australia many of these traditional industries are, however, now in decline for reasons which include the depletion of resources, international trade factors, economic restructuring, the removal of tariff protections, changes to company employment procedures and government land use policies (Beer, Maude, & Pritchard, 2003; Chisholm, 1995; Lockie, 2000; Rofe,

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<sup>1</sup> Rural Australia is, for the purposes of this research, defined as all areas of Australia outside the capital cities (McManus & Pritchard, 2000b). This ensures that the results of this research are not constrained by other commonly cited criteria of rurality e.g. community population size/density, access to medical government services (see Bourke, 2001). Many of the issues being canvassed in this inquiry regarding the decline of traditional primary industries in rural areas and the growth of sustainable nature tourism apply to larger regional centres such as Newcastle (population 288,732), as much as they apply to smaller centres such as Eden (population 3277).

<sup>2</sup> The parameters for this inquiry were set out initially in a project brief prepared by the project sponsors TTF Australia: Tourism and Transport Forum, the Sustainable Tourism Cooperative Research Centre (STCRC) and the School of Leisure Sport and Tourism (UTS). The Australian Sport and Tourism Youth Foundation was also a sponsor of the inquiry but were not involved in defining the parameters of the research.

2004; Smailes, 1995; Tarrant, Bright, Smith, & Cordell, 1999).

Many rural communities have pursued a policy of industry diversification as a response to the deterioration in the economic viability of primary industries (Australian Commonwealth Government, 2008). The aim of any such management approach is to find a way of maintaining the social sustainability<sup>3</sup> of rural areas. While some forms of diversification are successful, others suffer because they necessitate 'new forms of ownership and control ... [whilst also transforming] the landscape visually' (Barlow & Cocklin, 2003, p. 504). This inquiry focuses on the social sustainability potential of nature tourism landuse diversification.

Nature tourism is considered an important component of Australia's tourism sector. Figures from the *2004 National Visitor Survey* indicate that 25.9 million people participated in nature based tourism activities in Australia (Tourism Australia, 2005b)<sup>4</sup>. The expenditure of this section of the tourism market was approximately \$19.1 billion in 2004 (Tourism Australia, 2005b). Bush walking/rainforest walks were the most popular forms of nature based tourism in 2004 followed by visits to national parks/state parks (Tourism Australia, 2005b). Nature Tourism may be defined as the industries serving:

Domestic and international visitors who participate in at least one of the following five nature based activities while travelling in Australia: (1) visiting national parks or state parks, (2) visiting wildlife parks, zoos or aquariums, (3) visiting botanical or other public gardens, (4) bushwalking or rainforest walks, and (5) whale or dolphin watching (in the ocean). (Tourism Australia, 2005b)

Nature tourism forms one part of the broader Australian rural tourism sector. Rural tourism may be defined as a multifaceted industry that takes place in an environment outside of urban areas and represents to the visitor the essence of country life (Commonwealth Department of Tourism, 1994). Common components of the rural tourism spectrum in Australia can be said to include farm tourism, wine tourism, adventure tourism and ecotourism (Hall, 2003). Today rural or regional tourism

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<sup>3</sup> Defined in this thesis as 'the continuing ability of rural communities to retain their demographic and socioeconomic functions' (Jones & Tonts, 1995, p. 136).

<sup>4</sup> This figure is made up of domestic overnight visitors, domestic day visitors and international visitors (Tourism Australia, 2005a)

contributes approximately \$27 billion to the regional economy, the majority coming from domestic tourist sources (Tourism Australia, 2005c). Nationally the industry employs around 185,000 people or a third of the national tourism employment base (Tourism Australia, 2005c).

Various authors have considered the question of whether rural tourism will ever be a rural development panacea (Ashley & Roe, 1998; Fleischer & Felsenstein, 2000; Jenkins, Hall, & Houghton, 1998; Nitsch & Van der Straaten, 1995; Reeder & Brown, 2005a, 2005b; Sharlpey, 2002, 2003; Wilson, Fesenmaier, Fesenmaier, & van Es, 2001). One of the arguments often put forward in support of tourism development in rural areas is that it can act as an economic lifeline for rural communities; bringing in dollars, generating jobs and supporting retail growth (Wilson et al., 2001). This is certainly the case for sectors such as agritourism.

Agritourism has been defined by the Australian Regional Tourism Research Centre (ND) as a 'business or activity that invites visitors to come on-farm or into a rural community to enjoy agriculture, its produce and the natural environment in which it exists'. Usually existing as a supplement to traditional farm operations, agritourism is often perceived by rural people to be a means of engaging with visitors on aspects of rural life, whilst also providing an economic life line for struggling farms (Ollenburg & Buckley, 2007, p. 48). Quotes from agritourism providers illustrate this:

We wanted interested people to have the opportunity to see what life was like on an outback cattle station, to experience the realness of our way of life. Secondly the extra income would be welcome.

I wanted to work for myself, work from home so I could be there for my children. I like the role of farmer and showing guests the animals and the outdoors entertaining. The farm does not provide sufficient income (drought problems) so alternative income is necessary. Currently just a big debt but project is long-term to secure my future (single parent).

Prominent individuals including the former Australian National Party leader Tim Fisher have noted that 'farming is becoming more and more a service industry' (Lawrence & Gray, 2000, p. 42). In spite of this, debate persists regarding the benefits of agritourism to regional development. For example, agritourism has been criticised on the grounds

that it requires farmers develop additional skills, equipment and knowledge which may put farms at increased risk of inadvertent mismanagement (Vanclay, 2003a). It may also be seen as a threat to the patriarchal nature of traditional farming enterprises (Lawrence & Gray, 2000).

Different perceptions of traditional industries and newer “sun-rise” industries such as rural tourism (see Beer et al., 2003) are often the result of contestation over the notion of rurality. The rural idyll is often defined in terms of nostalgia for the past and a desire to escape from the pressures of modernity:

The countryside as past is often used in contrast with the fears of the present and the dread of the future . . . Households can look back to rural roots. (The countryside) is the location of nostalgia, the setting for the simpler lives of our forebears, a people whose existence seems idyllic because they are unencumbered with the immense task of living in the present. (Short, 1991, p. 34)

In this way, traditional industries often act as a hook by which rural communities can maintain a connection to what they know and feel secure with. In the case of Newcastle on the mid north coast of NSW, the ‘steel works came to be both iconic to Newcastle’s identity and animated as the living heart of the place’ (Winchester et al. 1996, p.49 in Rofe, 2004, p. 195). Community concern over the potential for the loss of tradition can negatively influence perceptions of newer tourism developments, as is shown in the following quote from a participant in this study:

There is a really negative attitude amongst the community towards tourism. I saw a typical example the other day in the local paper . . . This particular column was focused on people on the main street’s opinions of the Snug Cove development. The fishing industry is winding down from its traditional base of 20 years ago. We have an infrastructure down there [at Snug Cove] that could be developed. And the question focussed on whether each community member would support a Snug Cove redevelopment. Three of the people said that yes; it could become a Fremantle type area with alfresco dining, little novelty shops and the like. The fourth lady interviewed . . . her husband had worked in the fishing industry and she is a retired lady. Her attitude was that there should be no new development; let’s just leave the town the way it is. That’s fine for her because she’s in the later stages of her life. But for my kids who want to live here and raise a family; they need income. (Ethan, 2007, Personal Communication)

The potential for a rural community to be divided on the role of tourism development is connected to the lack of homogeneity in rural communities more generally (McManus & Pritchard, 2000a). The rapid repopulation of rural centres with “sea-changers” and “tree-changers”<sup>5</sup> is forcing a re-appraisal of exactly what constitutes appropriate uses of rural landscapes. Paquette and Domon (2005, p. 426) note that ‘the word rural no longer has a single meaning ... [and that as a result a rural] landscape can be defined as a tangible imprint continuously reshaped by changing social representations of the space’. This has significant implications for the study of sustainable nature tourism development in rural areas.

Sustainability like rurality is a socially constructed term (Cocklin & Alston, 2003). The heterogeneous nature of rural communities means that perceptions of nature tourism in a rural area will vary from individual to individual and social group to social group. To produce meaningful, sustainable, benefits for a community the process of tourism focussed landuse change (diversification) therefore needs to be managed rather than simply allowed to run its course. The aim of tourism managers should be to produce outcomes from tourism development that, as far as possible:

- Maintain the community and the social networks and relationships within it
- Maintain the community’s sense of itself and its attachment to place, and
- Allow the community to maintain its sense of pride in its culture and traditions, even if the way of life substantially changes.

These issues will be explored in this inquiry through a case study analysis of tourism development in Eden on the NSW far south coast. Through the joint use of psychological and economic research methods this inquiry considers the various ways in which the social constructions of nature tourism focussed landuse change can be understood in relation to higher order concepts such as “place” and “community”. The next section will outline the aim of this research project and the associated research questions.

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<sup>5</sup> See McLeod (2005)

### **1.3 Inquiry Aim and Research Questions**

The aim of this inquiry is to examine how residents of a rural community perceive different forest landuses in their locality. Using a case study of the Eden community on the NSW far south coast<sup>6</sup> (see Figure 1 overleaf) this thesis will investigate the merits of combining traditional economic contingent valuation methods with repertory grid methods developed from *Personal Construct Theory* (PCT). The rationale for this new interpretation of economic psychology is to investigate whether PCT psychological principles may help researchers understand how people form non-market valuations for different rural landuses. This research approach is based on a critique of the economic contingent valuation survey literature. This critique suggests that contingent valuations do not always illustrate the myriad of values issues, which may explain an individual's valuation of a non-market good. For this reason this inquiry will examine contingent valuation results through the lens of a psychological theory (PCT) where the central tenant is the idea that people are personal scientists who interpret the world according to their own experiences and values, and thus form constructs in which to explain them.

To address this aim, three research questions have been posed:

- 1. What is the non-market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**
- 2. What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**
- 3. How may *Personal Construct Theory* based repertory grid methods aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?**

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<sup>6</sup> The NSW far south coast region extends from the Kings Highway near Batemans Bay in the north to the NSW Victorian border in the south (For the location of the Eden case study site see Figure 2). Nature tourism has become central to regional marketing strategies through: offshore whale, seal and dolphin watching; heritage sites; natural features; vast tracks of national parks and state forests. Nature tourism has been defined by NSW south coast commentators as 'All tourism in natural areas ... [ranging from] family picnics to wilderness walks and study tours ... [Nature tourism] focuses on the natural and cultural features of a site and education rather than just the activities undertaken' (Shepherd et al., 2004 n.p). Nature based tourism in the NSW far south coast region is an emerging industry, one largely made up of a handful of small commercial operators working within National Parks and State Forests (Shepherd et al., 2004).

**Figure 1: The Eden Case Study Site on the NSW Far South Coast**



Source: McManus (2002, p. 852)

### **1.4 The Development of a Research Approach**

Through its synchronisation of contingent valuation and repertory grid research instruments this inquiry sought to explore new ways of understanding community values as they relate to nature tourism development in rural areas. It was mentioned in section 1.2 that in order for tourism to produce sustainable benefits for a community, the process of tourism focussed landuse changes needs to be managed rather than simply being allowed to run its course. One aspect of successful management is the development of tourism that reflects the values and expectations of the host community.

Contingent valuations have a history of use in studies designed to value nature based tourism developments (Lee, 1997; Mercer, Kramer, & Sharma, 1995; Wood, Glasson, Carlsen, & Hopkins, 2006) Along with cost benefit analysis, contingent valuations

theoretically provide Neo-classical economists with the ability to measure the total economic value of a development proposal (Hill & Zammit, 2000). Contingent valuations involve the development of a hypothetical market in order to value preferences for non-market goods (Carson, 1998; Moons, 2002). A more comprehensive examination of the contingent valuation method is found in section 2.3.

A number of criticisms have been levelled at the ability of contingent valuation surveys to develop markets for commodities where no actual market exists. Criticisms commonly include lexicographic preferences (Rekola, Pouta, Kuuluvainen, Tahvonon, & Li, 2000; Veisten, Navrud, & Valen, 2006) and protest bids (Lindsey, 1994). A common feature of each of these criticisms is the idea that many aspects of the physical and social environment of a rural area are uncomodifiable. Brennan (1992) notes that a personal and diverse range of human values may underpin a WTP (WTP) estimate in a contingent valuation survey. This inquiry employs the use of PCT repertory grid methods to understand the personal values, which may underpin contingent valuations.

*Personal Construct Theory* has its foundations in George Kelly's work *The Psychology of Personal Constructs* (1955) (see Adams-Webber, 1979; Bannister & Mair, 1976; Kelly, 1963; Kelly, 2003; Neimeyer, 1985; Sahakain, 1977; Sechrest, 1977 for elaboration on theory). Developed originally for work in clinical psychology, PCT and its various techniques (e.g. repertory grids, laddering) have also been applied to a wide range of contexts including tourism, education, destination image analysis and consumer preferences. The essential premise of PCT is that individuals within society have the ability to perceive the world around them in their own terms. In contrast to many existing personality theories, PCT aims to avoid the pitfalls of over reliance on experts and observer bias. By painting individuals within societies as experts, Kelly attempted to develop a theory and method, which would allow ordinary people to control their own world by construing/interpreting events and their implications on their lives (Riegler, 2005). Tourism development is a reality for many rural populations in Australia. It was previously noted that rural tourism industries have the potential to cause changes to the social, economic and environmental environment in which they develop. Walker and Winter (2007) have recently drawn attention to the value that PCT may have for the field of social psychology. Through consideration of the notion of



‘person in relation’ they argue that there is inherent in Kelly’s theory many aspects of social context. This is evidenced in the existence of sociality and commonality corollaries and the idea that people may function as ‘*validating agents for the testing of constructions and dependency*’ (Walker & Winter, 2007, p. 457). This inquiry is employing PCT repertory grid methods to interpret the social context of tourism economic valuations.

The starting point for this inquiry was the formulation of a hypothetical economic contingent valuation survey scenario, which would allow the researcher to understand the non-market value that Eden residents attach to nature tourism development. The contingent valuation scenario that was developed had its basis in current stakeholder debates regarding sustainable forest usage in Australia’s south east. Respondents were told that the survey they are completing was examining levels of community support for an increase in the area of public forest land around Eden that was designated national park. It was also explained that support for further national park creation would hypothetically increase the opportunities for nature tourism development in Eden’s forests, whilst reducing the area of land available to State Forest stakeholders for timber extraction. Contingent valuation surveys were distributed by post to every household in the Eden Township. Some 198 survey responses were received and the results will be examined in Chapter 4 to address the following research questions:

**What is the non-market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**

**What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**

The development of a scenario whereby residents were asked to place a non-market economic value on a reduction in the area of land available to traditional primary forest industries is the first set of data presented and examined in this thesis. When viewed alongside existing market based studies, the results of Chapter 4 of this thesis can aid researchers who are interested in understanding the total economic value of national park based nature tourism industries in NSW.

The primary theoretical contribution of this thesis is, however, the supplementing of traditional economic contingent valuation methods with PCT based repertory grid methods. The use of repertory grid methods in conjunction with economic contingent valuation methods is reasoned on the basis that many contingent valuation theorists have used attitudinal questioning as a means of shedding light on payment estimates (see Arrow et al., 2003; Horton, Colarullo, Bateman, & Peres, ND; Imber, Stevenson, & Wilks, 1991; Nunes, 2002). These authors, and others, have made the connection between attitude and contingent valuation on the grounds that contingent valuation surveys are a form of economic consumerism where individuals make choices that are dependent upon their attitudes and beliefs (Pouta, 2003).

This inquiry has framed its discussion of attitude and personal values according to the principles of PCT. The use of formal psychological theories to “improve” the reliability and validity of contingent valuations is not in itself new. Nearly 20 years ago Harris et al. (1989) outlined a research agenda for assessing contingent valuations from a psychological perspective. As part of this agenda it was asserted that attention should be focused on ‘developing a model of contingent valuation method valuation based on psychological theory, such as attitude theory’ (Harris et al., 1989, p. 225). The new links that this inquiry is making between contingent valuation and PCT is an application of other scholars work to link contingent valuations to the *Theory of Planned Behaviour* (Ajzen & Driver, 1992a). The inquiry’s conceptual framework is outlined in more detail in section 2.3. Briefly, however, the *Theory of Planned Behaviour* falls within the broad confines of work which tests the relationship between attitude, and the behaviour that attitude is able to predict (Mitchell & Carson, 1989). This thesis will argue that PCT repertory grids may allow for a fuller understanding of how individuals formulate beliefs. Beliefs are a central precursor for the development of attitudes and eventually WTP behaviour according to Ajzen and Driver’s *Theory of Planned Behaviour* model (Mitchell & Carson, 1989). The beliefs being considered in this thesis are beliefs about the consequences of further national park development in the Eden area.

PCT attitudinal data was collated for this study in the form of 22 repertory grid interviews with Eden community members who had already completed the contingent valuation survey. The results of these interviews were used to address the final research question:

**How may *Personal Construct Theory* repertory grid methods aid our understanding of the attitudinal underpinnings of contingent valuation Willingness to Pay estimates?**

## **1.6 Research Limitations**

The present study represents, to the researcher's knowledge, the first research to consider the benefits of an economic psychology approach to values assessment in Australia's forested regions. This study is, however, limited in its scope by a number of factors including:

### Choice of the Eden Case Study Site

The decision to focus solely on forest based tourism development in Eden on the NSW south coast was made on the basis of the researcher's previous experience with the key local landuse protagonists in the course of earlier research conducted at the University of Sydney. For reasons that are explained in section 3.4.2, Eden served as an appropriate exemplifying case with which to test a new economic psychology approach for landuse values assessment. While this exploratory study confirmed the potential benefits of using repertory grids to interpret the attitudinal underpinnings of economic contingent valuations in Eden, further research is needed to assess the broad applicability of the assessment approach to other rural townships.

### Confinement of Response Sample to Permanent Eden Residents

In section 2.2.1 it will be noted that determinations regarding the sustainability potential of a tourism industry involves reconciliation of the expectations of the different core stakeholder groups in tourism development discourses (i.e. tourists, industry and the host community) (Lane, 2005). Although the researcher accepts the premise of this statement, field data collection was confined to permanent residents of the Eden Township. This limitation was made for purely pragmatic reasons of time available within the researcher's doctoral candidature. With this limitation in mind, the focus of study was specifically on how best to manage the process of rural tourism development for the benefit of a rural community. Future research is needed to broaden the scope of study to include the views of people who visit the area's forests from outside the Eden

Township, tourists and tourism industry operators. The landuse attitudes of any or all of these groups can easily be canvassed through the use of an adaptable repertory grid instrument of the kind described in Chapter 5.

### Thesis Timing

The relative availability of areas of state forest and national park land for tourism usage is dictated by government legislation such as Regional Forest Agreements (RFA). RFAs are 20 year plans for the sustainable management of Australia's native forest estate. The Eden RFA was signed in August 1999, six years before the commencement of this inquiry. The 20 year duration of the RFA legislation, the absence of legislative mechanisms to alter the parameters of the agreements on the basis of 5 yearly reviews and the history of tension between Eden residents and regional land managers has created a degree of cynicism in sections of the Eden community regarding their ability to have their voices heard in national landuse debates. This is seen as potentially effecting response rates to the community surveys.

### Lack of Experience with Repertory Grid Methods

The process of ascertaining whether repertory grids can be used to interpret the attitudinal underpinnings of economic contingent valuations has involved the researcher acquainting himself with the intricacies of the repertory grid method. Every effort was made to ensure the soundness of the research approach. The researcher undertook multiple pilot studies and liaised with researchers from the psychology department at the University of Wollongong. That said reference will be made in Chapter 4 to instances where the researcher's lack of repertory grid experience influenced his ability to sell the merits of the method to potential interviewees.

## **1.7 Outline of the Thesis**

The central focus of this study is to investigate new ways of understanding the complex attitudinal underpinnings of economic contingent valuations. The interrogation of these issues is addressed through an analysis of literature and primary data that was gathered in the Eden case study community. The outcomes of these analyses will be used to develop a better understanding of issues that need to be considered by tourism planners

and social impact assessors when providing a total economic value for a rural tourism development.

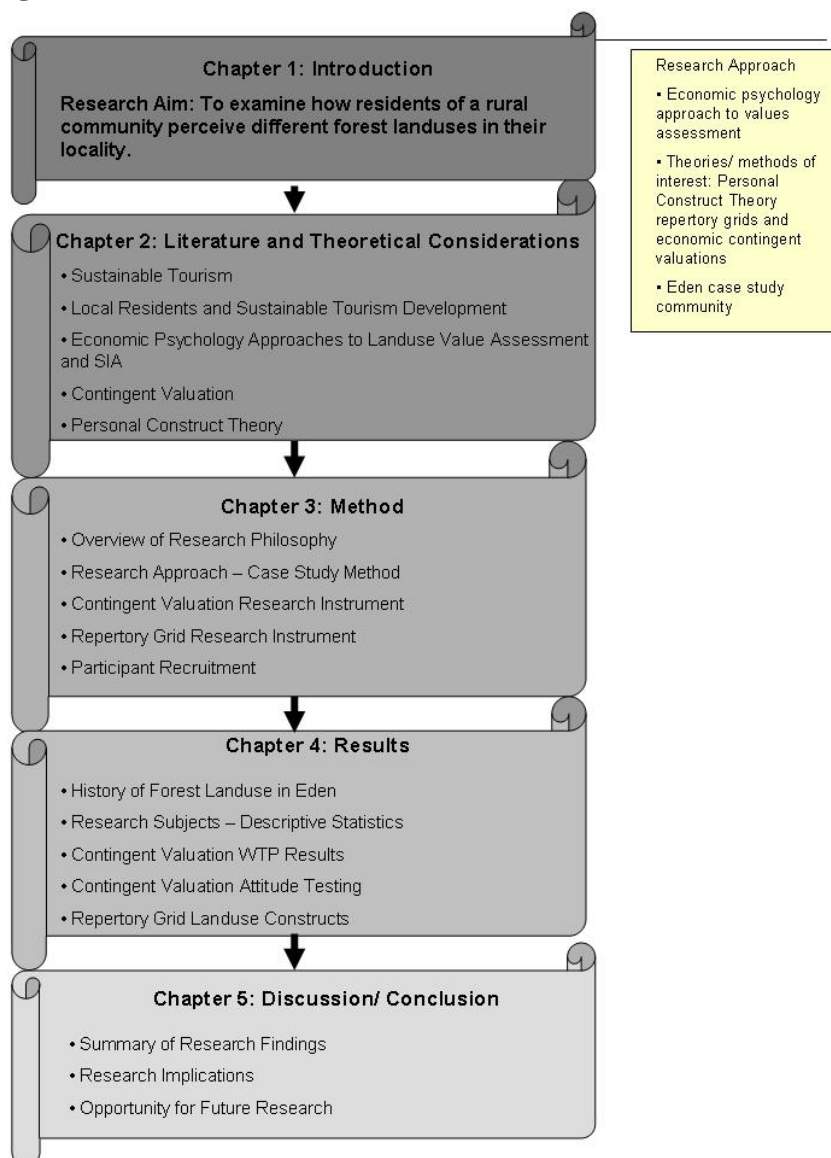
This thesis consists of five chapters (outlined graphically in Figure 2 overleaf). Following on from the introduction, Chapter 2 provides background material related to the rural landuse debates and the inquiries economic-psychology conceptual framework. Additionally it references the importance of active community participation in the development of sustainable tourism industries in Australian rural areas. This section is intended to provide the context for the subsequent argument that the synchronisation of contingent valuation methods (as often used in tourism development Social Impact Assessments – henceforth referred to as SIAs) with psychological repertory grid methods can increase our understanding of the complexity of community values as they relate to nature tourism development in rural areas. Reference to the likely contribution of this new approach to SIA and Australian forest policy will be canvassed in Chapter 5. In addition to canvassing literature on community impacts from tourism and tourism planning responses; this section will also refer to theoretical concepts of “place” and “community” as they relate to rural sustainable tourism development.

The second part of Chapter 2 will then build on this research context by presenting the researcher’s theoretical justification for using PCT repertory grid methods to understand the attitudinal underpinnings of economic contingent valuations. Through reference to literature on economic/psychology, contingent valuation and PCT; this section will lay the groundwork for the presentation of research methods in Chapter 3 and the subsequent testing of the research approach in Chapter 4.

Chapter 3 will then report on the methods employed in executing a contingent valuation and repertory grid survey of community perceptions of forest use in the Eden area. The chapter will open with an overview of the research procedure and a diagrammatic representation of research design, which is intended to walk the reader through the relationship between the various research questions and field techniques. This is followed by comment on the social research paradigms, which underpin the methods employed in the Eden community. This section is built around the argument that a constructivist research approach is ideal for the study of values and attitudes that

underpin economic contingent valuations. Eden is being used as an exemplifying case study with which to examine new ways of understanding the attitudinal underpinnings of a tourism development contingent valuation exercise. This chapter accordingly provides comment on the relative merits of the case study approach to tourism study, along with a breakdown of the criteria used to decide on Eden as the sole case study for analysis. The final sections of this chapter seek to provide detailed comment on the contingent valuation and repertory grid research instruments. Contingent valuation survey instrument discussions include reference to: scenario formulation, response elicitation and response demographics. Sections on repertory grids will focus on issues including: element selection, construct elicitation and analysis approaches.

**Figure 2: Overview of Thesis Structure**



Chapter 4 will present contingent valuation and repertory grid results that relate to the Eden community's behavioural intention to support or reject the development of further areas of national parks in their area. The chapter will open with a historical overview of forest landuses in the Eden area. This historical analysis will illustrate some of the issues, which may influence community receptiveness to the prospect of an increased focus on national parks in the Eden RFA area. This will be followed by a demographic breakdown of the two Eden sample groups. The chapter will then proceed to discuss the contingent valuation community survey results. The contingent valuation survey was conducted with the aim of determining Eden residents' WTP to reserve public forests in national parks. Such reservation would preclude the utilisation of these forests for timber whilst potentially placing nature tourism in a position of primacy within the local economy. From this contingent valuation survey result, the chapter will also consider the various justifications that the Eden community gave for their contingent valuation WTP estimate. In the course of this discussion reference will be made to the ideas that the majority of sampled Eden residents rejected the contingent valuation scenario proposition on the grounds that they are satisfied with the existing landuse balance in the Eden RFA area. In doing so the Eden residents established a link between attitude to forest landuses and local receptiveness to the further development of national parks. The final parts of the chapter will hence examine contingent valuation attitudinal questions pertaining to different forest landuses, with a view to further understanding the attitudinal underpinnings of contingent valuation WTP estimates. Results from this contingent valuation attitudinal questioning will canvas community perspectives on forest based tourism, nature tourism and their interaction in Eden's forests. These results will then be further interpreted using PCT repertory grid methods.

Chapter 5 will conclude the thesis by collectively considering the data and information obtained in the Eden community with a view to offering some final comments on how the community level impacts resulting from nature tourism development in rural areas can be better understood. This chapter will open with a section on the development of a research agenda. The purpose of this discussion is to articulate to the reader the process that the researcher went through to develop the parameters of this inquiry. Drawing on material cited in the introduction (Chapter 1), literature review (Chapter 2) and methodology (Chapter 3) chapters this section will canvas various issues relating to

research context/justification, theoretical orientation etc. With this material in mind, conclusions relating specifically to each of the four research questions are then presented. It is the researcher's contention that the empirical findings and theoretical discussions that have been presented in this thesis can provide a starting point for the development of more powerful tools, which hopefully will encourage more researchers to consider the value of an economic psychology approach to SIA/tourism development analysis. This chapter will conclude by summarizing the opportunities that the researcher perceives for future research.



## **Chapter 2: Literature and Theoretical Considerations**

### ***2.1 Introduction***

The previous chapter outlined the research context, including the aims and research approach. The purpose of this chapter is to introduce the reader to the various theoretical aspects, which underpin the fieldwork completed in the Eden region.

The chapter commences with a discussion of the importance of active community participation in the development of sustainable tourism industries in Australian rural areas. This section is intended to provide the context for the subsequent argument that the synchronisation of contingent valuation methods with repertory grid methods can increase our understanding of the complexity of community values as they relate to nature tourism development in rural areas. This understanding may then lead to the development of structured methodological tools which would allow researchers to avoid interpreting WTP responses on the basis of their own personal opinion and prejudice. Reference to the likely contribution of this new approach to SIA projects in Australia's forests will be canvassed in Chapter 5. In addition to investigating literature on community impacts from tourism and tourism planning responses, this section will also refer to theoretical concepts of "place" and "community". Both these concepts will be shown to be central to understanding the myriad of ways that human values may be formed in a rural tourism development context.

Section 2.3 will build on this research context by presenting the researcher's theoretical justification for using repertory grid methods to understand the attitudinal underpinnings of economic contingent valuations. Through reference to literature on economic/psychology, contingent valuation and PCT; this section will lay the groundwork for the presentation of research methods in Chapter 3, the subsequent testing of the research approach in Chapter 4 and finally its value for SIA practitioners in Chapter 5.

## ***2.2 Sustainable Tourism Development through Community Involvement***

### 2.2.1 Defining Sustainable Tourism

Sustainable tourism developed from its parent term sustainable development and has been a topic of academic and industry inquiry since the 1987 *World Commission on Environment and Development* (WCED) (see Berry & Ladkin, 1997; Butler, 1998; Clarke, 1997; Diamantis & Ladkin, 1999; France, 1997; Garrod & Fyall, 1998; Griffin & De Lacey, 2002; Hardy & Beeton, 2001a, 2001b; Hardy, Beeton, & Pearson, 2002; R. Harris & Leiper, 1995; Hunter, 1995; Liu, 2003). This section will consider some of the characteristics of sustainable tourism in light of the broader history of sustainable development.

The principles of sustainable development have their origins in the work of eighteenth and nineteenth century environmentalists such as Gifford Pinchot and Thomas Malthus who were concerned with the finite nature of the earth's natural resources (Tilton, 1996). The effort of these and other early environmental pioneers began to receive widespread attention in the 1960s and 1970s (Robinson, 2004). It was this period that saw the publication of a number of influential works such as Silent Spring (Carson, 1963), A Blueprint for Survival (Goldsmith, 1972) and the World Conservation Strategy (International Union for Conservation of Nature and Natural Resources, 1980). The latter of these works subsequently gave rise to early tourism industry interest in their relationship to the environment in which they operate. Seminal works such as Krippendorff's The Holiday Makers built on the principles of the 1980 World Conservation Strategy and sought to consider the effects that different forms of tourism have on the society, physical environment and economy of destination regions.

While the principles of sustainable development were first introduced in the 1980 World Conservation Strategy, the term was popularised by the World Commission on Environment and Development's report Our Common Future. It was this report that gave rise to perhaps the most popular definition of sustainable development; 'development that meets the needs of the future without compromising the ability of future generations to meet their own needs' (World Commission on Environment and

Development, 1990, p. 8). In Australia the WCED definition was later adapted in recognition of the Commonwealth Government's moves to develop a National Strategy for Ecologically Sustainable Development (ESD - Commonwealth Government of Australia, 1992). As part of the process of developing this strategy a working group on ecologically sustainable tourism development was formed in recognition of the important links between tourism and the natural environment. In commenting on the links between tourism and ESD, McKercher (1998, p. 191) points out that:

A review of the principles of ESD offers valuable insights into how the tourism industry must act in relatively undisturbed areas. Underlying the entire ESD philosophy is a commitment to operate within the social and biophysical limits of the natural environment. To abide by this tenet, tour operators may have to trade off economic gain for ecological sustainability and, indeed, will have to accept that there are some places where tourism should be excluded.

This inquiry explores issues relating to the social context of tourism development in rural Australia. In particular the focus is on exploring new ways in which the often subjective values of people of the destination region can be better incorporated into tourism development decisions.

Subsequent to the 1992 Rio Earth Summit and the before mentioned Australian Commonwealth Government's National Strategy for Ecologically Sustainable Development there has been a spike in academic and industry interest in the debate over the parameters of sustainable tourism. A number of academic journals have developed including the Journal of Ecotourism and the Journal of Sustainable Tourism; the latter of which aims to 'advance critical understanding of the relationships between tourism and sustainable development' (Taylor and Francis Group, ND). In 2002, as part of an editorial to mark 10 years for the Journal of Sustainable Tourism, Bramwell and Lane (2002, p. 1) noted that:

International bodies, governments and businesses, and even some communities and tourists claim [now] to accept the concept of sustainable tourism.

Aside from advances in the academic study of the parameters of sustainable tourism; sustainability philosophies have also come to influence a number of industry initiatives both in Australia and overseas. One of the first attempts to develop strategies on the assimilation of sustainability and tourism was the Globe'90 conference in Canada (Holden, 2008). This has been followed by global initiatives such as the Green Globe sustainability accreditation initiative which was implemented by the World Travel and Tourism Council as a means of integrating the principles of *Agenda 21* into tourism industry operations (Griffin & De Lacey, 2002). Australian initiatives have included the *National Ecotourism Certification Program* (Buckley, 2001; Ecotourism Australia, ND). Sharpley (2000) argues that because of their shared histories, sustainable tourism should logically reflect the core tenants of sustainable development. However, he also points out that tourism industries are often characterised by an inward/product centered mindset, which makes it difficult for it to align with the sustainable development goals of holistic and intergenerational equity (Sharpley, 2000). This discrepancy then draws attention to the idea that different types of tourism may or may not be able to be aligned with sustainable development principles (see Clarke, 1997).

Whether one is talking about mass tourism or alternative tourism; determinations regarding the sustainability potential of a tourism industry ultimately involves reconciliation of the expectations of the different core stakeholder groups in tourism development discourses (i.e. tourists, industry and the host community) (Lane, 2005). This thesis focuses on the host community aspect of sustainable tourism. Hunter (1997, p. 859) notes the importance of host community values to sustainable tourism discussions when he points out that sustainable tourism should not be perceived:

as a narrowly defined concept reliant on a search for balance, but rather as an overarching paradigm within which several different development pathways may be legitimised according to circumstances. In other words, there may be always a need to consider factors such as demand, supply, host community needs and desires, and consideration of impacts on environmental resources; but sustainable tourism need not imply that these often competing aspects are somehow to be balanced

In spite of the recognised place of local communities in sustainable tourism documents such as *Agenda 21* (see United Nations Environment Programme, 2003), community involvement in sustainable tourism discussions has often taken a back seat to concern for conservation visions and economic development factors (Hardy et al., 2002). Over the last 40 years various interpretations of the how best to conceptualise the effects of tourism development on communities have been proposed; interpretations that have ranged from seeing community as a victim, to seeing community as a partner with industry in protected area management and nature tourism (Hardy et al., 2002). Central to all discussions regarding the effect of tourism development on host communities is, however, the notion that in the end tourism must be culturally appropriate to be socially sustainable (Wall, 1997). To provide a measure of the cultural sustainability of tourism development this inquiry will consider the processes that lead residents to formulate individual values regarding different forest landuses.

This research approach has been developed from the idea that positive tourism industry development is not necessarily congruent with positive impacts for the host community (Saarinen, 2006). The multitude of ways that local communities can relate to tourism development often necessitates a fundamental re-organisation of a community's economic structure when tourism industries are introduced into a locality. Such a re-organisation may result in opposition from communities responding with an ideological opposition to environmentalism that is brought about through decades and generations of an extracted industry culture. Communities may also be concerned with the ramifications of a shift from an extractive/tangible product delivery economy to that of being part of a service economy (Johnston & Payne, 2005).

While sustainable tourism commentators have increasingly come to equate community development goals with broader sustainable tourism objectives (see Barraket, 2001; Hall & Richards, 2000), this reality is that this is often only possible with appropriate tourism planning:

Well-planned tourism [development] provides economic and political incentives for management and for conservation, and may bring additional benefits to local communities and regional economies. (Agardy, 1993, p. 219)

The next section will consider the issue of community involvement in sustainable rural tourism development in more detail.

## 2.2.2 Inclusion of Local Residents in Sustainable Tourism Development

### **Introduction**

We suggest that the reasons why the development and introduction of tourism into rural and isolated area communities has such a profound effect should be sought in the different world views and practices that are introduced through the development agencies, tour operators and tourist themselves, and the cash economy enforced in communities which hitherto primarily have been characterised by a subsistence economy. (Wearing & McDonald, 2002, p. 191)

Wearing and McDonald (2002) made the above quote with a view to rationalising their study of the relationship between tour operators/development agents and isolated rural communities in Papua New Guinea. Wearing and McDonald (2002) used a Foucauldian framework to understand notions of power and knowledge in rural tourism discourses, arguing that the way tourism stakeholders perceive a tourism destination region affects the way they act towards it. This inquiry is seeking to investigate the potential for PCT repertory grids to provide a more comprehensive understanding of the attitudes which may underpin a community member's economic valuation regarding a tourism development. This section will provide comment on some of the rationales for involving residents in local sustainable tourism development decisions. In addition to canvassing literature on community impacts from tourism and tourism planning responses; this section will also refer to theoretical concepts of "place" and "community" as they relate to rural sustainable tourism development.

### **The Socially Constructed Study of Place and Community**

Recreation [and forestry settings generally] are much more than the sum of their attributes and there is a complex psychology concerning people and places. The

people-place relationship has been explored through a variety of concepts. One concept in particular, which is largely accepted and used in recreation research, is the concept of place attachment' (Payton, 2003, p. 6)

The scale of analysis for the inquiries case study is the Eden "community" on the NSW south coast<sup>7</sup>. Veal (2006, p. 108) notes that case studies are an 'example – a case – of the phenomenon being studied'. In this inquiry the phenomenon in question is an Australian rural "community", which is experiencing nature tourism focussed changes in the composition of their local industry base. In order to understand the way that the Eden case study "community" perceives the prospect of further nature tourism development in their area, this inquiry has focussed on developing new ways of understanding the social context factors, which may underpin a "community" member's WTP for an increase in the area of land devoted to nature tourism industries.

Local scale analysis is important for a study that is interested in the sustainability potential of rural tourism development. Sharpley (2003, p. 40) noted that an implicit characteristic of sustainable tourism development is localisation; that sustainability should 'focus on satisfying the development needs of local communities through ... promoting local supply chains, encouraging local crafts and industries, optimising the retention of tourism earnings within the destinations and ensuring that development is within local environmental and social capacities'. Later in this chapter reference will be made to some of the issues complicating our ability to understand the various ways that local residents can perceive the sustainability potential of rural tourism. The core argument in this section will be that tourism industries have the potential to bring both benefits and costs to a rural area. While governments and other stakeholders may pursue tourism to re-invigorate a rural economy, unplanned tourism expansion can carry significant social costs (Faulkner & Tideswell, 1997). In order to begin to understand the ways that the Eden "community" relates to their local area this section will consider the theoretical notions of "place" and "community".

Low and Altman (1992, p. 5) define "place" as a 'physical space imbued with meaning'. Over recent years "place" theories have become more and more a central idea in

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<sup>7</sup> The case study approach is canvassed in more detail in section 3.4

environmental management debates (Beckley, 2003; Cheng, Kruger, & Daniels, 2003). In the course of factoring a sense of “place” into decision making processes, land use managers have been encouraged to ‘adopt a more ecologically holistic conceptualisation of “place” than that which frequently characterises economically-driven environmental impact assessment’ (Semken, 2005, p. 149). By initiating a discussion about sense of “place” it is possible for managers to ‘construct a working relationship with society that reflects the complex web of lifestyles and social relations endemic to a “place” or resource’ (Williams & Stewart, 1998). This is particularly significant in rural localities where rural identity is often connected to an ability to develop a local character which itself is often framed against local sense of “place” (Bushell, Staiff, & Conner, 2002).

Tuan (1977, p. 19) notes, with regards to “place”, that ‘people’s thoughts concerning “place” grow out of life’s unique and shared experiences’; as opposed to being focused on unique locations, landscape, and communities. This view is reflective of the tendency towards phenomenology in “place” research, which has its origins in the work of the philosopher Edmund Husserl (Hall, 2004). Phenomenological approaches to “place” argue that ‘rather than understanding “place” as an objective social construct, “place” can instead be recognised as a social product resulting from the complex interplay of human perceptions, goals and capacities’ (Hall, 2004). This notion of “place” as a humanistic construction as opposed to an abstract positivist force had its origins in human geography movement in the 1970s (Duncan, 2000).

The idea that “place” may be connected to perception and experience creates a link to PCT, which has been identified as one of the theories, which is central to this inquiry. *Personal Construct Theory* is concerned with life’s experiences. As the theory’s founder George Kelly noted; ‘we assume that all of our present interpretations of the universe are subject to revision or replacement’ (G. Kelly, 1963, p. 15). Kelly was arguing that interpretations are the product of experience. Similarly places are not ‘abstractions or concepts, but are directly experienced phenomena of the lived world...’ (Relph, 1976, p. 141). Shamai (1991) noted that geographic locations are not, in themselves, sufficient to create feelings of “place”, human involvement is also vital. Discussions of “place” must go beyond the physical location (i.e. space) in which the phenomenon is occurring. To determine ‘people’s responses to places ... it is necessary to understand how they think’ (Canter, 1977, p. 1). Canter (1977) noted that this idea



developed in part from the PCT work of George Kelly, which itself has formed a central part of this inquires approach. In the 1970s and 1980s a number of “place” researchers undertook empirical studies, which paralleled work being undertaken into the idea of “community” attachment (e.g. Goudy, 1982; Kasarda & Janowitz, 1974).

Generally “community” has been defined as a socially constructed phenomenon that is one of the driving forces behind current social debates in rural Australian societies (Liepens, 2000). The study of “community” has been based around consideration of notions of commune, the rural urban divide, globalisation and time-space compression (R. Johnston, 2000). In recent years there has been an increased level of interest paid to notions of “community” in natural resource management SIAs (Fortin & Gagnon, 1999; Hough, 1991; Kelly & Lymon, 2000; Lepp, 2002; Wells & Brandon, 1992).

For the purpose of this particular inquiry into the sustainability potential of nature tourism development in a forested “community” in south east NSW, the following definition of “community” has been adopted; a **‘social network of interacting individuals, usually concentrated into a defined territory’** (Johnston, 2000, p. 101). This definition was chosen because it prioritised both the individual in society and social relations. Bell and Newby (1978) noted that sociologists have tended to group studies of “community” into three distinct groups: “community” as a geographical expression, “community” as a sociological expression and “community” as a particular kind of human association irrespective of its local focus. All of these issues are highlighted in the NSW Government’s Guidelines for the Preparation of Rural Communities Impact Statements (Office of Rural Communities & NSW Agriculture, 1997). Mirroring the concerns of the sustainability triple bottom line (see Dwyer, 2005; Elkington, 1999, 2004) this report noted that rural communities have a variety of economic, social and environmental characteristics. These characteristics include geographic isolation, a strong self help culture and a strong attachment to “place” (Office of Rural Communities & NSW Agriculture, 1997).

Physical characteristics of “community” such as geographic isolation and the natural environment are not a primary concern to this inquiry. . Reference to a **‘... defined territory’** (Johnston, 2000, p. 101) in the before mentioned working definition was only

intended to guide the collection of field data in the author's case study locality. It will be demonstrated in Chapter 3 that the defined territory for the contingent valuation postal survey and follow-up repertory grid was households within the Eden 2551 area code, as defined by Australia Post. The lack of attention afforded to environmental significance of land use change, except to the degree that it influences the economic and/or social valuations of Eden townspeople, is made with due acknowledgment of the importance of the environment to the sustainability triple bottom line.

Authors such as Butler (1998) have identified that the notion of sustainable development is an integrative term that requires consideration of economic, social/cultural and environmental forces. The integration of these three elements was popularised by John Elkington when he coined the notion of the Triple Bottom Line (Elkington, 2004). The term gained widespread exposure with the 1997 publication of Elkington's *Cannibals with Forks: The Triple Bottom Line of 21st Century Business* (Vanclay, 2003b). In Australia the Triple Bottom Line has gained broad acceptance. Since 2002 the Australian Commonwealth Government has advised statutory Rural Research and Development Corporations that: 'henceforth, they would be required to evaluate their outcomes in line with TBL measurements' (Hall, 2003, p. 9). More broadly Triple Bottom Line advocacy organisations were developed in Victoria and NSW in 2000 and 2001 (Triple Bottom Line Australia, 2005). There is also an acceptance of the Triple Bottom Line in the establishment of Comprehensive, Adequate and Representative (CAR) conservation reserves; a component of the RFA process (Commonwealth Parliament of Australia, 1998). The RFA CAR Reserve Scheme aimed: 'to detail the environment, heritage, economic and social values of forests, as well as community and industry aspirations' (Lane, 1999, p. 148).

Whilst acknowledging the importance of the environmental component of the triple bottom line; this inquiry is more concerned with often intangible notions of rural "community" identity and the way that that this affects an individual's receptiveness to tourism development. Bourke (2001) drew attention to the idea that communities are first and foremost about meanings which result in a sense of identity for local people. Other authors such as Attfield (2003) have similarly drawn attention to the idea that the environment may be perceived in both geographical and psychological terms. Over time

the way people perceive a rural “community” or “place” will change (Liepens, 2000; McGuirk & Rowe, 2000; Mitchell, 1998). Notions of construct temporality and the effect of experience are both central parts of the economic and psychological research tools employed in this inquiry (see Chapter 3).

The idea that conceptualisations of “place” and “community” are bound up in the individual circumstance of a community member means that inquiries such as this should not prescribe the type of relationship network that may exist between an individual “community” member and the Eden forest environment. Definitions of “community” such as ‘those [people that are] immediately adjacent to forestland or those with a high economic dependence on forest-based industries, including tourism as well as timber (sic)’ (Kusel, 1996, p. 367) imply a dependence relationship between “community” members and private industries, which is not necessarily constant from either an intragenerational or intergenerational perspective. McGuirk and Rowe (2000, p. 229) note that ‘the multilayered and fluid identities of “place” shift around with development and redevelopment, as new industries and services are attracted and older ones decline ...’. This quote was made in relation to the changing nature of the Newcastle “community” on the NSW mid-north coast, an area which is similar to Eden in its recent exploration of tourism development as an alternative to traditional primary industries. The idea that a “community’s” views on a forest landuse can change over time was the researcher’s rationale for prefacing his results discussion with reference to the changing nature of landuses in Eden’s forests (see section 4.2).

In addition to focussing on the intergenerational nature of forest landuse in the Eden area, the researcher also had to factor in intragenerational issues relating to the interplay between notions of individuality and social context. In subsequent chapters reference will be made to the way that repertory grid methods can help researchers who are interested in understanding the social context of economic contingent valuations. One of the social context issues that will be considered relates to social externalities and the importance “community” members attach to the possibility that their economic valuations may negatively affect others. Deciding on the importance of social externalities requires consideration of who has legitimate sustainability interests in the “community” and how “community” impacts from a particular development be

weighted (Burdge & Vanclay, 1996, pp. 47 - 51). The importance in having an accurate conceptualisation of the boundaries (geographical or otherwise) of the forest “community” has been borne out in national press coverage of forest issues such as the Howard Coalition Government’s \$4 million election deal with Tasmanian timber workers in the 2004 Federal election.

During the 2004 election campaign the former Prime Minister John Howard won the support of Tasmania’s timber workers with a \$4 million pledge to the Construction, Forestry, Mining and Energy Union (Norington, 2005). Some commentators credit the Liberal National Coalition’s pro industry policy as being vital to securing marginal seats such as Braddon and Bass in the 2004 election, seats which proved decisive in determining the poll’s outcome (Norton, 2006). The positive way that the funds allocation was received in the local area is understandable when one considers that the seat of Braddon in Tasmania currently has the highest unemployment rate in the state (7.8 %) (Denholm, 2007). The decision was, however, vehemently criticised by people in other parts of Australia:

I AM (capitalization in original) bewildered. We have, seemingly, a very deceitful politician [Howard] who appears to have paid unionists \$4 million of taxpayers' money to vote for him. And we have a group of unionists who sold their votes to the highest bidder, this bidder being their enemy who is plotting their eventual demise. I repeat, I am bewildered, completely bewildered. (Patterson, 2005)

The details of the Coalition timber package which the above author is vehemently criticizing were earmarked, in part, for skills training of local forest workers (Norington, 2005). The forestry assistance package was meant to protect the forest “community”; but at what point does the “community” end? Should a forest “community” be defined in terms of those who stand to benefit from the rescue package? Or should a “community” member be seen in terms of any Australian resident who is contributing to the package through taxes<sup>8</sup>?

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<sup>8</sup> It is presumed that the author Patterson (2005) has no connections to the forestry debate in Tasmania. They are identified as living in Tamborine Queensland

These and other questions draw the reader's attention to the different ways that residents of a locality can perceive sustainable "community" development. For instance, should it be perceived in terms of economic growth, or in terms of a broad commitment to development in a manner that does not necessarily positively impact on economic imperatives such as GDP (Diesendorf, 1997)? The researcher will explore these and other issues in the course of discussing the inquiries results in Chapter 4. The next section will discuss some of the various impacts of tourism industries on rural communities.

### **Community Impacts of Tourism**

In the earlier discussion of sustainable tourism reference was made to the tourism industry's close connection to the natural and cultural environments of a host community. This resource dependence invariably means that further tourism development has the potential to induce change, which can be either positive or negative, in destination regions (Holden, 2008). Some of the potential social impacts from tourism development include: the modification of the internal structure of the community; the instigation of social change and increased pressure on infrastructure (Beeton, 2006).

While the work of Beeton (2006) and others offers a guide to some of the types of social impacts that tourism can bring to a host region, the reality is that in any destination region there are a number of unique cultural, environmental and economic circumstances which will influence how tourism growth is perceived by the local people. This inquiry has set out to explore some of these circumstances for the Eden region, using PCT repertory grids to understand the social context and personal perspectives that individual Eden residents attach to economic valuations of nature tourism development.

Understanding the issues that may underpin economic valuations regarding tourism is an important area of research. Holden (2008, p. 103) noted that the 'fact that tourism can have negative [and positive] impacts on the environment ... suggests that the wealth creation from tourism is not universally beneficial'. For a number of years governments and other groups responsible for landuse policy development have pursued tourism growth as a mechanism for regional economic development. As far

back as 1975 the Canadian Council on Rural Development noted that ‘tourism and recreation demands for rural resources can provide income and employment opportunities for rural people and therefore assist in a ‘stay’ option for those who prefer rural living’ (in Hall & Boyd, 2005, p. 9). Recently groups such as the Australian Tourism Taskforce have recognised the complexities involved in assuming positive community impacts from tourism development. Chris Brown, in his introduction to the report Keeping the Bush in the Game: New Approaches to Making Regional Tourism More Competitive noted that:

This study grew out of recognition that the key contributors to regional tourism success - beyond natural advantages such as “location” – are little understood. Vast amounts of money have been spent in many regions developing tourism strategies and plans that have too often become “door-stops” rather than effective guides to action. The report identifies success factors for regional tourism from a national review of ten different “groupings” of tourism regions based on location, geography and existing tourism profiles, and from detailed case-study research. (Tourism Task Force, 2002, p. 3)

This quote draws the reader’s attention to the formative nature of our understanding of the relationship between tourism and the social environment in which it operates. In a recent work entitled Development of Australia’s Regions: Theory and Practice it was noted that the attainment of a local sustainable tourism industry is dependent on striking a balance between the potential economic and social returns from tourism development and the ‘ways in which [tourism] industries are embedded ... within their local regions’ (Beer et al., 2003, p. 95). Although the researcher is of the view that it is not possible to rule considerations of resource and industry stability out of sustainability discussions, it is acknowledged that community based sustainability is the primary focus of this inquiry. The community based sustainable tourism tradition works by stressing ‘the wider involvement and empowerment of various actors, especially host communities, in development by emphasising the elements of social capital in a local context’ (Saarinen, 2006, p. 1131). Murphy (1985, p. 166) notes that the tourism industry ‘possesses great potential for social and economic benefits [to host populations] if planning can be redirected from a pure business and development approach to a more open community oriented approach’

## **Community Involvement in Sustainable Tourism**

There is a close connection between sustainable tourism development and planning systems. Tourism and Local Agenda 21 (see Berry & Ladkin, 1997; United Nations Environment Programme, 2003) called on governments 'to review the status of planning and management system[s] and, where appropriate, modify and strengthen procedures so as to facilitate the integrated consideration of social, economic and environmental issues' (George, 2001, p. 95). One of the inherent social issues in any tourism development is its effects on the host community. This section will consider various aspects of community involvement in sustainable tourism planning.

For many years the tourism planning literature has acknowledged that success for local communities is more likely if they are encouraged to participate in the tourism decision-making process (Baud-Bovy, 1982; Dowling, 1993; Getz, 1986, 1987; Getz & Jamal, 1994; Gunn, 1994; Jamal & Getz, 1995; Murphy, 1988; Prentice, 1993; Simmons, 1994). The rationale for this assumption is the idea that residents 'should be given the opportunity to participate in the planning of its future development and express their views on the type of future community they want to live in' (Inskeep, 1991, p. 27). To successfully involve local communities in tourism planning initiatives requires that the goals for a particular tourism development be located within a broader community framework. McIntosh (1977 in Murphy, 1985, p. 157) outlined a four goal framework by which this could be achieved:

His first goal is to provide a framework for raising the living standard of local people through economic benefits of tourism. Second, to develop an infrastructure and provide recreation facilities for both visitors and residents. Third, to ensure that the types of development within visitor centres and resorts are appropriate to the purposes of those programs. Finally, to establish a development program that is consistent with the cultural, social and economic philosophy of the government and people of the host area

Ensuring that a particular tourism development is commensurate with the cultural, social and economic philosophy of the host area is complicated by the fact that within a rural area there will be a plethora of different spiritual values, cultural values and identities amongst community members (Putney, 2003). Tourism planners are increasingly conscious of the fact that they must engage with the views of all people and not simply those with a formal connection to a tourism project (Hall & Testoni, 2004; Inskip, 1998). This thesis is seeking to lay the groundwork for the future development of new research tools/philosophies that will allow the different values a community member may attach to a tourism development to be recognised. The result of this endeavour is the illustration in this thesis of the ways that PCT repertory grid methods can be used to understand the attitudinal underpinnings/social context of contingent valuation WTP estimates. In Chapter 5 reference will be made to the opportunities for future research that can be identified from this thesis for the study of human attitudes to localised landuse changes. One of these perceived opportunities will relate to the development of repertory grid toolkits (based on PCT principles), which can be distributed by tourism operators and land managers to help them gauge the likely impacts that may result from tourism development in a particular rural area.

It is argued that the development of research tools that can manage regional complexity and recognise the unique backgrounds of individual community members represents advancement on other community impact methods/theories. A number of theories such as Doxey's *Irridex Model*, Butler's *Destination Lifecycle Model* and the *Theory of Social Exchange* have been used to understand the impacts of tourism on host communities (Faulkner & Tideswell, 1997; Gursoy & Rutherford, 2004; Teye, Sirakaya, & Sonmez, 2002).

Extrinsic models such as Doxey's *Irridex Model*, Butler's *Destination Lifecycle Model* have been associated with assumptions of community homogeneity and unidirectional tourism development (Horn & Simmons, 2002). Authors such as Kuvan & Akan (2005) have criticised such approaches, arguing that it is more common for clusters of residents with different attitudes to tourism to exist at any one time. In contrast, intrinsic models such as Ap's (1992) adaptation of the *Theory of Social Exchange* examined the relationship between hosts and visitors in terms of a cost-benefit trade-



off. Contemporary understandings of *Social Exchange Theory* have developed from the work of theorists including Levi-Strauss, Homans and Blau (Ap, 1992). The interactions between tourism stakeholders, which are implied in *Social Exchange Theory* has parallels to the idea of *Tourism Systems Theory* (see Chan & Huang, 2004; Jamal, Borges, Peterson, Peterson, & Figueiredo, 2004; Jamal & Getz, 1995; Leiper, 1990). *Tourism Systems Theory* is an important part of contemporary approaches to tourism planning. It recognises that 'all development sectors and support facilities and services are interrelated with one another and with the natural environment and society of the area' (Inskeep, 1991, p. 27).

The development of new research tools/theories for understanding the way that different community stakeholders within a tourism system relate to a tourism development is of value to tourism studies for a variety of reasons. Principally it can be argued that the effect of placing individuals at the forefront of development discussions allows community members to feel empowered regarding their ability to influence the corporate agendas of tourism industry leaders and natural resource managers. This issue will now be discussed with reference to the National Ecotourism Strategy and the 2004 Far South Coast Nature Tourism and Recreation Plan.

Community development goals have become an important component of sustainable tourism dialogues (Hall and Richards 2000). A community participation approach is apparent in the local and regional benefits objective of the National Ecotourism Strategy. This objective states in part that '*benefits of ecotourism should be equitably distributed with significant benefits accruing to the local community*' (Allcock, Jones, Lane, & Grant, 1994, p. 17). Australia was the first country in the world to develop and implement a National Ecotourism Strategy to manage the growth of its ecotourism sector. In establishing a National Ecotourism Strategy in 1994, the federal Labor Government's intention was to formulate an overall policy framework for the planning, development and management of ecotourism in natural areas. The aims of the Strategy were to:

- Identify the major issues that affect, or are likely to affect, the planning, development and management of ecotourism in Australia

- Develop a national framework to guide ecotourism operators, natural resource managers, planners, developers and all levels of government towards achieving a sustainable ecotourism industry, and
- Formulate policies and programmes to assist interested parties to achieve a sustainable and viable ecotourism industry. (Charters, 1996).

From these National Ecotourism Strategy objectives it can be observed that tourism legislators have at least a tacit appreciation of the value of including local communities in tourism master plans. Does, however, the in principle inclusion of local communities in tourism planning necessarily result in acceptable sustainability outcomes for local people? This is a question considered previously in relation to the 2004 Far South Coast Nature Tourism and Recreation Plan (see Schweinsberg, Wearing, & Darcy, 2007). The plan was a multi agency initiative to formalise the south coasts' nature tourism sector. The parameters for strategy development were dictated by the Tourism New South Wales Masterplan and the National Regional Forest Agreement legislation. Perhaps because of these tourism industry origins the 2004 Far South Coast Nature Tourism and Recreation Plan focuses on industry development issues including marketing, product, development (visitor experiences), provision of infrastructure, integrated planning and partnerships and market research (Shepherd et al., 2004). The underlying theme throughout the five stated objectives of the plan is the provision of a high quality tourism product (Shepherd et al., 2004, pp. 4-6):

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- 'Objective 1: Through the consideration of regional demand, gaps and identification of opportunities, develop high quality NTR<sup>9</sup> sites/products, especially:
  - NTR experiences/opportunities in the hinterland/escarpment areas;
  - Increased diversity of walking tracks; and
  - Basic accommodation in proximity of coastal and hinterland Parks.

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<sup>9</sup> Nature tourism and recreation

- ‘Objective 2: Enhance cooperation, planning and partnerships between land management agencies, the industry and community for the successful and effective provision of NTR product and infrastructure’
- ‘Objective 3: To support marketing and promotional activities that highlights the regional character and particularly the diversity and wealth of NTR experiences available’
- ‘Objective 4: Encourage the development of accurate, informative, imaginative and entertaining approaches to the provision of both information and interpretation of the natural environment’
- ‘Objective 5: Encourage high quality NTR programs and tours that enable better access and experience to the regions outstanding natural environments for visitors, and especially to Aboriginal Cultural Heritage Programs’

The maintenance of a sustainable tourism product is a common topic of inquiry throughout the sustainable tourism literature (Coccosis & Parpairis, 1996; Hunter, 1997). However, it is not the only way that sustainable tourism can be perceived. Authors such as Hunter (1997) and Tosun (2001) have drawn attention to the need for sustainable tourism to be viewed as an adaptive paradigm, which is capable of contributing positively to the provision of basic needs in different tourism settings.

It is argued that whilst there is an appreciation amongst planners for community involvement in development, there is also a tendency to see the partnership between different tourism stakeholders solely in terms of their ability to provide nature tourism products and infrastructure (Schweinsberg et al., 2007). This can be illustrated through reference to the marketing objective of the 2004 Far South Coast Nature Tourism and Recreation Plan:

Objective: To support marketing and promotional activities that highlights the regional character and particularly the diversity and wealth of Nature Tourism and Recreation experiences available. (Shepherd et al., 2004, p. 6)

Since the formulation of the 2004 Far South Coast Nature Tourism and Recreation Plan, marketing strategies such as the *Far South Coast Nature Tourism Project* (Anon, 2006b) have tapped into this principle of promoting the area's natural features. What is evident in such strategies is that the benefits of nature tourism to the local population are often defined solely in terms of the potential for nature tourism to boost local employment prospects (Anon, 2006b). However it is argued that this is a narrow interpretation of a local population's connection to a rural tourism, which can negatively influence the receptivity of the local population to future developments. Tourism, as with all forms of rural development exists in a specific social context. In terms of sectoral context, Hunter (1995, p. 161) notes that '*no delineated human endeavours comprising one socio-economic sector, such as tourism, can ever exist in isolation from other sectors*'. Much of Hunter's (1995) discussion is connected to issues of over reliance on tourism development and the potential for so called "sustainable tourism" to develop in a manner which is not conducive to broader resource levels. Sectoral context has obvious implications for the Australian rural sector given the tendency in these areas to view rural tourism development as an economic and social lifeline against declines in traditional primary industry sectors (Choi & Sirakaya, 2005). The idealised way in which rural commentators often view tourism may potentially mask the idea that development initiatives must ideally focus on 'rural community development, incorporating strategies for the sustainability of the economic, social and cultural spheres of rural life' (Herbert-Cheshire, 2000, p. 203). Frequently this involves the development of an integrated economic base for an area, of which tourism is often just a single component (Butler & Michael Hall, 1998; Carr, 1999).

The idea that tourism may be only one component of a wider economic base in a rural area means that this discussion of tourism planning must include reference to community involvement in broader land management strategies in the Eden area. The next section will address the issue of community engagement in SIA's undertaken as part of the Eden RFA process.

### **Community Involvement in RFA Social Impact Assessments**

Rural community sustainability in a tourism development context is subject to higher exogenous factors including government policy (Dibden & Cocklin, 2005; Sharlpey,

2003). Current government landuse policy in the Eden region is characterised principally by the Eden RFA process, which was a core determinant of the objectives of the 2004 Far South Coast Nature Tourism and Recreation Plan (Shepherd et al., 2004). This section will consider various issues relating to the inclusion of community level stakeholders in RFA sustainability discussions.

Regional Forest Agreements are 20 year plans for the sustainable management of Australia's native forests (Department of Agriculture Fisheries and Forestry, 2007d). There are currently ten RFAs located in New South Wales, Victoria, Western Australia and Tasmania (the Eden RFA was signed in August 1999). RFA are first and foremost Commonwealth/State Government legislation (Bartlett, 1999; Hollander, 2004; Gary Musselwhite & Herath, 2005; Zammit, ND) and were developed in response to a series of publicised land management disputes in the 1980s including the proposed damming of the Franklin River in Tasmania and the proposed logging of Queensland's Fraser Island (Lane, 1999; Law, 2001; Musselwhite & Herath, 2007).

The political history of the RFA process began at the 1990 Special Premiers Conference which gave rise to the 1992 Inter-governmental Agreement on the Environment and the 1992 National Forest Policy Statement (Ashe, 2002). The then Prime Minister Bob Hawke was conscious of the continued conflict over forest resources and thus requested the establishment of an inquiry 'into options for the use of Australia's forest and timber resources, in accordance with the Resource Commission Act 1989' (Bartlett, 1999, p. 332). A key outcome of this inquiry was the recommendation for a national forests strategy from which the 1992 National Forest Policy Statement was framed (see Commonwealth Government of Australia, 1995a). As part of the National Forest Policy Statement, governments agreed to sign RFAs to ensure the long term management of the nation's forests (Proctor, 1999). Legally RFAs have their foundation in the 1998 Commonwealth Regional Forest Agreement Bill (Department of the Parliamentary Library Information and Research Services, 2001).

In a manner reflective of their governmental origins in Commonwealth Government legislation (see Ajani, 2007, pp. 186-188), the policy settings of RFA legislation are typically driven by state and national objectives. Simultaneously, however, the social

consequences of management decisions are typically felt by individuals and communities. In recognition of the significance of RFA legislation to local communities, RFA legislators instigated a comprehensive social assessment process into RFA planning procedures (Coakes, 1998). Comprehensive Regional Assessments were undertaken in each RFA region to establish the social, economic and environmental values of each region's native forests (Brooks, Kelson, & Tottenham, 2001). In contrast to previous forest plans such as the Victorian Government's 1988 State Plantations Impact Study: Report and Recommendations, RFA social assessments went beyond isolated public submissions/briefings, with the public being formally integrated into every stage of the development (Coakes, 1998) (see Table 1).

**Table 1: Stages in Preparing a Regional Forest Agreement**

Step	Phase	Opportunities for Participation
1	Public Involvement	Initial stakeholder briefings at the commencement of each RFA at State and Regional levels
2	Assessment	Data collection and analysis in all streams (social, economic, environmental and heritage) involving community input
3	Release of Comprehensive Regional Assessment Reports	
4	Public Involvement	Stakeholder briefings and feedback on assessment work
5	Integration	Integration of assessment data, development of RFA options and impact analysis of options
6	Public Involvement	Stakeholder consultation on option(s) and formal submissions
7	Consideration of options by governments	
8	Decision on final RFA option by governments	
9	RFA signing	
10	Implementation of agreement and review of performance at 5 yearly intervals	

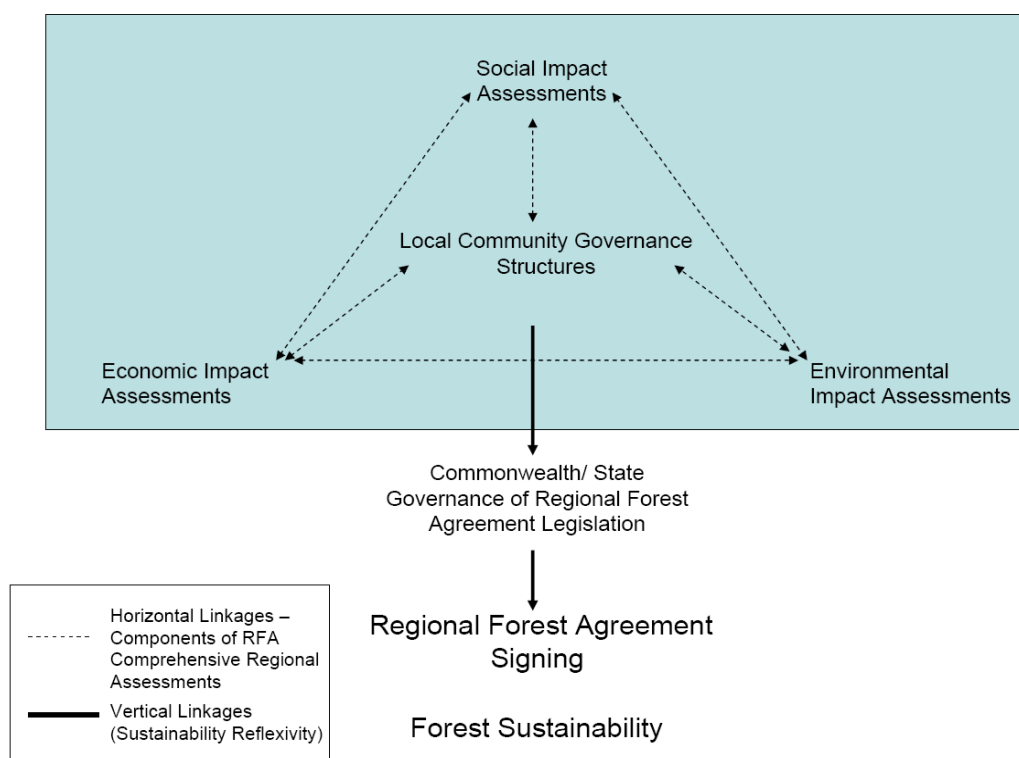
Source: Coakes (1998, p. 48)

Moves to integrate the public into the RFA development process draws the reader's attention to the increasing focus on policy network principles in forest governance discussions (Glück et al., 2005). Various authors have highlighted the fact that government legislators were interested in developing a RFA process that was open to public involvement and scrutiny (Ajani, 2007; Brueckner, 2002; Brueckner, Duff, McKenna, & Horwitz, 2006). Brown and Gray (2003, p. 53) summed up the initial position of governments when they said that 'the real technology used to determine [RFA] policy is ... called a table. The decision makers gather around a table and although they use the evidence provided by the experts, decisions are arrived at through a process of bargaining'. Other commentators have, however, raised the possibility that the only real outcome from the RFA process was an intergovernmental agreement which reduced conflict between the Commonwealth and the States (Brown, 2002; Dargavel, 1995; Mercer, 1995). The idea that the focus of RFA legislation was not on producing outcomes that were acceptable to the full range of forest stakeholders meant that there were no reliable techniques developed for reconciling competing forest values (Brown, 2002). It is proposed that this is where repertory grid methods, such as those outlined in this thesis, may be able to make a contribution to the social objectives of RFA SIA processes. This will be discussed further in Chapter 5.

Figure 3 (overleaf) illustrates how the researcher perceives the relationship between multiple levels of forest governance, and the various types of impact assessments that were completed by RFA planners to ensure the attainment of forest sustainability. It illustrates that impact assessments must integrate with local governance structures in order to ensure that recommendations to Commonwealth/State Governments are respectful of local conditions. Governance can be defined as 'a mode of decision making that allows governments, states or policy actors to lead their society and economy in a goal-oriented way' (Kello & Zito, 2002, 43 in Pulzl & Rametsteiner, 2002, 260). Over recent years there has been a shift away from seeing governance simply in terms of a centralised government (Goodwin, 1998; Painter, 2000). Through discussions of decentralization of management responsibility, governance is now often seen to entail active participation of different levels of stakeholders, and a departure from hierarchical forms of land management (Glück et al., 2005). A sizeable body of research has developed over recent years that has considered decentralisation principles

as they relate to forest governance (Andersson, 2004; Brown, 2001-2002; Glück et al., 2005; Hodge, 2005; Menzies, 2004; Nelson & Pettit, 2004; Shrestha, 2005; Suryanta, Fox, & Brennan, 2003). Australian RFA legislation has similarly proven to be a fertile ground for academics and others interested in the governance of Australia's forest areas (see Bartlett, 1999; Brown, 2002; Brown, 2001; Brueckner et al., 2006; Hillier, 2000, 2003; Kirkpatrick, 1998; McDonald, 1999).

**Figure 3: RFAs, Governance Factors and Sustainability Assessments**<sup>10</sup>



<sup>10</sup> The author's decision to formally integrate a governance dimension into RFA impact assessment processes was made on the basis of the new idea of Triple Bottom Line + One (Governance). The Global Sustainability Unit at RMIT developed the concept of Triple Bottom Line + One (Governance) in response to the idea that ensuring natural and social sustainability in a particular societal context requires consideration of the management systems which dictate the nature of development (Global Sustainability Institute, 2005). Recently 'TBL + One' principles have driven the sustainability reporting practices of the Victorian Association of Forest Industries (VAFI). The inclusion of an independent governance component in forest sustainability discussions was connected to a need to understand how forest policy and decision making takes place (Victorian Association of Forest Industries, ND). The author feels that a discussion of the concept of Triple Bottom Line + One (Governance) could provide a suitable lens with which to structure a case study concerned with the negotiation and operation of RFA legislation. Such research could yield much about contemporary patterns of or issues in environmental governance and is an appropriate area for further research.



Figure 4 illustrates that forest sustainability is the ultimate outcome of Comprehensive Regional Assessments. The interest that RFA legislators showed in formally integrating local communities into development processes can therefore be said to be built on the idea from the International Union for the Conservation of Nature (IUCN) that any government strategies for sustainable usage of forest resources must be considerate of a variety of community level issues ‘including support for the emergence of communities as institutions endowed with meaningful powers for resource management’ (IUCN World Conservation Union, 2005). Sustainability assessments within the RFA process place a premium on the issue of stakeholder involvement (Ananda & Herath, 2003; Proctor, 2000). There is a principle in RFA legislation that there would be a departure from traditional centralized management approaches in favour of ‘a participatory model emphasising open discussion and the recognition of different stakeholder groups and their values’ (Gary Musselwhite & Herath, 2005, p. 581). The similarities of this integrated approach to *Network Theory* (Rhodes, 1997) illustrates the importance of applying issues of governance to any discussion of the local sustainability potential of RFAs

The principle of decentralised governance in RFA Comprehensive Regional Assessments is also reflective of changes in the nature of SIA practice. Human values are progressively becoming more central to SIA practitioners as they consider the impacts of development on the human population in a development area (Kelly & Lymon, 2000). SIA may be defined as a ‘planning tool which is designed to understand the distribution of costs and benefits of project development at the local ... level’ (Lane, 1997, p. 100). There has been a recent tendency towards bottom up, participatory approaches to SIA in many environmental management contexts. Apart from the before mentioned RFA Comprehensive Regional Assessments; bottom up participation may also be observed in the working parameters of the Clayoquot Sound Scientific Panel investigating forestry issues in British Columbia Canada (Fraser, Dougill, Mabee, Reed, & McApline, 2006; Iisaak Forest Resources, 2000) and the Participatory National Forest Programmes in Germany (Elsasser, 2007).

Twelve years ago Lugg (1996) published a state of play article on SIA and forestry in the journal of the same name. In the article’s conclusions Lugg noted that ‘SIA in

relation to forestry needs to address and perhaps predict the changing demands of society. Impacts of proposed activities should be considered in light of the range of forest values and not restricted to those that are most identifiable and quantifiable' (1996, p. 50). Table 2 illustrates some of the issues (values) that the Eden community identified during the RFA assessment process (Social Assessment Unit DPIE, 1998b). The key issue to be drawn from this table is that the Eden community was focussed on subjective ideas relating to community identity, grass root empowerment and patriotism. Unlike employment and local wage conditions, these ideas are not typically quantifiable in economic cost/benefit analyses. This thesis is exploring how subjective values may be better incorporated into cost-benefit methods. Before this chapter moves on to consider the links between PCT and contingent valuation, reference will be made to the history of SIA in Australia's forests.

**Table 2: Issues Influencing Community Attachment in the Eden RFA CRA**

Saw mill closure meant "end of the world", the fight has gone out of the community	Change has occurred to safety of the community with increase in crime
Support from adults to children is fantastic	Good core of "prime movers" to initiate change
Concern about unemployment	Town will survive but may be different
Strong work ethic exists	Loss of fun – lack of involvement in sport
Lack of employment opportunities	Community will work together to overcome problems
Community positive but concern about loss of population, ageing and shift to welfare	No future here for young people, lack of jobs gives sense of hopelessness
Potential for growth; good support for all people	Noticeable shift in welfare dependency and need for all types of support services
Proud to be part of community	Great community to raise children
Pessimistic about replacement industry	Need to fight smarter – can do it
Negative about future for young people	Community support still exists

Source: Social Assessment Unit DPIE (1998b, p. 55)

Forest developments in Australia are subject to the Environmental Planning and Assessment Act 1979 (Australasian Legal Information Institute, 1979). This act entreats developers to consider the social and the environmental impacts of development through environmental and social assessment mechanisms. SIA has been defined as a 'planning tool which is designed to understand the distribution of costs and benefits of

project development at the local ... level' (Lane, 1997, p. 100)

The formal history of social and environmental impact assessment began with the United State's *1969 National Environmental Policy Act* (Burdge, 1994). This act provided the impetus for the NSW Government to adopt a formal Environmental Impact Assessment (EIA) process in 1972 (Lugg, 1996). This process was then updated to the comprehensive EIA process that is reflected in the 1979 Environmental Planning and Assessment Act (Lugg, 1996). The 1979 act includes a very anthropocentric definition of the environment; 'all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings' (Australasian Legal Information Institute, 1979). Reflective of a perceived need to consider the human effects of development there have been a number of SIAs completed in the forests of south east NSW over the last 20 years (e.g. Environment Australia, 1999; Margules and Partners Pty Ltd, 1986; State Forests of New South Wales, 1994). Over this period there has been a progression in the manner by which forest SIAs are conceived. Early SIAs were essentially just EIAs, interspersed with anecdotal histories of affected peoples and narrow cost-benefit calculations (Lugg, 1996). More recently though there has been a realisation that impact assessment data must move beyond scientific data and statistical predictions to encompass concern for local values, relationships and kinship structures (Howitt, 2002). Concern for often intangible notions of local values and kinship structures is represented in the reference to environmental justice in the *2003 Principles and Guidelines for Social Impact Assessment in the USA* (see Table 3). Environmental justice may be defined as socio-political movement that concerns itself with the well-being and rights of past and future generations, 'equity considerations based on race, gender, class and nation and to a lesser extent ... rights and obligations towards non human forms of nature' (Pulido, 2000, p. 219).

**Table 3: 2003 Principles and Guidelines for SIA in the USA**

1. 'Achieve extensive understanding of local and regional populations and settings to be affected by the proposed action, program or policy'
2. 'Focus on the key elements of the human environment related to the proposed action, program or policy'
3. 'The SIA is based on sound and replicable scientific concepts and methods'

4. 'Provide quality information for use in decision making'
5. 'Ensure that any environmental justice issues are fully described and analysed'
6. 'Undertake project, program or policy monitoring and evaluation and propose mitigation measures if needed'

Source: Vanclay (2003c)

In the 1990s SIA formed an important part of the before mentioned RFA Comprehensive Regional Assessment Process<sup>11</sup> (Brooks et al., 2001). RFA SIAs were designed to be participatory as opposed to technocratic in their focus. Technocratic approaches to SIA support the 'instrumental manipulation and engineering of people (and nature) in the pursuit of unexamined goals such as economic development' (Dryzel, 1990, p. 55 in Lockie, 2001, p. 279). In contrast RFA managers purported to be pursuing a policy whereby; 'for the first time, a wide range of organizations with interests in production, conservation, resource management and regional development were linked formally in forest policy and management' (Buchy & Race, 2001, p. 301). In RFAs, stakeholders were to be allowed to develop their own indicators of sustainability and monitor the effectiveness of mitigation measures (Buchan, 2003). The aims of the RFA Comprehensive Regional Assessment process were in line with a government desire to promote decentralisation of forest governance structures in RFA legislation (Brown, 2002; Lane, 2003). It was also reflective of the basis of RFAs in the forestry objectives of the National Strategy for Ecologically Sustainable Development (ESD) (ESD Steering Committee, 1993; Walker, 2004; Ward, 2000). This national ESD strategy noted that there was a need 'to develop a high level of community awareness and understanding of the goal, objectives and principles of this ESD Strategy' (ESD Steering Committee, 1993). The goal of the national forest ESD working group was to maintain ecological processes, while also maximizing potential economic benefits to communities from forest activity within the boundaries of existing ecological constraints (Bartlett, 1999).

The values issues affecting the Eden community that were highlighted in Table 2 were canvassed through community workshops, which also saw citizens presented with three

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<sup>11</sup> The aim of the Comprehensive Regional Assessment process was 'to evaluate the economic, social, environmental and heritage values of forest regions and involved the full range of stakeholder and community groups' (Department of Agriculture Fisheries and Forestry, 2007a)

hypothetical public forest land use scenarios (Social Assessment Unit DPIE, 1998b). The combination of values questioning and hypothetical landuse scenarios by RFA managers is remarkably similar to the approach that has been employed in this thesis, where psychological values questioning has been combined with hypothetical contingent valuation scenarios.

To date many commentators would argue that the aim of RFA planners to have public participation as a cornerstone of forest SIAs has been a management ideal rather than an operational reality (see Brueckner, 2002; Dargavel, 2004; Duthy, 2002; Gray & Wolfenden, 2003/2004; Hillier, 2000, 2003; Hollander, 2004, 2006; Kirkpatrick, 1998; Mackey, 1999; Gary Musselwhite & Herath, 2005; Rangan & Lane, 2001; Redwood, 2001; Schirmer, Scarff, Duus, & Dargavel, ND; Wright, 1997 for examples of assessment criticisms). At about the time when the first RFA was being developed in Tasmania in 1997, Coakes (1998) discussed the model of SIA that RFA planners implemented as part of the Comprehensive Regional Assessment process. Coakes (1998) highlighted the vision of RFA planners for an assessment process based on social inclusiveness. It was recognised early on by the Commonwealth that public participation and/or public acceptance of the RFA process ‘can profoundly affect the durability [sustainability] of inter-governmental agreements’ (Commonwealth Government of Australia, 1995b, p. vi). To this end a variety of public participation mechanisms were implemented. These included: the production of RFA information kits, media releases, public information sessions and the appointment of Community Coordinators in each of the 10 RFA regions throughout the country (Coakes, 1998; Lane, 1999). More recently, Brueckner et al. (2006) examined the participatory nature of the completed Western Australian RFA legislation. In the context of an analysis of good governance literature; Brueckner et al. (2006, p. 6) drew attention to what they described as a ‘systematic failure in the management of the Western Australian RFA’. The authors noted that this failure of RFAs to encourage active stakeholder participation necessitates an opening of planning processes and structures in the future (Brueckner et al. 2006).

The idea that future land management decisions in rural areas need to become more stakeholder oriented has implications for people interested in the sustainable

development of forest based tourism industries. Tourism is a central component of RFA legislation in the Eden area (Department of Agriculture Fisheries and Forestry, 2004a). Also many new initiatives such as the 2004 Far South Coast Nature Tourism and Recreation Plan have been developed in an effort to formalise and provide future goals for the sector (Shepherd et al., 2004). Often governments will give less than adequate attention to the intangible aspects of community identity, and how these may affect local receptivity to tourism development.

The next section will consider ways in which intangible aspects of community identity may be better incorporated into a government's development decisions through reference to the new economic/psychology approach to the study of resident valuations of different forest landuses, which this thesis is considering

### **2.3 Economic/Psychology Approaches to the Study of a Community's Attitude to Forest Landuses**

As was previously noted, the aim of this thesis is to explore different ways of conceptualising the values that rural communities ascribe to forest based nature tourism development in their community. Section 2.2 illustrated the merits of active community involvement in sustainable tourism development, as well as the value in the further development of research philosophies which will be accepting of the subjective nature of a community member's relationship to the physical and social environment. With the research context in place the purpose of this section is to illustrate the researcher's theoretical rationale/justification for the concurrent use of contingent valuation and psychological repertory grid methods in a study of rural community landuse valuations. The section will open with some reference to the use of psychological methods in resource based SIAs, before reference is made to economic psychology and the contingent valuation and PCT research.

#### **Psychological Research Methods in Research Based SIAs**

The Planning Institute of Australia (2008) recently published a *Draft National Position Statement on Social Impact Assessment*. The key policy principles identified were that:

1. Social Impact Assessment should vary according to site and scale
2. Social Impact Assessment can include a range of data gathering techniques
3. A social impact assessment is based on what is known at a particular point in time, and
4. Social Impact Assessments provide both a planning and a policy tool.

These policy positions illustrate the complexity of SIAs and the importance of using research instruments, which are responsive to “place” and “community” circumstance. It was noted previously that an individual in a rural area will define “place” and “community” according to his/her own social constructs. When applying “place” philosophies to environmental management debates, Cantrill and Senecah (2001, p. 186) note that Miles Law can be applied; ‘Where you stand depends on where you sit and where we sit is framed by the psychological schema we have for that “place” called “home”’. A locality such as the forests of the Eden RFA area will be materially and imaginatively constructed by different types of people (Anon, 2000).

Psychological variables have the effect of mediating interaction between an individual’s unique personal experiences and responses to a development, and the conditions in which the development occurs (Lounsbury, Liere, & Meissen, 1983). Scholarship on the use of psychological variables in SIA has been limited to date (Kelly & Lymon, 2000) with the majority of SIA work remaining technocratic in its orientation (Stolp, Groen, van Vliet, & Vanclay, 2002). Technocracy refers to the ‘instrumental manipulation and engineering of people (and nature) in the pursuit of unexamined goals such as economic development’ (Lockie, 2001, pp. 278-279). A criticism that has been levelled at SIA theories in general relates to the fact that often it lacks the specificity of environmental impact assessment measures; ‘reactions can be more varied and fickle [in SIA], because individuals or groups in a population differ in response’ (Barrow, 1997, p. 231). SIA is not based around scientific measures, but rather: much of the rhetoric justifying social impact assessment ... is stated specifically in terms of subjective states such as “social well being” and “quality of life” (Lounsbury et al., 1983, p. 216).

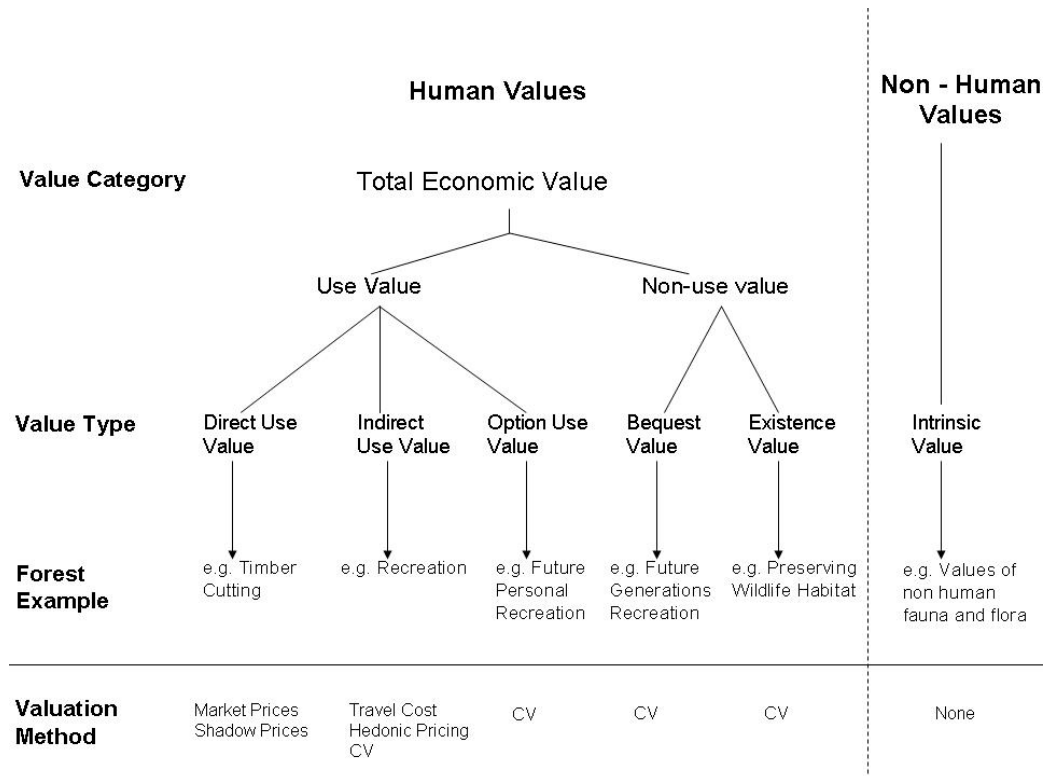
Pioneering work linking psychology and SIA was completed by Lounsbury, Liere, & Meissen (1983) who examined the use of attitudinal variables in SIA theorising. Meissen and Ciprani (1984) also investigated the use of Community Psychology in SIA contexts. More recent applications of psychological theories in SIA studies include work undertaken in the Netherlands into the issue of Citizen Value Assessments. Citizen Values refer to the value judgements an individual makes regarding the quality of an environment (Stolp et al., 2002). It is thus a means to link the environmental setting of development with the human population in the affected area.

Commentators have also considered the importance of human values to impact assessment discussions in terms of the idea of “Assessment for Sustainability”. Assessment for Sustainability is an approach to SIA which is based on the perceived need to develop environmental impact assessment as a sustainable development tool (George, 1999; Pope, Annandale, & Morrison-Saunders, 2004). Assessment for Sustainability differs from traditional impact assessments in its aims. It does not for instance aim to ‘identify the environmental, social and economic impacts of a proposal after a proposal has been designed and compare these impacts with baseline conditions to determine whether or not they are acceptable’ (Pope et al., 2004, p. 608). Rather its aim is to determine, using traditional environmental impact assessment methodologies, whether or not an initiative is actually sustainable (Pope et al., 2004). The sustainability of a particular initiative is defined as a societal state, thus centralising the community and the individual in development discussions (Pope et al., 2004).

Centralising the community in development discussions is complicated by the fact individuals within that community can value a commodity in different ways. Figure 4 (overleaf) is adapted from Bateman and Langford’s (1997) work on the total economic value of a wetland that they produced as part of a study of contingent valuations in national parks. It illustrates how, for a forest area, community value can be perceived in both use and non use terms. A change in the nature of “use values” in a forest area away from traditional primary industries towards tourism will have impacts on the way that the industry base in the area relates to non use values.



**Figure 4: Total Economic Value of a Forest**



Source: Adapted from Bateman & Langford (1997, p. 573)

This thesis will consider one of the economic valuation methods referenced in Figure 4; the non use/non market contingent valuation. The characteristics of the contingent valuation method are canvassed in the next section. It will be noted in subsequent sections that this researcher is using PCT based repertory grid methods to shed light on the social context of contingent valuation WTP estimates. Potter (1984, p. 315) noted that the repertory grid method can theoretically provide a ‘flexible method for studying individual’s environmental perceptions and can provide a rich variety of detailed [qualitative and quantitative] data’. The strength of this statement will be considered in Chapter 4 when this thesis will use a *Theory of Planned Behaviour* framework to consider the ability of repertory grid methods to shed light on the social context of contingent valuation WTP estimates.

## **The Contingent Valuation Method**

Contingent valuation (identified as CV in Figure 4) is an economic survey-based technique for eliciting respondent's preferences for non-market goods i.e. their willingness to pay<sup>12</sup> (Carson, 1998; Moons, 2002). Contingent valuation methods should be conceived as one of a suite of stated preference techniques which requires individuals to state the economic value for a particular environmental commodity (Nunes, 2002). The origin of the contingent valuation method comes from the work of Ciriacy-Wantrup's Capital Returns from Soil Conservation Practices (1947). The method came into prominence in the 1960s as option and existence values began to be recognised as important components of the total economic value of environmental resources. One of the most prominent early applications of contingent valuation methods was in relation to the Exxon Valdez oil tanker grounding in Alaska's Prince William Sound in 1989. Over the years contingent valuation methods have come to play an important role in the environmental impact assessment literature (Ventkatachalam, 2004). In the last 35 years there has been some 50 papers published dealing with Contingent Valuation and its forest and conservation applications (Pouta, 2003). In Australia contingent valuation methods have been used as part of broader economic cost benefit analyses of the Warrumbungle National Park, the Gordon below-Franklin Dam, the Great Barrier Reef and the Kakadu Conservation Reserve (De Lacey & Lockwood, 1992).

Contingent valuations should be recognised as being one of a number of methods available to researchers for eliciting community values regarding environmental change.

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<sup>12</sup> This inquiry has used a WTP instrument to complete its contingent valuation objectives. It is important to acknowledge at this point that WTP is one of two approaches available to contingent valuation researchers. WTP commonly refers to the amount a stakeholder is prepared to pay to see a particular development scenario (e.g. the creation of a national park) come to fruition. Willingness to Accept (WTA) in contrast refers to the amount of compensation an individual deems as necessary before they will allow a development to occur (Mitchell and Carson, 1989). Over recent years a considerable amount of scholarship has been undertaken considering the relative merits of the WTP and WTA approaches (see Amigues et al. 2002; Loomis et al., 1998; Nilsson, et al. 2006; Weber, 2003). Pearce and Turner (1990) have noted that according to economic theory WTA and WTP values should not vary; yet CV studies 'continue to suggest quite major disparities' (Pearce and Turner, 1990, p. 157). Historically WTA estimates have been found to far exceed associated WTP estimates (see Mitchell and Carson, 1989, pp 30 - 38). Explanations for this phenomenon are numerous. One interpretation is that WTA will exceed WTP 'because WTP is constrained by an individual's ability to pay. The explanation may be that people are more averse to losses than to gaining benefits of equal utility, and people see only limited substitutes for foregone goods and services such as environmental quality (Mirovitskaia & Ascher, 2001, p. 185).

Contingent valuations have gained particular prominence amongst other methods because of their ability to ‘provide amenity benefits that can be directly incorporated into benefit-cost calculations’ (Arrow, 1993 in Welch & Fischhoff, 2001, p. 209). The ability of contingent valuations to contribute to policy discussions has been illustrated in Lockwood et al. (1993). These authors conducted a contingent valuation to determine Victorian’s WTP ‘to reserve unprotected East Gippsland national estate forests as national parks’ (Lockwood et al., 1993, p. 233). The rationale for this study was that most old-growth forest in East Gippsland is registered on the national estate. This registration places legal protections on the ability of the Commonwealth to act to harvest these forested areas. At the same time though it does not legally constrain State Government managers who must decide whether to declare national estate forest as national park. The decision to declare land as national park is typically made against a backdrop of stakeholder conflict between the timber industry and conservationists (Lockwood et al., 1993). Through a split sample of Melbournian and East Gippsland residents Lockwood et al. (1993) found that local people tended to place a higher emphasis on market values and had a lower WTP for forest preservation than their urban counterparts.

Different social context issues in Lockwood et al.’s (1993) sample groups affected the results that were recorded. As part of the Lockwood et al. (1993) study the Victorian and Gippsland sample groups were asked to rank different aspects of the national estates they were contingent valuing. The results of this analysis are shown in Table 4 (see overleaf). The central observations that can be made regarding this graph are that:

- The market values of timber and jobs were ranked significantly higher in the Gippsland sample on the basis that people in this area are more financially dependent upon forest products, and;
- Preservation and bequest values are higher in the Victorian sample, a result which may be connected to the common conception that environmental attitudes are typically stronger in rural communities. (McBeth & Foster, 1994)

**Table 4: Importance of National Forest Estate Forests**

Reason for Valuing the Forest	Victorian Sample	Gippsland Sample
Preserve the forest, its plants and animals	3.72	3.50
To provide timber	2.57	3.10
To provide jobs	2.56	2.99
To know the forest has not been changed	3.08	2.54
To visit the forest	3.28	3.08
To know the forest exists	3.14	2.68
For future generations	3.71	3.50
Measured on 4 point Likert scale: 1 = not important, 2 = slightly important, 3= important, 4 = very important		

Source: Lockwood et al. (1993, p. 237)

Social context issues such as those in Table 4 have been identified as being one of the three principal components of any contingent valuation WTP exercise, along with the contingent valuation good and payment vehicle (Mitchell & Carson, 1989; Pouta, 2003). For the research, 22 repertory grid interviews were conducted with Eden residents who had already completed a contingent valuation survey in order to investigate the potential for PCT repertory grid methods to aid understanding of the social context of WTP contributions.

The components of the contingent valuation scenario employed in this thesis are outlined in Chapter 3. If one compares some of the characteristics of contingent valuation exercises to the main phases of a SIA project (Becker, 2001) it can be seen that contingent valuation falls into the impact assessment scenario design phase. This early phase involves the sketching of possible future contexts/directions for the target population. Pre-testing of development scenarios is common in Australian SIAs e.g. the RFA Comprehensive Regional Assessment process (see New South Wales Government & Commonwealth Government, 1998).

Debate exists in the literature regarding the precise distinction between use and non use values (see Weikard Hans-Peter, 2002 for an in-depth discussion). What is generally agreed, however, is that the economic theory of value (use, non use or other) is based on

an individual's own preferences (Hodgson, 1997; Weikard Hans-Peter, 2002). Typically values in a contingent valuation are expressed in terms of an individual's WTP or "Willingness to Accept" some form of change in the provision of a particular good (Horton et al., ND). How WTP was expressed in the contingent valuation survey conducted for this project is outlined in Chapter 3.

This thesis has focused on the links between contingent valuation techniques and an established psychological theory. Such links are not without precedent. Contingent valuation has proven to be fertile ground for joint economic/psychological research. Contingent valuation is a method based in economic consumerism where individuals make choices that are dependent upon their attitudes and beliefs (Pouta, 2003). For this reason many contingent valuation studies have employed attitude testing as part of their valuation elicitation procedure (e.g. Resource Assessment Commission, 2002). Imber et al (1991, p. 11) noted that if 'attitudes and actual behaviour do not correspond then it stands to reason that a Willingness to Pay ... would not necessarily be adhered to in a real life setting'. It is for this reason that this research is considering the value in a psychological approach to understanding respondent attitudes in a contingent valuation context. The specific psychological theory under investigation is George Kelly's Theory of Personal Constructs, which is focused on how an individual forms an interpretation of the environment around them (Coshall, 2000). The interpretations or constructions that an individual makes about the environment are formulated according to personal experience and current circumstance. As such, PCT can tap into many of the intangible ideas that are at the heart of contingent valuations; ideas such as heritage and community identity.

### **Economic Psychology and the Linking of Contingent Valuation and *Personal Construct Theory* Repertory Grids**

Psychological variables contribute to a better understanding of the behaviour of economic agents. In pure economic research, only the effects of economic behaviour are studied...without considering the intervening psychological processes of evaluation, decision and choice.

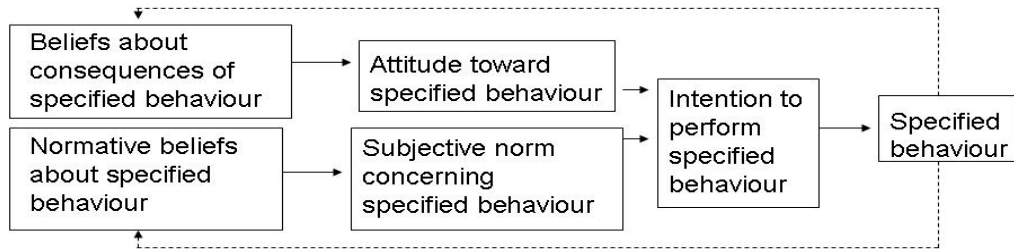
(Raaij, 1981, p. 4)

This thesis seeks to establish a link between an economic cost benefit measure (contingent valuation) and a psychological theory whose primary analysis metric are values laden constructs. Before the specific nature of this theoretical link is outlined it is appropriate to say something on the broader issue of economic psychology.

There is a rich history of academic research into the integration of economic and psychological research disciplines. Economists such as Adam Smith first demonstrated an appreciation of the value in researching the psychological aspects of human behaviour over 200 years ago. This research led to the publication of works such as The Theory of Moral Sentiments (Earl, 2004). Analysis of the potential for integration of the respective theory streams has flourished in the last 50 years. Commentators such as Kato (1951) noted that psychological variables such as attitude may contribute to a better understanding of an individual's economic behaviour. Katona (1975) similarly recognised that individual psychological variables have the ability to influence behavioural responses to current economic conditions. Recently the need for academic commentators to study the linkage between economics and psychology has seen the development of research publications such as the Journal of Economic Psychology. Linkages between the disciplines are also evident in the existence of research institutes such as the Socio-Economic Research Program connected to the United Kingdom based Macaulay Institute and initiatives such as the European Science Foundation's Social Psychology and Economics in Environmental Research Workshops (Spash & Biel, 2002).

In spite of the structural suitability of contingent valuation to psychological analysis and the inclusion of attitudinal questioning in many studies, actual applications of formal psychological theory in contingent valuation studies are rare (Pouta, 2003). One exception is however research that has linked Contingent Valuation to the *Theory of Planned Behaviour* (Ajzen & Driver, 1992b; Luzzar & Cosse, 1998; Pouta, 2003). This thesis is using the *Theory of Planned Behaviour* as a basis for the link between contingent valuation and PCT. Pouta and Rekola (2001) have previously used *Theory of Planned Behaviour* as a means of predicting contingent valuation results in a study focusing on forest regeneration cutting in Finland. Figure 5 (overleaf) outlines the key parameters of the theory.

**Figure 5: The Theory of Planned Behaviour**



Source: Mitchell & Carson (1989, p. 179).

The *Theory of Planned Behaviour* falls within the broad confines of work which tests the relationship between attitude, and the behaviour that attitude is able to predict (Mitchell & Carson, 1989). Table 4 illustrates the relationship between the *Theory of Planned Behaviour* and other theories and models of behavioural change. It is argued that PCT, specifically the construct formulation component of the PCT process<sup>13</sup>, allows for a fuller understanding of how individuals formulate beliefs, which lead to attitudes and behaviours under Fishbein and Ajzen’s model (Fishbein & Ajzen, 1975). The nature of PCT and the parameters of this link will now be outlined.

**Table 4: Selected Theories of Behavioural Change**

Theory or Model	Selected Authors	Key Concepts
Model of persuasion	Manfredo and Bright, 1991	Behaviour is a function of message elaboration, which is measured by the number of thoughts generated, acquisition of new beliefs and changes in old beliefs.
Elaboration Likelihood Model	Petty and Cacioppo, 1981 & 1986; Petty et al. 1992	Motivation and ability to process arguments determines whether persuasion is via central or peripheral route. The central route involves high elaboration of message, whereas the peripheral route influences through cues tangential to message.

<sup>13</sup> For a discussion of the construct formulation procedures employed in the thesis repertory grid interviews see section 3.7.2.

Theory of Planned Behaviour	Ajzen, 1991; Ajzen and Fishbein 1980; Fishbein 1967; Fishbein and Ajzen 1975.	Human behaviour, or at least behavioural intention, is consistent with attitudes, and these attitudes are consistent with beliefs. Behavioural intention is affected by attitude towards behaviour (behavioural beliefs and evaluation of those beliefs), subjective norm (normative beliefs and motivation to comply with those beliefs), and perceived behavioural control (control beliefs).
Norm Focus Theory	Ciadini et al., 1990; Festinger, 1957.	People behave according to how they think they should behave, based on social norms. Norms are either descriptive (what we think most people do) or injunctive (what we think is socially acceptable).
Mindfulness	Langer, 1989; Moscardo 1996.	In any situation a person can either be mindful or mindless. Mindfulness is influenced by setting factors (such as displays, signs, maps and walks) and visitor factors (such as familiarity with site, motivation and companions).
Model of Responsible Environmental Behaviour	Hines et al., 1986	Intention to act, and hence responsible environmental behaviour, is influenced by action skills, knowledge of action strategies, knowledge of issues and personality factors (including attitudes, locus of control and personal responsibility).

Source: Littlefair (2003 in Wearing, Archer, Moscardo, & Schweinsberg, 2006, p. 3)

PCT developed from the psychological work of George Kelly in the early to mid 1900s, work that culminated with the release in 1955 of The Psychology of Personal Constructs. The fundamental postulate of PCT proposes that ‘a person’s processes are psychologically channelised by the way in which he (sic) anticipates events’ (Kelly, 1963, p. 46). This postulate was then expanded by Kelly in the form of 11 corollary assumptions of PCT (Kelly, 1963, pp. 103-104) (see Table 5).

**Table 5: Personal Construct Theory Corollaries**

Corollary	Note
1 – Construction	A person anticipates events by construing their replications
2 – Individuality	People differ from each other in their constructions of events
3 – Organisation	Each person characteristically evolves, for his(sic) convenience in anticipating events, a construction subsystem embracing ordinal relationships between constructs
4 – Dichotomy	A person’s construction subsystem is composed of a finite number of dichotomous constructs
5 – Choice	A person chooses for himself(sic) that alternative in a dichotomised construct through which he(sic) anticipates the greater possibility for extension and definition of his system
6 – Range	A construct is convenient for the anticipation of a finite range of events only
7 – Experience	A person’s construction system varies as he (sic) successively construes the replications of events
8 – Modulation	The variation in a person’s construction system is limited by the permeability of the constructs within whose ranges of convenience the variant lies



9 - Fragmentation	A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other
10 – Commodity	To the extent that one person employs a construction of experience which is similar to that employed by another, his (sic) psychological processes are similar to those of the other person
11 - Sociality	To the extent that one person construes the construction process of another, he(sic) plays a role in a social process involving the other person

Source: Kelly (1955)

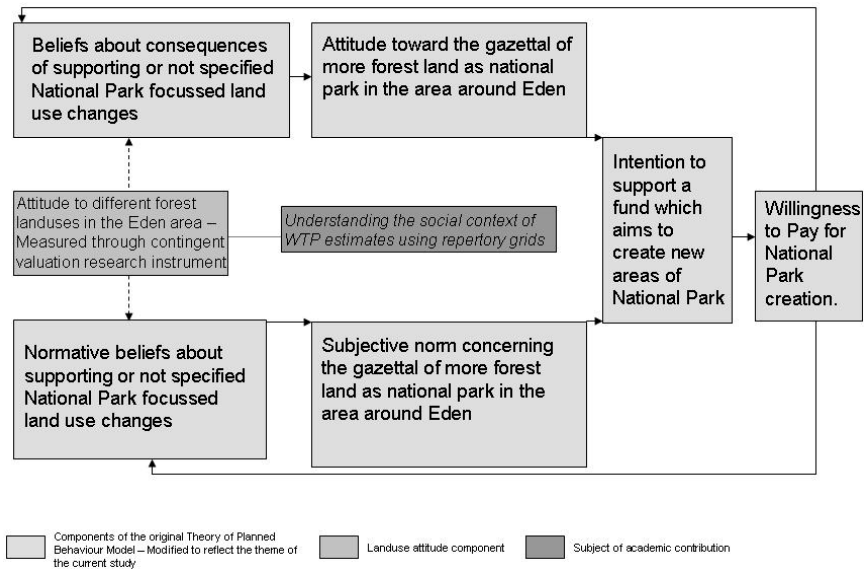
*Personal Construct Theory* is a method of individual psychology which centres on an individual's interpretation and assessment of the environment around them (Coshall, 2000). PCT methodologies require an individual to construct interpretations (constructs) regarding subjects of inquiry (elements). Constructs are constantly being re-evaluated according to experience. Kelly noted that 'we assume ... all of our present interpretations of the universe are subject to revision or replacement' (Kelly, 1963, p. 15). Loundsbury (1983) noted that it is common to study the psychological perspectives of SIA in temporal terms, given that an individual's views regarding a development may change over time as they acquire new information and experiences.

Before conceptually outlining the contribution that PCT can make to our understanding of the belief systems that underpin contingent valuation WTP estimates, it is worth noting that there is precedence in Australia for the use of PCT and psychological principles more generally in environmentally focussed SIAs (see Coakes, Fenton, & Gabriel, 1999 for an example). In this Victorian case, PCT was used by the researchers to understand community sensitivity to change in the forest sector in a SIA context (Coakes et al., 1999). Elements (i.e. subjects of inquiry) in the paper were rural townships, 'which were grid analysed to determine the frameworks of perception that were being used by participants in the study' (Coakes et al., 1999, p. 200). One of the conclusions of this study was that PCT needs to be supplemented with material from other sources such as local reports and interviews in order to strengthen the impact assessment conclusions that can be offered regarding the impacts of a particular development. This was the rationale for the move to conceptually link PCT to contingent valuation survey material canvassing the economic connections an individual has with a particular development scenario in this thesis.

A central component of contingent valuation relates to the fact that, in providing contingent estimates to a particular intervention, an assumption is made that people are 'sufficiently in tune with their hedonic processes that they can generate meaningful ... judgments' (Welch & Fischhoff, 2001, p. 210). Hedonic processes typically relate to issues such as an individual's personal wealth i.e. independent economic variables that may influence economic valuations. When dealing with personal assessments regarding the value of natural resource developments one is faced with the issue of existence values and with the reality that people will often not see environmental resources in market terms (Chapman, 1995; Dunthony, 2002). It is necessary therefore to accept that beliefs regarding the correct use of resources may be an independent variable in many SIA contexts.

It is this researcher's contention that PCT may allow for elaboration regarding the origins of the beliefs and attitudes which underpin behaviour in the *Theory of Planned Behaviour*. Thus, rather than being confined to consideration of beliefs regarding a specified contingent scenario, consideration of PCT may allow researchers to understand the self generated templates (Kelly, 1963) which underpin an individual's beliefs and attitudes. Figure 6 (see overleaf) illustrates how this thesis builds on this existing research base. Figure 6 is an adaptation of the Fishbein and Ajzen's *Theory of Planned Behaviour*/ contingent valuation model. The model has been adapted to reflect the thematic focus of this thesis. It can be seen that the beliefs being considered in this thesis are beliefs about the consequences of further national park development in the Eden area. Different forest management jurisdictions (i.e. national park and state forest) allow for different types of human utilization of forests. As such repertory grid interviews completed for this project have sought to tap into respondent constructions of different forest landuses, which may or may not be allowable if more of the forests around Eden were to be gazetted as national park.

**Figure 6: The Theory of Planned Behaviour + PCT – Conceptual Model**



Modified from: Mitchell & Carson (1989, p. 179)

In justifying this perceived convergence between PCT and the *Theory of Planned Behaviour* it is important to say something on the context in which beliefs and attitudes are perceived in the two theories. *Personal Construct Theory* is concerned with belief in the sense that in determining constructs regarding subjects of inquiry an individual will consider existing information they have about the subject in question. Kelly (1963, 8-9) noted that; ‘man looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed’. Similarly, Fishbein and Ajzen (1975) note that beliefs are the information an individual has about an object prior to making an attitudinal determination. The idea of individually constructed beliefs has ensured the relevance of the Attitude Behaviour model to contingent valuation debates. Contingent valuations are personally constructed phenomenon (Earl, 2004). Actions such as WTP will be dictated by current circumstances and how respondents perceive situations (Bonini, Biel, Garling, & Karlsson, 2002).

This characteristic of WTP corresponds to PCT, in as much as constructions which people place on events are personal (Scherl, 1988). Proponents of the *Theory of Planned Behaviour* argue that beliefs are based on experience, hence the reciprocal nature of the belief/behaviour relationship in Figures 6. Reciprocity is also reflected in the PCT

Experience Corollary (Table 5). Beliefs are subject to relatively narrow ranges of convenience with only a certain number of beliefs being relevant for any attitude or behaviour at any given time (Mitchell & Carson, 1989). Kelly (2003, p. 11) defined range of convenience in the following terms:

‘A construct has as its focus of convenience – a set of objects with which it works especially well ...Beyond that it fades into uselessness and we can say the outer range of objects simply lies beyond that range of convenience’

Range of convenience principles also applies to contingent valuations where scenarios can be said to be case specific measurements (Nunes, 2002). In PCT Fransella and Bannister (1977 in Botterill & Crompton, 1996) note that elements (areas of study) must be representative of the pool from which they were drawn. The focus of PCT is on the mental constructions of individuals with respect to specific problems or events in an individual’s everyday environment (Borell, Espwall, Pryce, & Brenner, 2003).

A bi-product of this individual nature of PCT constructions does mean that the value of PCT to the *Theory of Planned Behaviour* is limited with respect to normative beliefs and subjective norms. Figure 7 showed PCT influencing the individually constructed beliefs and attitudes regarding the benefit of National Park focused landuse change. Attitude is after all based on an individual’s own values and beliefs, not what an individual perceives other people to think about a particular behavioural action (Kerr & Cullen, 1995). The PCT Individuality Corollary noted that ‘people differ from each other in their constructions of events’ (Kelly, 1963, p. 55). The centrality of the man as scientist and constructive alternativism principles to PCT has seen proponents argue that understanding develops from active construction, rather than from passive response to external reality (Marsden & Littler, 2000).

The second key component of PCT, after the elements or subjects of inquiry, relates to the development of individual constructs (interpretations) about the elements in question. Detailed reference will be made to the process whereby constructs were developed in the Eden fieldwork component of this study in section 3.7.2. At this point it can be noted that constructs are ‘the basic reference axes that form the respondents’ dimensions of cognitive appraisal’ (Potter, 1986 in Lawton, 2005, p. 190). PCT

constructs are similar to notions of attitude in Fishbein and Ajzen’s *Theory of Planned Behaviour* model in as much as attitude represents ‘the amount of affect for or against some object ... measured by a procedure which locates the subject on a bipolar affective or evaluative dimension’ (Fishbein & Ajzen, 1975, p. 11). Bipolarity is similarly an important component of constructs in personal construct theorising (G. Kelly, 1963). By definition a construct is a bi polar interpretation of the relationship between subjects of inquiry (Shaw 1980 in Botterill & Crompton, 1996). Diamond (1982) notes that typically bi-polar constructs are represented in a repertory grid in the form of two poles (one negative/ one positive).

Table 6 is an example of a series of bi polar constructs taken from another tourism study, which used repertory grid methods. In this case bi polar constructs were developed regarding the perceived characteristics of London museums as tourist attractions. In this case the construct column represents the positive pole and the contrast column the negative. It is evident in this example that; reflective of the individual dimension of cognitive responses, bipolar constructs do not have to represent real points of difference, merely what a respondent perceives to be real. Constructs are after all an ‘individual’s personal interpretations of the environment around them’ (Coshall, 2000, p. 86).

**Table 6: A Completed Repertory Grid Showing Bipolar Constructs**

CONSTRUCT	1 British Museum	2 Victoria and Albert	3 Sir John Soane’s Museum	4 National Gallery	5 Tate Gallery	6 Hayward Gallery	7 Museum of London	8 Imperial War Museum	9 Transport Museum	10 Natural History Museum	11 Science Museum	CONTRAST
1 More general	✓	✓		✓	○		✓	✓	✓	✓	✓	Specific to art
2 Traditional	✓	✓		✓	○		✓	✓	✓	✓	✓	A negative place
3 High status visitors			✓	✓	○				○			Average
4 Generally art/paintings	○		✓	✓	✓							Different kinds of exhibits
5 Reflects historical issues	✓	✓			○		✓	✓	✓	✓	✓	Deals more with art
6 Paintings		○	✓	✓	✓							More about English history
7 Interesting	✓			✓	✓						✓	Less interesting
8 Have a good reputation	✓	✓		✓	✓		✓		✓	✓	○	Less well known
9 Not interesting		✓	✓	○	○		✓	✓	✓	✓		Interesting
10 Far from city centre		✓	✓	○				✓	✓	✓	✓	Good location
11 Museums	✓	✓	✓		○		✓	✓	✓	✓	✓	Gallery
12 More British	✓	✓		✓	○		✓					General
13 Snobbish		✓	✓	✓	✓					○		Closer to my taste
14 Displays objects other than pictures	✓	✓		○		✓	✓	✓	✓	✓	✓	Just pictures
15 Technological						○	✓	✓		✓	✓	Not to do with technology
16 For adults			✓	✓	✓						○	Children would love it

Source: Coshall (2000, p. 87)

The significance of this linkage between PCT and attitude formation for contingent valuation theorists is expressed in the following question:

Are the opinions measured in well – designed contingent valuation surveys meaningful in the sense that they represent genuine views rather than random expressions of opinion?

(Adapted from Mitchell & Carson, 1989, p. 174)

Traditionally Likert scale questioning is used to determine respondent opinions in contingent valuation exercises (Ajzen & Perterson, 1988). Likert scale questioning was included in this thesis's contingent valuation survey (see Appendix 1). The researcher liaised with a variety of tourism, forestry and governmental stakeholders to determine the wording of the questions, in order to ensure that the wording was not inflammatory or inaccurate regarding local conditions. Topics canvassed in Likert Scale questioning include the ability of tourism and other forest industries to ensure the protection of local biodiversity levels.

Understanding a resident's perceptions of an issue like the environmental protection potential of different forest industries is not, in itself, enough to shed light on the sustainability potential of said industries. The reason is that sustainability can mean different things to different people (Garrod & Fyall, 1998). The interactions that humankind has with the environment are governed by a plethora of priorities, beliefs and philosophies including Technocentrism<sup>14</sup> and Ecocentrism<sup>15</sup>. The topics that are included in the project's contingent valuation survey represent the sustainability priorities of the researcher, and not necessarily the population under investigation. To ensure that attitude questioning adequately reflects individual community member conceptions of sustainable landuse, one must explore methods that allow respondents to

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<sup>14</sup> Technocentrism argues that 'technical solutions can be found to environmental problems through the application of science ...' (Holden, 2008, p. 153)

<sup>15</sup> 'Ecocentred strategies reject contemporary mainstream technologies and economies as fundamentally flawed, since they provide the basis for a materialist- and consumer-oriented society, promoting selfish values and short-term thinking. Ecocentrism is further subdivided into two camps, 'deep ecologists' who argue for the notion of bio-rights, that is, the right of endangered species or 'of unique landscapes' to be left unmolested; and 'self-reliance soft technologists' who reject modern technology because of its anti-democratic character. Soft technologists emphasise the importance of 'community participation in decision-making, but the need for elitist expertise in high-tech contexts undermines this possibility' (Henry & Jackson, 1996, p. 19).

frame the scope of the inquiry. Repertory grid methods allow researchers to minimise the effects of meaning imposition in landuse discussions. This is achieved by providing a series of triad element (subjects of interest) combinations, from which respondents determine their own constructions (points of similarity) (Jankowski, 2004). The procedure for triad selection that was employed in this project will be discussed in Chapter 3 in the course of outlining the details of the Eden field research.

## **2.4 Conclusions**

The purpose of this chapter has been to present an outline of the literature, which underpins this investigation into new ways that host community values can be incorporated into rural tourism development decisions. To this end this review of the literature has covered the topics of: tourism sustainability; 'place'/community; community impacts of tourism; community involvement in sustainable tourism planning; economic psychology; contingent valuation valuations of non market resources; and PCT repertory grid methods.

This literature review has confirmed that the development of integrative sustainable tourism is dependent upon an accurate understanding of the ways in which the tourism industries in question interact with host societies and other tourism stakeholder groups. While in many localities tourism development agendas are driven by government, as opposed to community interests (see Joppe, 1996); this thesis has sought to investigate new ways in which the broadest spectrum of tourism stakeholders can be actively involved in determining the direction of tourism development locally.

Involving a broad spectrum of tourism stakeholders in the development decisions is commonly seen as being central to discussions of sustainable tourism (Buckley, 1999; Clay, Hingston, & Aslin, 1988; Hall, 2000; Timothy & Tosun, 2003). While a number of tourism planning documents such as the 2004 Far South Coast Nature Tourism and Recreation Plan have demonstrated an appreciation amongst planners of the importance of community involvement in tourism development; this chapter has drawn attention to some of the complexities community involvement entails. Through a discussion of literature relating to "place", "community" and community impact literature it has been

shown that there are a number of unique social, environmental and economic issues which will influence how tourism growth is perceived by local people.

To investigate how these social, environmental and economic issues may be visualised by tourism planners; this thesis has considered the benefits in using PCT repertory grid methods to understand the social context of economic contingent valuations. This chapter has outlined the conceptual justification for this enterprise in relation to literature on economic psychology, as it relates to SIA. The next chapter will outline the methodological approach that was adopted in the Eden field study.



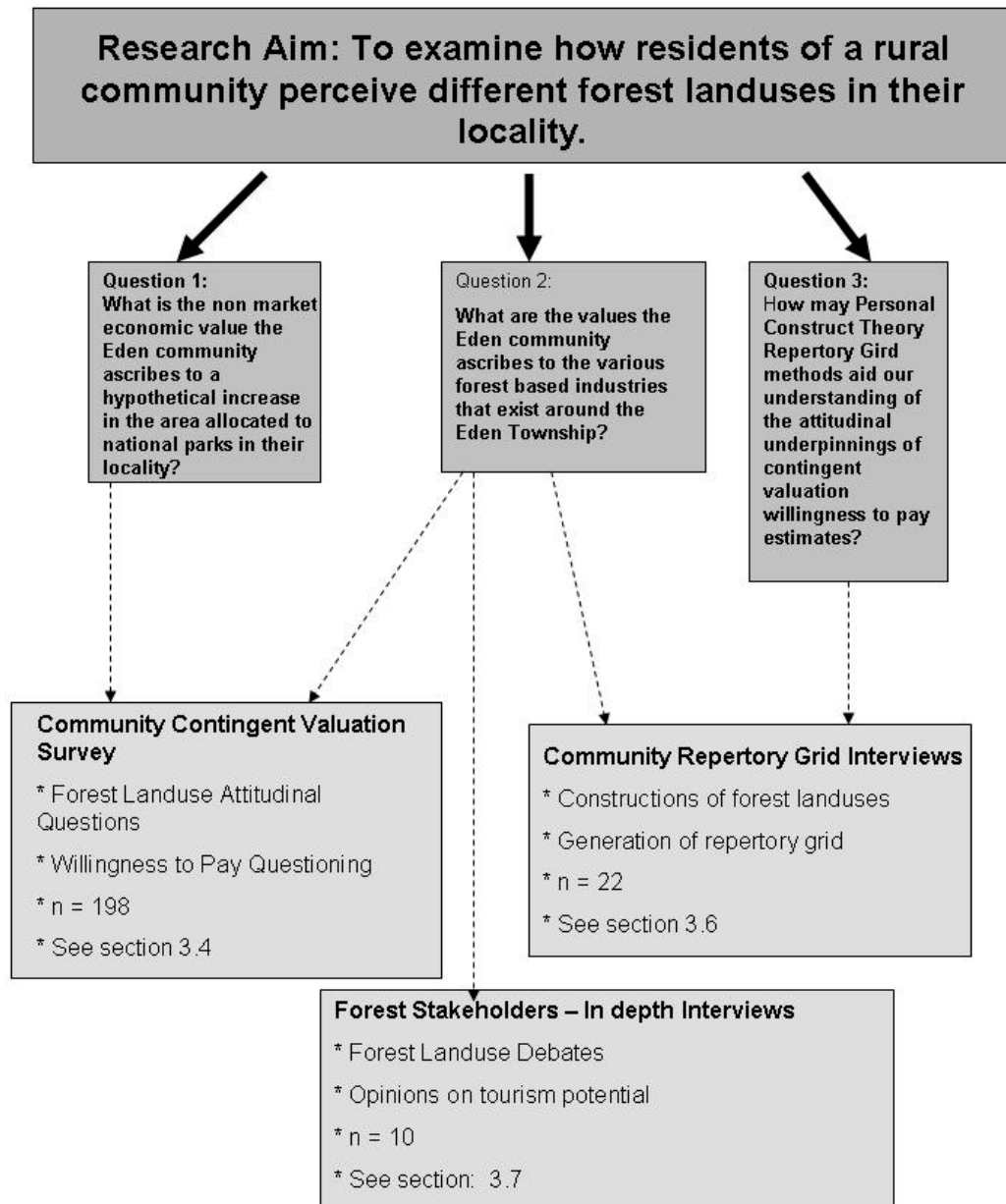
## **Chapter 3: Research Approach**

### **3.1 Introduction**

The thesis aims and research questions have been outlined in Chapter 1 along with an overview of the methodology as it relates to the economic-psychology conceptual framework. This chapter provides further details of the methodology and fieldwork, which was undertaken to collect data and analyse research questions in the Eden case study community.

The chapter opens with an overview of the research procedure and a diagrammatic representation of the research design (see Figure 7 overleaf), which is intended to walk the reader through the relationship between the various research questions and field techniques. This is followed by comments on the social research paradigms, which underpin the methods employed in the Eden community. The discussion is framed around the argument that a constructivist research approach is ideal for the study of values, which underpin economic contingent valuations. Eden is being used as an exemplifying case study with which to examine new ways of understanding the attitudinal underpinnings of a tourism development contingent valuation exercise. Reference will accordingly be made in this chapter on the relative merits of the case study approach to tourism study, along with a breakdown of the criteria used to decide on Eden as the sole case study for analysis. The final sections of this chapter provide detailed comment on the contingent valuation and repertory grid research instruments. Section 3.5 canvasses various issues related to contingent valuation including: scenario formulation, response elicitation and response demographics. Section 3.7 on repertory grids will concern itself with issues including: element selection, construct elicitation and analysis approaches. Finally reference will be made in this chapter to various issues relating to pilot surveys, participant recruitment and ethical research principles.

**Figure 7: Overview of Research Questions and Methodologies**



### 3.2 Overview of Research Philosophy

This thesis has adopted a constructivist approach to the study of the values, which underpin economic contingent valuations. Various research paradigms exist by which social research can be conducted. One of the most prominent paradigm distinctions is between positivism and the interpretive model. Veal (2006, p. 37) notes that positivism

is a research framework, which is ‘similar to that adopted by the natural scientist, in which the researcher sees people as a phenomena to be studied from the outside, with behaviour to be explained on the basis of facts and observations gathered by the researcher’. In contrast the interpretive model proposes that ‘more reliance be placed on the people being studied to provide their own explanations of their situation or behaviour (Veal, 2006, p. 37).

It is the researcher’s contention that peoples’ perceptions of the appropriateness of forest land use cannot be grounded in positivist thinking, where reality is considered fundamental and not reliant on individual meaning (Creswell & Miller, 1997). For this reason a mixed methods approach has been employed whereby the researcher has sought to interpret a positivist neo-classical economic theory (i.e. contingent valuation) using interpretive psychological measures (i.e. *Personal Construct Theory* repertory grids). Veisten (2007, p. 207) noted that contingent valuations do not ‘conflict with the positivistic view as long as the motives or reasons behind those valuations are kept out’. This thesis is using PCT repertory grids to understand these values.

Marsden and Littler (2000) have noted that PCT and repertory grids are consistent with paradigms that focus on the psychological processes that people use to make sense of their material and social environment (see also Alexander & Loggerenberg, 2005; Hutchinson, 1998; Tan & Hunter, 2002). The repertory grid instrument, which has been employed in this thesis, is particularly useful for researcher’s interested in bridging the divide between positivist and constructivist research approaches. In section 3.7.3 reference will be made to some of the repertory grid methods’ positivist characteristics; particularly its numerical nature and suitability for factor analysis, frequency counts etc. While it would be persuasive to argue therefore that the repertory grids have no interpretive characteristics; one must always remember that repertory grids are a methodological tool rather than a research method or theory. They operate on a similar plane to interviews and questionnaires (Alexander & Loggerenberg, 2005). They also have their basis in the underlying philosophy of PCT, which will be shown in this thesis to be based around the constructivist idea of an individual interpreting an event or phenomenon according to their own values. These values are, in turn based on personal experience. Repertory grids offer a means whereby this rich personalised data can be

presented in a systematic manner:

The grid is perhaps best looked on as a particular form of structured interview. Our usual way of exploring another person's construct system is by conversation. In talking to one another we come to understand the way the other person views the world. What goes with what for him (sic), what implies what, what is important and unimportant and in what terms they seek to assess people and places and situations. The grid formalises this process and assigns mathematical values to the relationships between a person's outlook on the world. (Fransella & Bannister, 1977, p. 4)

The next part of this chapter will outline aspects of the case study approach that the researcher has employed in order to test this new approach to the study of the values, which underpin economic contingent valuations

### **3. 3 Case Study Research Approach**

#### 3.3.1 The Case study Method

This thesis uses the Eden community on the NSW south coast as an exemplifying case study (Bryman, 2004) with which to examine new ways of understanding the attitudinal underpinnings of a tourism development contingent valuation exercise.

The case study method has been defined by Yin (1994, p. 13) as 'an empirical enquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used'. It is a research approach that has received considerable usage in tourism studies, PCT and forest landuse management research (e.g. Asafu-Adjaye & Tapsuwan, In Press, Corrected Proof; Botterill & Crompton, 1996; D. Brown, 2001-2002; Canning & Holmes, 2007; Davies & Wismer, 2007; Griener, Stoeckl, & Schweigert, 2004; Haralambopoulos & Pizam, 1996; Holden & Sparrowhawk, 2002; Kotchen & Reiling, 2000; Kuvan & Akan, 2005; K. Lindberg, Enriquez, & Sproule, 1996; Moscardo & Pearce, 1997; Nelson & Pettit, 2004; Sharlpey, 2002). In an analysis of the use of case study methods in tourism research Xiao and

Smith (2006) identified 76 peer reviewed articles from recent volumes (2000-2004) of Annals of Tourism Research, Journal of Travel Research, Tourism Analysis and Tourism Management, which employed case study methods. Content analysis of these papers revealed that tourism authors have employed case study methods to study a wide variety of topics including the economic impact of tourism operations, residents' attitudes towards tourism development, and tourism planning, community development and sustainability (Xiao & Smith, 2006). These analyses were employed over differing scales of analysis (i.e. local, state, and national) and typically involved the convergence of multiple sources of data (Xiao & Smith, 2006). The inherent flexibility of the case study approach has led many commentators to debate its intellectual rigour (see Hamel, Dufour, & Fortin, 1993; Tellis, 1997; Yin, 2002). In order to justify the use of the method in this thesis reference will now be made to the work of Veal (2006) who sought to describe the possible merits of case work for tourism researchers. Table 7 (see overleaf) outlines the merits of case study analysis, as seen by Veal (2006). For each item reference is made to the significance of this issue for the current research.

**Table 7: Merits of the Case Study Approach for this Thesis**

Merits of the Case study Approach (Veal, 2006, p. 111)	Relevance For This Thesis
The ability to place people, organisations, events and experiences in their social context.	This thesis is framed around a new interpretation of how economic psychology principles can aid the interpretation of an individual's economic contingent valuation data. The PCT repertory grid methods that this researcher has used allow people in a rural community to develop constructions (interpretations) of forest landuse that are based on that person's social context (i.e. past experience and current circumstance).
Ability to treat the subject of study as a whole, rather than abstracting a limited set of key features.	In order to comprehensively canvas community opinion on how different forest landuses are perceived in the Eden community it has been necessary to compliment contingent valuation and psychological repertory grid data with detailed demographic, historical and other information on the Eden area as a whole.
Multiple methods – triangulation – are implicit and seen as a strength	The notion that case studies allow for the convergence of multiple sources of evidence is significant for this research given the researcher's attempt to draw together multiple economic and psychology theories in order to better understand the subjective values rural communities attach to forest landuses. The multiple theories being employed necessitate the simultaneous use of interviews and survey research instruments. Different data collection methods were also appropriate given the sensitivities regarding forest landuse in the Eden area. This necessitated the joint use of anonymous community surveys along with in-depth interviews to canvas the opinions of key stakeholders in the most ethical manner possible.
Flexibility in data collection strategy allows researchers to adapt their strategies as the research proceeds	This thesis developed a multi stage research approach whereby community contingent valuation surveys were completed canvassing the WTP for an increase in national park zones throughout the whole Eden community. This was followed by repertory grid interviews with a smaller sample of community members. While the basic framework for these interviews was set in advance, a case study approach gave the researcher flexibility to adapt the interview process based on the issues raised by respondents in the survey.
The single, or limited number of cases, offers a manageable data collection task when resources are limited	The time frame available to a PhD scholar, along with other resource limitations necessitated Eden being used as a sole exemplifying case with which to test a new economic-psychology approach for understanding human values in contingent valuation surveys. The results of this study, although not directly extrapolated for other rural areas in this thesis, do offer a starting point for researchers interested in the development of adaptable methodologies for understanding how community values may be formed during landuse debates.

<p>There is no need to generalise to a defined wider population</p>	<p>Reference has been made in Chapter 1 to the lack of homogeneity in rural Australian communities (McManus &amp; Pritchard, 2000a; Sidoti, 2000). As with the theory of case study research, this heterogeneity in rural life makes generalisations between communities difficult (Creswell, 1998). The Regional Australia Summit Steering Committee (2000, p. 9) noted that ‘best practice community and business initiatives in regional Australia remain largely unknown beyond the boundaries of individual communities’. For this reason the researcher has not sought to use draw direct comparisons to other areas of rural Australia.</p> <p>Authors such as Veal (2006) acknowledge the potential for case studies to be used for exploratory theoretical development; in this case a new interpretation of how of how economic psychology principles can aid the interpretation contingent valuation data.</p>
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### 3.3.2 Case Study Selection Criteria

Eden was chosen as the sole case study site for this project on the basis of its history as a timber town and the increasing local focus on nature tourism development. Recent nature tourism initiatives in the region include the Far South Coast Nature Tourism Project (Australian Government: Department of Transport and Regional Services, Eurobodalla Nature Coast, Sapphire Coast Tourism, Forests New South Wales, & National Parks and Wildlife Service, 2006) and the 2004 Far South Coast Nature Tourism and Recreation Plan (Shepherd et al., 2004). Eden is also a timber town. South East Fibre Exports Pty Ltd (formerly the Harris Daishowa Corporation) has their main woodchip processing facility in Eden and in 2005 the company generated annual revenue in excess of \$72 million (IBIS World, 2005). 83 percent of the south coasts’ forest workers still live in the Eden Township (Social Assessment Unit DPIE, 1998b). The next section of this chapter will outline the procedure employed for the thesis’s contingent valuation survey.

### **3.4 Contingent Valuation Research Instrument**

The contingent valuation survey that is discussed in this section was designed to address the following research questions:

**What is the non market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**

**What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**

Field results for these questions will be canvassed in Chapter 4.

#### **3.4.1 Contingent Valuation and Determinations of Attitude**

It was noted in Chapter 2 that contingent valuations are an economic survey-based technique for eliciting preferences for non-market goods (Carson, 1998; Moons, 2002). Many contingent valuation applications have used attitudinal questioning as means of shedding light on WTP/Accept estimates (Arrow et al., 2003; Duthy, 2002; Horton et al., ND; Imber et al., 1991; Nunes, 2002). The use of attitudinal measures in contingent valuations is appropriate when one remembers that contingent valuation is a method based in economic consumerism where individuals make choices that are dependent upon their attitudes and beliefs (Pouta, 2003). In Australia the Commonwealth Government's 1992 Forest and Timber Inquiry checked contingent valuation attitudinal questions against a previously completed attitudinal report to gauge consistency in responses (Resource Assessment Commission, 2002). In much the same way Kotchen & Reiling (2000) employed the New Ecological Paradigm to investigate whether people with high environmental values exhibited certain contingent valuation responses. Kotchen & Reiling (2000) noted that those people with stronger environmental attitudes tended to provide legitimate yes/no responses to contingent valuation questioning.

Attitudinal questions in the Eden community survey were modelled off the framework employed in existing Australian forestry applications (Duthy, 2002; Imber et al., 1991) and can be seen in Appendix 1 (Questions 1 – 5). The next sections will outline the stages in the actual contingent valuation exercise.



### 3.4.2 Contingent Valuation Scenario Formulation

The first stage of a contingent valuation is the formulation of an appropriate scenario. Scenarios must outline the precise description of the good that is to be valued and the circumstances under which the good will hypothetically be made available to the survey respondent (Moons, 2002). The hypothetical scenario that was developed by this researcher for this project is as follows:

I am interested in understanding how you as a resident of Eden would value an increase in the area of national parks in your locality. An increase in the area of conservation reserves carries with it the potential for increased nature tourism development. However it would also require some reduction in the areas of land available for integrated forestry operations under Forest NSW's zoning plans.

The decision to link national park creation and tourism development was reflective of the increasing recognition of the joint role that tourism and park managers play in the management of Australia's natural biodiversity (TTF Australia: Tourism and Transport Forum, 2007b). Eagles (2004, p. 133) notes that the 'name national park is closely associated with nature-based tourism, being a symbol of a high quality natural environment with a well-designed tourist infrastructure'. TTF Australia and the Australian Conservation Foundation note that:

'Australia's national parks and other protected areas are an invaluable resource for the nation and its tourism industry. From the iconic and remote Uluru ...to the Great Ocean Road, our protected areas are the defining image of our nation and critical assets for a sustainable tourism industry'.

(Australian Conservation Foundation & TTF Australia Tourism and Transport Forum, 2004, p. 2)

While the presence of nature tourism in national parks is not in dispute, the exact nature of its role often is. Park managers have a number of competing management goals; to maintain user safety, protect natural resources, and to provide high-quality user experiences (Moore, 1994). In recent years this portfolio of interests has expanded to include recognition of the role of indigenous populations in protected area management (Department of Agriculture Fisheries and Forestry, ND). Management agencies such as

the National Parks Service in the US have to work to balance the rights of the public to enjoy natural areas, whilst also protecting the natural environment of the area (Noe, Hammitt, & Bixler, 1997).

Throughout much of the history of the national park movement there has been tension between these joint conservation and human usage objectives (Boden & Baines, 1981; Ovington, 1980). Human usage was the dominant factor in the creation of the world's first national parks. Yellowstone was created 'as a public park or pleasuring ground for the benefit and enjoyment of the people' (Anon, 2004). Many early national parks were similarly designated "Reserves for Public Recreation" (Ovington, 1980). Over time there has been increasing synthesis between the tourism and conservation objectives of parks. There was a general shift from an anthropocentric to conservation approach to national park management in the years following World War 2. This shift led to the creation of the NSW National Parks and Wildlife Service in 1967. Park visitors have played a role in the development of conservation ideologies amongst park agencies (Beal, 1994; Griffin & Vacaflores, 2004). In NSW the development/growth of bushwalking clubs was a catalyst for the development of the modern conservation movement and the formulation in 1932 of the National Parks and Primitive Areas Council (NPPAC) (C. Hall, 1995). In North America, Canadian ecotour companies have 'used the name national park (with its images of a high quality natural environment) as a brand name to attract potential ecotourists' (Eagles and Wind 1994 in Eagles, 2004, p. 133).

As with the decision to promote nature tourism development in a rural area; the decision to allow for more areas of forest land to be gazetted as national park is often a source of contention in surrounding communities. Protected area managers such as the NPWS face the complex task of managing 'for both conservation of the biodiversity within their jurisdiction and local community interests and resource needs' (Ormsby & Kaplin, 2005, p. 156). Since the 1992 IVth World Congress on National Parks and Protected Areas in Caracas there has been recognition by protected area managers that they must work to ensure local community support for the designation of protected areas (Figgis, 1999). This, however, is easier said than done when one considers the subjective nature of sustainability and the multitude of divergent positions on forest management that can exist within one host community.

The complexity of this management objective was recently illustrated in debates over the gazettal of the Cobboboonee National Park near Portland Victoria. This new park covers some 18,400 hectares and was formed in recognition of its high conservation values (Minister for Environment and Climate Change, 2008). Conservation groups such as the Wilderness Society have been quick to praise the benefits of the park, noting in particular its biodiversity protection value (Anon, 2008). For more than 2 years, however, the Cobboboonee National Park has been the subject of fierce local debate between groups such as the Cobboboonee Community Forest Group and the Portland Field and Naturalists Group. Issues of contestation include; the degree to which local populations will be restricted from accessing forest areas for recreational activities such as hoarse and trail bike riding; levels of public consultation; the degree to which biodiversity was actually under threat by forest users, and the ability of locals to continue with traditional fire wood collection practices (Cobboboonee Community Forest Group, ND).

The fact that communities can respond to the development of national parks in different ways has led to researchers taking a variety of different approaches to understanding the people/park relationship. Some studies have considered the social context of communities adjacent to proposed national park areas (e.g. Fiallo & Jacobson, 1995; Raval, 1994). Other studies have considered the ability of tourism development to simultaneously meet the challenges of local conservation and community development (e.g. Lepp, 2002). Some research has also considered the ways in which communities respond to conservation and biodiversity programmes associated with park/protected area development (e.g. Mark & Agrippinah, 2001; McFarlane, Craig, Stumpf-Allen, & Watson, 2006). The one issue that is, however, fundamental to all research in this area is the perceptions and attitudes that host populations have of protected areas (Allendorf, Smith, & Anderson, 2007). Understanding how these perceptions may be formed is the focus of this thesis.

The increasingly close connection between park and tourism managers was one reason behind the wording of the contingent valuation scenario. Another reason was the need to develop a set of circumstances where tourism and the development of forestry products were mutually exclusive. Both tourism and forestry are accepted components of state forests. State forests may be defined as areas of forest land managed by Forest

NSW under the Forestry Act 1916, with the primary objective of ‘providing a sustainable supply of timber into the future in conjunction with a range of social, environmental and economic benefits consistent with community expectations’ (Forests New South Wales, 2006). During 2003 and 2004, Forests NSW developed a strategy for managing state forests for sustainable recreation, sport, tourism and training. The result of this project was the report Living, working, playing ... Forests 2005-2009. The primary objective of this initiative was to ‘promote and encourage the safe and responsible use of State forests for commercial and private recreation, sport, tourism and training in a way that is complementary to the corporate objectives of multiple-use sustainable forest management’ (Forests New South Wales, 2004b, p. 5).

In contrast, protected area managers typically work under a more restrictive mandate. Protected areas have been defined by the Commonwealth Department of Environment and Water Resources as; ‘An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means’ (Department of Environment and Water Resources, 2004). Tourism is increasingly becoming a prime concern for protected area and state forest managers. On a national level the TTF Australia: Tourism and Transport Forum have commissioned projects such as the A Natural Partnership: Making Tourism a National Priority initiative to explore how the tourism sector in protected areas could be helped to reach its potential (TTF: Tourism and Transport Forum, 2004).

The decision to frame the project’s contingent valuation survey in terms of a hypothetical future for Eden with a reduction in the land available for extractive logging operations was modelled off the approach employed in James (1994). As state forests and national parks represent the two principal public land management zonings at play in the south east forests of NSW; a map showing the area of land allocated to these groups was provided to the respondents, along with other background information (see Appendix 1).

Originally there was to be an extension of this scenario to include specific reference to the first five year review of the Eden RFA. The rationale was that an increase in areas of

reserve status was a component of the Supplementary Tasmanian Regional Forest Agreement 13 May 2005, signed to mark the culmination of the Tasmanian RFA's first five year review (Commonwealth Government of Australia & Tasmanian State Government, 2005). National park and reserve development is also an established component of the RFA process in the Eden region. The Eden RFA resulted in the creation of 33 000 additional hectares of national park additions in the Eden region (Commonwealth Government of Australia & State Government of New South Wales, 1999). While it is important that contingent valuation scenarios are of relevance to local stakeholders, it was decided after discussions with various forestry stakeholders in the Eden area to remove reference to RFAs from the scenario. Suggesting that land use change may follow RFA review was considered overly provocative with respect to its possible effects on local land management debates

Another characteristic of the scenario was that there was no reference made to the size of possible increases in national park reserve area in the south coast forests. There was no perceived value in this survey being concerned with additional increases to specific national parks e.g. South East Forests, Mount Imlay, Ben Boyd etc. Nor at any point was the survey suggesting that the future for the area should be based exclusively around logging, conservation or a composite of activities. The researcher was simply interested in whether people in Eden put a value on an increase in land earmarked for reserve status, assuming some reduction in land available for the sourcing of material for forest industries under State Forest zoning plans. Methods of contingent valuation payment and response elicitation techniques will be discussed in the next section.

### 3.4.3 Contingent Valuation and Response Elicitation

WTP for an increase in land allocated to reserve uses in the south east forests was extrapolated by means of a Payment Card method. This methodological approach was developed as a response to the tendency of respondents to provide non responses in open ended contingent valuation questioning (Mitchell & Carson, 1989).

The Payment Card method is not the only approach available to contingent valuation researchers. Other techniques include dichotomous choice questioning, the bidding game and open Ended questioning (Nunes, 2002). Dichotomous Choice questioning is

the established approach for many of the existing studies that use Contingent Valuation in Australia's forested environments (Carter, 1992; Rogers, 1992). Open ended approaches are usually only employed due to budget and time considerations which may preclude appropriate pre testing of response ranges (Duthy, 2002). The rationale for using Dichotomous Choice questioning is usually that it affords respondents less opportunity to bias their answers in the hope of influencing the survey results (Imber et al., 1991). Under the Dichotomous Choice approach respondents can only answer yes or no as to whether they would be willing to pay for a particular scenario. Dichotomous Choice, as opposed to open-ended responses is also often considered appropriate in that taxes, a common payment vehicle in forest applications of the CV method, are not normally open to public debate (Carson, 1998; Cho, Newman, & Bowker, 2005). In spite of the various positives connected to the use of Dichotomous Choice questioning, some criticisms of the method do exist. One such criticism is that it is a technique that is susceptible to 'yea saying' (Kreg Lindberg & Johnson, 1997, p. 100) i.e. where respondents may be compelled through societal pressure to contribute to a project even if their WTP is less than the stated amount. This researcher considers this to be problematic in that the decision to contribute to environmental trust funds is obviously a very personal decision. While it is appropriate to specify a range of possible responses in line with existing studies; it must be accepted that respondents may not feel it appropriate to contribute at all. This project is also avoiding the use of dichotomous choice approaches because the researcher is not specifying an exact area of national park creation or an exact area of land to be lost by woodchip industries. As such a payment card method illustrating a range of possible responses is deemed more appropriate.

The payment card tool, which was employed in this project involved respondents being offered a range payment amounts. The payment amounts were \$0, \$10, \$25, \$50, \$75, \$100, \$125, \$150, \$200 and \$200+. These amounts were modelled from the work of Lockwood et al. (1993) who measured Victoria's WTP to reserve unprotected East Gippsland national estate forests as National Parks during the heyday of environmental debate on the merits of RFAs. While Lockwood et al. (1993) provided payment options of up to \$950, they also emphasised that their Gippsland specific sample had a mean maximum WTP of only \$62. This is comparable to Roger's (1992) study of old growth

forest in Armidale and Dorrigo where it was found that the average annual donation for environmental protection was between \$77 and \$126. Based on this it was chosen to cap contributions in this survey at \$200 per annum. In the survey it was specified that annual contributions would continue for 13 years i.e. the remaining lifespan of the Eden RFA and that payment was to be through a contribution to the Natural Heritage Trust<sup>16</sup>.

Elicitation of respondent's WTP was a multi stage process. In the first instance a payment question (Bateman & Langford, 1997) was included to ascertain in principle support for the increase in local reserve area. Referendum questions are a common contingent valuation technique. Mitchell and Carson (1989, p. 94) raised the applicability of referendums to contingent valuation surveys when they noted that 'referenda are actually used as a mechanism to enable citizens to make binding decisions about the provision of public goods'. Pouta (2003) employed referendum questions in conjunction with open ended contingent valuation questions in the local community component of her research into forest conservation. A referendum question was employed in this thesis with the aim of limiting bias in responses. Only respondents who answered yes to the referendum question were then directed to the payment card questions, which are illustrated in Appendix 1.

A trust fund administered by the Natural Heritage Trust was determined to be an appropriate payment vehicle for the contingent valuation analysis (Champ, Flores, Brown, & Chivers, 2002; Maxwell, 1994). The Natural Heritage Trust is an organisation with a history of involvement in RFA debates and the earlier 1992 National Forest Policy Statement. For example the Strategic Plan for the Private Land Component of the CAR Reserve System approved by the Commonwealth in 1998 was implemented on a budget of \$30 million that was partially funded by the Natural Heritage Trust (Price Waterhouse Coopers, 1999).

Following the establishment of a respondent's WTP for an increase in the area of forest reserves around Eden, the survey then sought to determine the reasons behind this

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<sup>16</sup> The Natural Heritage Trust was set up by the Australian Government in 1997 to help restore and conserve Australia's environment and natural resources. Investments are made to projects on a local, state and/or national level. A primary activity of the trust is 'establishing and effectively managing a comprehensive, adequate and representative system of protected areas' (Australian Commonwealth Government, 2007).

decision. The reasons given to respondents for justifying their contingent valuation response were modelled off frameworks in Mitchell and Carson (1989): See Appendix 1 for a breakdown of response justifications that were provided to respondents.

#### 3.4.4 Contingent Valuation and Response Demographics

The final component of the Eden contingent valuation survey was a series of demographic questions. Demographic questioning is a component of contingent valuation analysis (see Horton et al., ND). Demographic questioning has the effect of allowing a researcher to determine whether the response sample is representative of the broader population in the case study area (Bateman & Langford, 1997). It is also important in the sense that as populations grow and economies develop, forest values have the potential to dramatically change (Bishop, 1998). The notion that experience and perception is open to revision and replacement will be illustrated in the PCT component of this thesis. A variety of studies have for instance noted the correlation between length of residence alone as a measure of community attachment (Sheldon & Var 1984, and Um & Crompton 1987 in Clark & Stein, 2003). Demographic questioning in this thesis canvassed topics such as age, income, time spent in the region and employment history.

#### 3.4.5 Response Validity

Mitchell and Carson (1989) categorise validity into three types; content validity, criterion validity and construct validity (convergent and theoretical) (R. Mitchell & Carson, 1989). Content validity relates to the quality of the survey and the impact that this may have had on respondents (Horton et al., ND). It differs from other validity types in the sense 'that it can only be assessed by a subjective judgement based on an examination of the instrument' (Mitchell & Carson, 1989, p. 190). The researcher has attempted to address the issue of content validity in two ways. Firstly the wording of questions was pre-tested by an appropriate group of experts on the subjects being considered. Experts were deemed to include representatives of the various land management agencies, tourism managers and timber operators. Secondly, as much as possible, the survey has been modelled on other contingent valuation studies that have focussed on reserve creation in Australia's south east (e.g. Bennett & Carter, 1993; Carter, 1992; Lockwood et al., 1993; Rogers, 1992).



Criterion validity essentially refers to an actual market transaction that can be compared against a contingent estimate to determine its accurateness. The problem with determining a criterion value for national parks is that real markets frequently don't exist, at least within the everyday transactions of community members (Horton et al., ND). It will be demonstrated in chapter four that only a small number of respondents (n=3) identified themselves as standing to benefit financially from an increase in the nature tourism industries in national parks. While n=23 respondents worked in Accommodation/Cafes/Restaurants and n = 18 in Retail/Trade and n = 33 in forestry/timber, it is not possible to estimate the revenue for these individuals that would necessarily be lost or gained from the increase in the size of local national parks.

Construct validity focuses on whether the results of a contingent valuation estimate are expected and is typically determined with reference to demographic and other variables related to the respondents. Understanding the personal characteristics of respondents is important because, by its very nature '... every contingent valuation survey will be different and subject to different constraints and opportunities' (Imber et al., 1991, p. 91). It is also significant when one considers the issue of strategic bias. Strategic bias essentially refers to the potential for respondents to intentionally inflate or decrease their payment amounts to influence the outcomes of the decision making process (Bennett & Carter, 1993). Respondents can do this because the contingent valuation scenarios and requests for payment are hypothetical

Chapter four will consider the validity of contingent valuation results in relation to a number of independent variables

### **3.5 Pilot Surveys**

The composition of the final contingent valuation survey instrument was influenced by two pilot surveys. The first pilot survey was distributed to members of the Eden District Rotary Club in July 2006. The decision to use the Eden District Rotary Club was reflective of an early intention to distribute the community survey through local sporting clubs and cultural societies. Contact was made with approximately 12 clubs, with interest shown by groups including Eden District Rotary, the Eden Whalers

Football Club and Nethercote Trail Riders. The club distribution idea was eventually abandoned due to concerns about the small number of people in each club (often less than 20), the infrequent club meeting times, the fact that club participation is reflective of a certain type of resident and that not all club members necessarily live in Eden. It was deemed that the above conditions would bias the response sample, as well as overly complicate the fieldwork process.

While the decision was eventually made to undertake an Australia Post unaddressed mail out of all Eden residents, existing club contacts did make the Eden District Rotary Club appropriate for the first pilot. The pilot surveys were distributed to the 18 club members in attendance at a regular group meeting. Following a presentation by the researcher on the nature of the research, club members were encouraged to complete the survey in their own time. After completion the club president then mailed the completed surveys back to the researcher. 5 completed surveys were received.

The second pilot survey was completed anonymously by individuals on the Bega Valley Shire Council's intranet database from August 30 to September 8 2006. The distribution of the second pilot survey was by the online survey tool Survey Monkey (<http://www.surveymonkey.com/>). The use of Survey Monkey was designed to facilitate a quick distribution and collation of results, whilst also cutting down on the costs inherent in a postal survey. Comment was sought from other researchers at the University of Technology, Sydney who have previously used Survey Monkey prior to distribution. A draft was also provided to Bega Council executives for their comment. A covering letter was provided with each survey. This letter acquainted the reader with the broad nature of the research, the purpose of the pilot survey, guaranteed confidentiality and emphasised the hypothetical nature of the research questions. A report was completed on this pilot for the thesis sponsors and Bega Council and is available from the researcher on request.

Throughout the pilot survey phase of the research, comment was also continually being sought from the principal forestry, tourism and government stakeholders in the Eden area on the questions being asked. Stakeholder comments led to significant revisions being made to the survey instrument. Most changes related to the tone of the survey and

the inclusion of declarations that this work was not seeking to influence local forest debates. A total of 27 completed surveys were received by the researcher from the survey. A variety of lessons were learned from the two survey drafts, which influenced the main round of survey data gathering.

From the Eden District Rotary Club pilot it was concluded that respondents have difficulty in comprehending the nature of the repertory grid questioning. As such it was appropriate to remove this material from the 2nd pilot survey and from the future Eden community survey. The attempt to incorporate PCT and contingent valuation analysis into the same postal survey was useful in that it shed light on the inviability of the approach. There was precedence for attempting to include repertory grids in a self completed survey (see Scherl, 1988). However, in view of the concerns raised it was decided to undertake repertory grid questioning in the form of one on one interviews, which is the more common approach (Borell et al., 2003; Botterill & Crompton, 1996; Diamond, 1982; Kelly, 1955; Mena, 2001; Potter & Coshall, 1988).

The two pilot surveys also made it clear to the researcher to be mindful of survey length. Although no Bega Valley Shire Council respondents specifically commented on the survey length, there was a substantial decline in the number of respondents about half way through the survey. This decline was most noticeable at Q6 where contingent valuation questioning began. It is speculative as to whether the amount of material presented to respondents at this point was off putting, or whether the decrease in interest was connected to the abstract nature of the contingent valuation itself. Following lengthy consideration it was determined that the material in the contingent valuation section of the survey had been presented in as simple a fashion as was possible. The retention of questionnaire design in the survey proper was also made on the basis that the question format mirrored existing national contingent valuation surveys (see Imber et al., 1991; Resource Assessment Commission, 2002).

It was also determined that the Survey Monkey distribution was largely successful. Respondents who completed the survey expressed no concerns regarding the flow of ideas, or difficulties answering specific questions. For this reason an option to complete the survey online was provided to Eden residents during the main postal survey. Of

some concern, however, was the fact that 3 Bega Council employees were unable to access the survey online, a fact which led to their non participation. Discussions with Adrian Weedon (the researcher's Council contact) appeared to indicate a problem with the individual's computer settings, rather than with the online survey program. This conceivably could have affected Eden residents who chose the online response option. Owing, however, to the fact that all residents were also sent a hard copy of the survey this was not considered a major problem.

From the Eden Rotary Club pilot it also emerged that some newer residents had difficulty in accepting that they can contribute to forest management discussions. As such, it was deemed necessary to include a statement in the final survey introduction which drew attention to the fact that all views are important.

### ***3.6 Repertory Grid Research Instrument***

Repertory grid interviews were undertaken with 22 community members with the intention of shedding more light on community opinions regarding forest land use, which had been expressed in the contingent valuation survey. The research method, which is outlined in this section, will address the following research question:

***How may Personal Construct Theory repertory grid methods aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?***

George Kelly, the founder of PCT developed repertory grids with the aim of allowing an individual's personal construct systems to be visually represented and analysed (Fransella & Bannister, 1977). It is a technique which is based on individual experiences and the personal generation of constructions/interpretations of the world at a given time and in a given context (Borell et al., 2003). The potential for a mathematical, hierarchical and ordered representation of an individual's personal constructs in a grid setting may be connected to Kelly's organisation corollary, which stated that 'each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs'

(Diamond, 1982; Kelly, 1955, p. 56).

Tourism commentators have shown interest in repertory grid techniques for at least the last 20 years (see Allendorf et al., 2007; Botterill, 1989; Botterill & Crompton, 1987, 1996; Coshall, 1991, 2000; Embacher & Buttle, 1989; Gyte, 1988; Hankinson, 2004a, 2004b; Lawton, 2005; McNicol, 1996; Naoia, Aireyb, Iijimaa, & Niininenc, 2006; Pearce, 1982; Potter & Coshall, 1984, 1988; Waitt, Lane, & Head, 2003; Walmsley & Jenkins, 1993). Recently Veal (2006) referenced repertory grids as a tool that can be employed in survey design in his 3<sup>rd</sup> edition of Research Methods for Leisure and Tourism: A Practical Guide. Over the last 20 years tourism researchers have employed repertory grid techniques to examine different aspects of the destination image and tourist's perceptions of destination attributes. In contrast the technique has received limited application in the area of SIA (Coakes et al., 1999). Coakes et al. (1999, p. 196) used the technique to 'understand the taxonomy of communities within a particular region, that could be used by social assessors to understand ... the way in which one community perceives another ... [in order to predict] likely community response to future change in forest use'. This thesis has built on this work, using repertory grids to understand community members' perceptions of the likely role of forest based nature tourism in their area Coakes et al. (1999) noted that repertory grids cannot be perceived in isolation from other impact assessment measures. This thesis, through a parallel application of contingent valuation and repertory grid methods has sought to show how this impact assessment measure/repertory grid relationship may be operationalised.

Typically repertory grid exercises are seen as occurring in four stages: defining elements (subjects of concern), eliciting constructs (points of similarity and difference between elements), grid completion and grid analysis (Waitt et al., 2003). This chapter will now move on to examine the methodological aspects of each of these stages.

### 3.6.1 Repertory Grid Element Selection

The two principal components of repertory grid analysis are elements and constructs. Elements represent subjects of inquiry, which in this thesis were 7 images of different forest land uses in south east NSW (some prominent landuses in the Eden area were

excluded). The use of photographs as elements is an established approach in repertory grid studies (Waite et al., 2003). It is also seen as appropriate to use photography in forest landuse studies given the close connection between photography and experience of landscape; 'a series of comparative evaluations has confirmed the general viability of photographs as surrogates for landscape experience' (Fairweather & Swaffield, 2002, p. 285). Photographs were sourced from Sapphire Coast Tourism and Google Images (see Appendix 2).

The selection of landuses for consideration was based on a larger set of 13 landuses referred to in the community survey (see Appendix 1 Q1). 3 photographs relating to forest based tourism were employed in the repertory grid exercise i.e. Bushwalking, 4 x 4 Wheel Driving and Camping. Also 3 photographs relating to traditional extractive forest industries were employed i.e. Forest Plantations, Pulp Industry and Dairy Farming. The seventh photograph was an image of untouched forest. It was explained to the interviewees that it was implicit that there was no formal industry operating in this area. It was deemed that 7 elements were appropriate based on a review of comparable tourism and Australian rural studies employing repertory grid techniques. The number of elements employed in these studies frequently ranges from 6 – 11 (Coakes et al., 1999; Hankinson, 2004b; Potter & Coshall, 1988).

The selection of 7 elements for analysis does suggest some form of meaning imposition by the researcher. Some prominent local landuses such as hardwood sawmills and hunting was excluded. This decision was based on a thorough review of planning documents and media material relating to forest use in the Eden area. The researcher was also careful to emphasise that the landuses being examined are not exhaustive of those that exist in the Eden area. Often information on these and other excluded landuses was volunteered by the interviewee in the course of the repertory grid interview.

In determining the composition of elements for repertory grid study, the researcher also factored in issues identified in the main community survey. For instance the original aim had been to focus on extractive forest industries and nature tourism in the interviews. However, on reviewing the survey results it was discovered that some

respondents were of the view that the forests should be left alone in the Eden area.

I personally feel very strongly that conserving what we have now, not in years to come [should be] a very high priority ... As far as I'm concerned tourism, logging and the whole industry can go to hell. We've taken enough from mother earth. It's time we give something back. Otherwise, there will be nothing to see for either this or future generations and even less to conserve.

(Community Survey – Respondent 79)

For this reason the photograph of untouched forest was included in the repertory grid interviews (see Appendix 2)

### 3.6.2 Repertory Grid and Construct Elicitation

In their most simple form a construct is an individual interpretation of a way in which different elements relate. The function of a construct in a repertory grid is that an individual is fulfilling their inherent potential to interpret the world around them (Fransella & Bannister, 1977). The parameters of that world have been defined by the researcher in terms of the nature of the research question. An individual's ability to interpret the world around them based on their own personal histories and value judgments was described by Kelly in terms of man the scientist; the idea that ordinary people have the power to predict and control their own destinies (Kelly, 1955).

Interviewees in this thesis were asked to develop constructions or individual interpretations of different forest landuses relative to the over riding idea of whether they consider a landuse to be appropriate in the Eden area. Constructs were presented to interviewees in a triad fashion. The triad method involves randomly selecting three elements and asking the participant to describe in a short phrase or sentence how two of them are alike and different from the third (Marsden & Littler, 2000). For example 'Good Staff Service [construct] is important for the restaurant [element] and the shoes [element] but not for newspapers [element]' (Marsden & Littler, 2000, p. 820). Other repertory grid techniques include laddering and pyramiding (see Jankowski, 2004). These techniques were not employed in this thesis.

Nine triad combinations of elements were presented (see Appendix 2). The combinations were designed to ensure equal opportunity for comparison between the three principles groups of elements i.e. nature tourism, traditional industry and no human usage. Respondents who could not generate a construct for a particular element combination were not forced to do so (Jankowski, 2004). In some cases this resulted in as few as 4 constructs being elicited. This is not considered detrimental to the analysis of thesis results because previous research has linked the number of constructs elicited to the degree of differentiation in an individual's personal construct system (Adams-Webber, 1979).

To help interviewees complete the repertory grid a set of detailed instructions was provided (see Appendix 2). This was in addition to a hypothetical response sheet, which the researcher completed for a different set of elements. This response sheet was provided to assist any interviewees that had difficulty comprehending the nature of the interview exercise (see Figure 8 – 2 pages overleaf).

The instructions and hypothetical examples, which the researcher included in the repertory grid interview material, illustrate some aspects of construct formulation in PCT, which require further comment. Firstly it was emphasised to respondents in the interview instructions that the researcher was not seeking factually correct descriptions of the relationship between elements/landuses. Rather the focus was on the perceived relationship between landuses. This instruction brings us to the idea of bipolarity of personal constructs, a topic that Kelly (1955) explains in terms of the difference between a construct and a concept. To illustrate this Kelly (1955) asks us to consider the somewhat abstract notions of white and black. He argued that traditional logic would define the construct white and black as distinct entities; as distinct concepts (Kelly, 1955). Furthermore he pointed out that traditional thinking would argue that the opposite of black would be not black and white would be not white (Kelly, 1955). In PCT there is an attempt to move away from traditional assumptions of distinct concepts. The theory proposes that we interpret/construe the world in terms of a constant re-evaluation of likeness and difference between elements (Fransella & Bannister, 1977). What does this mean in the case of the idea of the bipolar construct black versus white? It means that if you had 3 balloons, 2 of which were coloured black and the third white,



your bi polar construct is not that 2 balloons are black and the third not black. Rather it is that 2 balloons are similar because they are black and one is different because it is white.

Over recent years people have come to debate this idea of bipolarity of personal constructs. The difference or triad method, which is being employed in this thesis, has in some instances been criticized as often generating bent constructs rather than constructs that are generally bipolar (Neimeyer, Bowman, & Saferstein, 2005). Neimeyer et al. (2005) note that researchers must decide whether they are seeking points of difference or points of opposition between constructs. This thesis has sought personalised points of difference between constructs. This can be illustrated through reference to the final hypothetical construct, which was included in the repertory grid interviews (see Figure 8 overleaf). The point of similarity between two of the elements is that they were important to Eden's community. Now the factual opposite description to this would be that the third element does not make a contribution to Eden's community. Instead what is written in the difference column is important to visitors. This means that the hypothetical respondent is saying that they perceive a difference between the way a landuse relates to the host community and the way it relates to visitors. Such a sentiment may tap into a degree of ambivalence to tourism's economic potential or a dislike of the way they perceive the host community as suffering from the presence of tourists. The only way to discover what issues are important is to ask for clarification of the reason for the construct, which was an important component of the research approach.

**Figure 8: Hypothetical Repertory Grid**

**Hypothetical Examples**



Images	Identification of Similarity	Identification of Difference	Camping	Pine Plantation	Bushwalking	Mountain Bike Riding	Untouched Forest	Dairy	Pulp Industry
2,4,6	Pays the bills	Does not pay the bills		✓				✓	✓
1,3,5	Environmentally Sensitive	Environmentally destructive.			✓		✓		
2,3,7	Growing industry	Stagnant industry		✓					✓
2,6,7	Modern industry	Traditional industry	✓	✓	✓	✓			✓
1,5,7	Important to Eden's Community	Important to Visitors		✓			✓	✓	✓

Another consideration was that interviewees should not be forced to construe a similarity relationship for each set of elements. Kelly (1955, p. 17) defined range of convenience as ‘that expanse of the real world over which a given system or theory provides useful coverage’. In asking Eden residents to develop constructs regarding the perceived appropriateness of forest industries in their area; the researcher had to provide elements (landuses) that were within the range of convenience of the desired constructs. Complicating this issue was the somewhat arbitrary nature of the idea of Eden’s forests in the repertory grid interview instructions.

People differed in their interpretation of exactly where Eden’s forests start and finish. Some interviewees pointed out that plantation forestry is focused inland around Bombala and that dairy farming is predominant in Bega. Due to this difference respondents had difficulty forming constructs for element triads that included dairy farming. This difficulty potentially indicates that dairy is an element outside the range of convenience for respondents. The PCT Range Corollary notes that ‘a construct is convenient for the anticipation of a finite range of events only’ (Kelly, 1963, p. 103). The researcher’s rationale for including the dairy farming element was that agriculture is a recognised forest based landuse in the Eden RFA area (Commonwealth Department of Primary Industries and Energy, 1998). The researcher was using such reports to determine the parameters of the PCT interviews, the results of which will be outlined in Chapters 4 and 5. The difficulties experienced as a result of this approach indicate that more comprehensive pre testing was needed in the Eden community itself.

When respondents had difficulty completing the grid, either because of issues with the range of convenience or something else, the following approach was adopted. Firstly, interviewees were directed to the hypothetical examples that had been prepared by the researcher. Whilst the researcher was careful to emphasise the hypothetical nature of these constructs, many interviewees found that the examples gave them a point of reference for the type of responses the researcher was seeking. Secondly, interviewees were given the opportunity to move on to the next triad combination. This approach was modelled from Jankowicz (2004).

In two cases interviewees were not able to see the point of the PCT approach and as such refused to complete the grid. This idea that some people could not see the

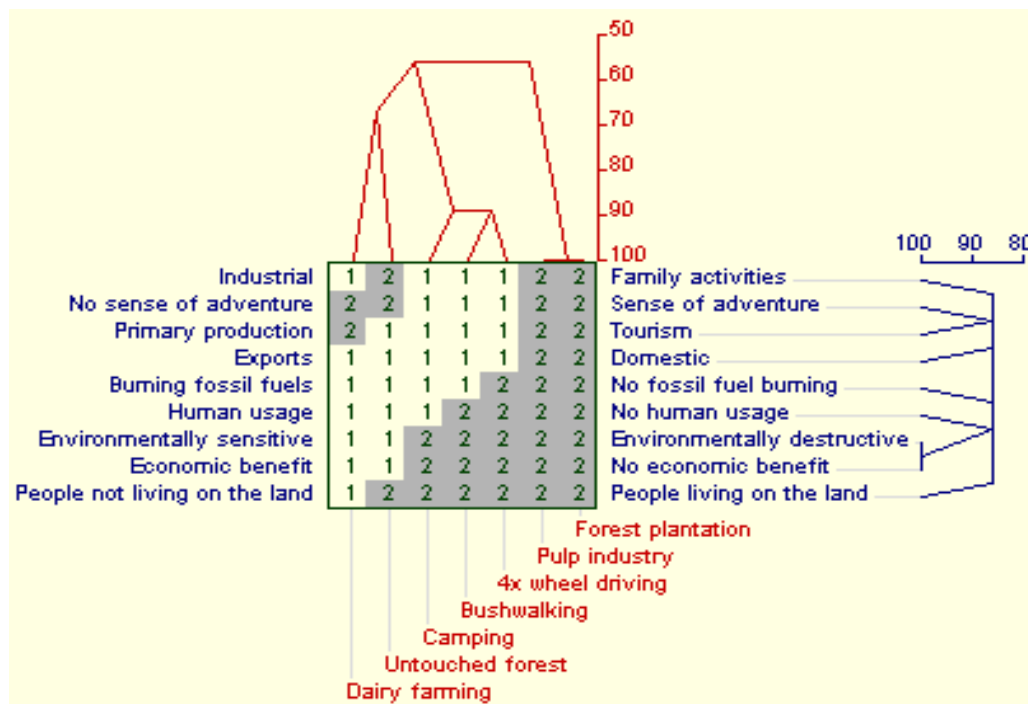
relevance of repertory grid techniques is understandable when one considers the notion of constructive alternativism. Constructive alternativism, which is a central component of PCT proposes that an individual's perceptions are open to constant revision and replacement (Kelly, 2003). Implicit in this idea is that there are different ways of looking at the world and that as such triad grid analysis may not be relevant to some people. One of the interviewees who refused to complete the exercise commented to the researcher after the interview that he thought the process was limiting, and that he preferred to have the opportunity to outline all the complexities that govern his views on the elements (forest land uses) under investigation. Given this an open ended discussion of the key issues relating to forest land use and an abandonment of the grid approach was appropriate. In its place the researcher conducted open ended discussions with interviewees to give them the opportunity to contribute. Owing to the absence of any repertory grid structure to the material gathered the results of these interviews are not included in the repertory grid results discussion (section 4.6). Selected quotes may, however, be included elsewhere in the thesis.

### 3.6.3 Repertory Grid and Analysis Approach

There are a number of methods available to researchers interested in interpreting repertory grid results. These methods include: frequency counts, content analysis (Canning & Holmes, 2007; Green, 2004; Hankinson, 2004b; Pike, 2003, 2007), visual focusing/eyeball analysis (Fransella & Bannister, 2004; Jankowski, 2004), cluster analysis (Lawton, 2005), principal components analysis (Coshall, 2000; Senior & Swailes, 2004) and Kelly's own non parametric hand method of factor analysis (Kelly, 1955; Kelly, 1969; Potter & Coshall, 1984, 1988). Computer programs, which can be used to analyse repertory grid data include Slater's *INGRID program*, Higgenbotham and Bannister's *GAB program* (Beail & Fisher, 1988) and *Statistical Package for the Social Sciences (SPSS)* (Bell, 1997; Jankowski, 2004).

This thesis has subjected individual repertory grid data to two way hierarchical cluster analysis using the RepGrid program (see <http://repgrid.com/>). Veal (1997, p. 287) defined cluster analysis as a ‘grouping procedure that aims to identify relatively homogenous groups of cases or variables based on selected characteristics’. The RepGrid program essentially functions by sorting constructs and elements into a focus grid. The arrangement of a focus grid is designed to illustrate how constructs and elements may be grouped with the least possible variation. A separate element tree and construct tree for each focus grid graphically represents the relationship and percentage match between adjacent elements and constructs (Fairley, 2002). Figure 9 is an example of one of the focus grids that was generated for this project.

**Figure 9: Focus Grid Subjected to Two-way Hierarchical Cluster Analysis**



Note: The blue text on the left and right hand sides lists the bipolar constructs that the respondent used to describe the relationship between different forest landuses. The 7 landuse elements are listed along the bottom of the grid in red. Numbers within the grid (either a 2 or 1) refer to the 2 point dichotomous ratings scale that was employed. “2” means that the landuse applied to the construct in the left hand column. Element and construct trees are provided by the *RepGrid* program.

The benefits of using computer programs such as *RepGrid* to analyse repertory grid data has been debated in the literature. Some commentators have sought to analyse the relationship between large numbers of elements and/or constructs using Kelly’s own

hand method for non parametric factor analysis. Some of the chief advantages of the method are that 'it relates both constructs and figures (elements) to the same basic factors, taking into account the interaction between them' (Kelly 1969 in Adams-Webber, 1979, p. 36). The technique also provides an opportunity for the researcher to complete the process by hand and retain a personal connection to the data. Proponents of the approach argue that maintaining a close personal connection to data is beneficial, particularly given the fact that computer analysis programs 'do not add anything to the information available in a grid, nor ... provide any information of the meaning of the grid' (Easterby-Smith, 1981 p. 22 in Fairley, 2002, p. 77).

The amount of information that was collected from n=22 interviews, which produced n=162 constructs meant that it was prudent to use computer programs to manage the material. The RepGrid program was used to analyse individual grid data because it can easily cope with the two point ratings scale for constructs that was employed in this thesis. There is debate about the use of different ratings scales in the PCT literature. In defence of the use of 2 point scales, Kelly (1955, p. 59) noted that 'a person's construction system is composed of a finite number of dichotomous constructs'. While Kelly (1955) was of the view that construct dichotomy should not preclude the use of scale analysis, there is a lack of consensus in the literature on the best length of the scale. Jankowski (2004) noted that 5 point scales are the norm, but that anywhere from 4 point scales to 7 point scales are satisfactory. When ratings scales are used, higher ratings are traditionally reserved for those cases where there is a higher degree of relevance between elements and construct (Neimeyer et al., 2005).

The next section will comment on the recruitment of participants for the before mentioned community surveys and repertory grid interviews. Also referenced will be the composition of contextual interviews completed with key forestry, tourism and local government stakeholders.

### **3.7 Participant Recruitment**

Social impact assessments in forest environments typically canvas both broader community views and specific forestry interest groups (Williams, Cary, & Webb, 2001). This section will report on the procedures employed in canvassing the views of the Eden community and specific forestry/tourism and governmental stakeholders.

Community surveys were used to circulate the thesis's contingent valuation economic instrument. Reference was made to the pilot surveys earlier in this chapter. The main community contingent valuation economic survey (see Appendix 1), which forms the basis of the results in Chapter 4, was distributed as an Australia Post unaddressed mail-out to all 1150 households in the Eden NSW 2551 area code in December 2006. A follow-up survey was distributed 1 week after the original mail-out. An incentive to participate was in the form of a \$500.00 Jet Start Travel Voucher, which was provided by TTF Australia and won by Ellen Barclay of Eden's Twofold Bay. The prize draw was completed on 19th February 2007 and the winner's name was drawn by Professor Jane Stein-Parbury (Chairperson - UTS Human Research Ethics Committee). The use of Australia Post unaddressed mail was due to changes in privacy legislation, which made it impossible to obtain an up to date copy of the Eden/Monaro Electoral Role. In April 2007 a second follow-up was undertaken. This survey was again distributed by Australia Post Unaddressed Mail.

As part of the December 2006 community survey respondents were given the chance to take part in a follow-up interview in February/March 2007 (see Appendix 2). 34 people indicated their willingness to take part and from this 25 interviews were completed. 22 interviews were completed using repertory grid methods; whilst three, for reasons already stated were conducted as semi structured interviews. Incentive to participate was in the form of a draw on the 27th March 2007 for a \$100 Coles Myer and Group gift voucher. The prize was drawn by Associate Professor Bruce Hayllar (Head School of Leisure Sport and Tourism – UTS) and was won by Don Hassan of Eden.

In addition to surveys and interviews with the Eden community; 10 forestry, tourism and government stakeholders were interviewed at length to provide contextual material for result interpretation. Recruitment of subjects for in-depth interviews was based on a

review of published material on forestry and tourism debates in south east NSW. Interviewees represented the following groups: The NSW National Parks and Wildlife Service (NPWS), State Forests NSW, Sapphire Coast Tourism, The Eden Chamber of Commerce Tourism Sub Committee, Bega Council, The Eden Aboriginal Land Council, South East Fibre Exports Corporation (SEFE), Timber Communities Australia, Chip Stop and The Eden Magnet

### **3.8 Ethical Considerations**

This research followed the UTS Research Ethics Guidelines for Research Involving Humans. Ethics approval for this research was granted on the 22nd February 2006 (UTS HREC REF NO. 2006-23A).

Given the sensitive and often polarised nature of community sentiment regarding tourism and forestry debates in Eden, every effort has been made to adhere to UTS policy guidelines and minimise any potential harm to research participants and the researcher. Focus groups were avoided as it was felt that discussions could be overly inflammatory. The researcher's focus on the values ascribed by different community members to different forest landuses necessitated the use of anonymous community surveys and follow-up interviews.

In developing the parameters of the community surveys the researcher also had to be careful to avoid inadvertently contributing to tension regarding the first 5 year review of the Eden RFA. For this reason the following note was included with survey instructions:

This survey is part of an independent Doctoral Thesis. Ethics approval for this survey has been granted by the Human Research Ethics Committee (UTS). The researcher Stephen Schweinsberg has no connection, financial or otherwise to any organisation involved in the management or use of Eden's forested areas. The results of this study will not contribute to any work being undertaken by any local stakeholder group. There is also, to the researcher's knowledge, no current Commonwealth or NSW State Government intention to change the nature of the Regional Forest Agreement legislation. The landuse change scenarios being proposed in this survey are hypothetical with respect to reference to the Regional Forest Agreement.



All interview and survey data has been stored within the researcher's locked office and on a personalised PC hard drive protected by a password known only to the researcher. Transcripts of in-depth interviews were coded to ensure respondent anonymity. Consent forms were prepared for all in-depth interviews. These forms explained the nature of the study, the respondent's rights as a research participant (rights of anonymity and to withdraw without financial or other penalty) and where the respondent's answers would fit within the wider research focus. In the case of the anonymous surveys written consent was not considered appropriate, as it would compromise anonymity. In these instances detailed information about the purpose of the research was provided with all questionnaires, along with material outlining the respondent's rights to anonymity and to refuse to participate. Included with this information were contact details for the lead thesis supervisor Associate Professor Stephen Wearing, the Human Ethics complaint number and the doctoral researcher.

### **3.9 Conclusions**

This chapter has sought to elaborate on the research paradigms and methodological tools, which formed the basis of the fieldwork carried out in the Eden community. This discussion was built on the core argument that a constructivist research approach is ideal for the study of the values, which underpin economic contingent valuations. To this end this chapter has outlined the various facets of the repertory grid and contingent valuation research instruments, whilst also commenting on sampling, participant recruitment and ethical considerations. The next chapter will report on fieldwork findings.

# Chapter 4: Results

## 4.1 Introduction

The previous chapter outlined the methodological procedures that the researcher employed to collect data and analyse research questions in the Eden case study community. This chapter will present the results of this analysis.

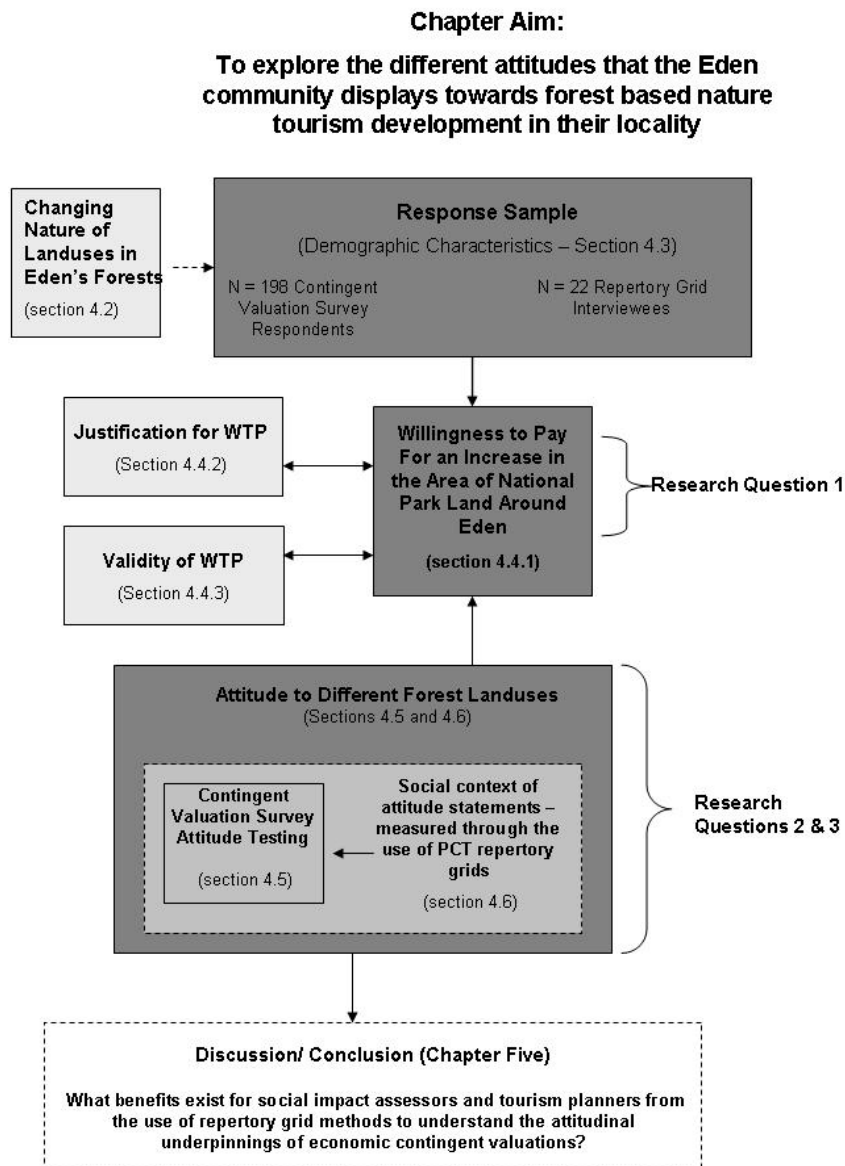
The purpose of this chapter is to explore the different attitudes that the Eden community displays towards forest based nature tourism development in their locality. This will be achieved with reference to the three thesis research questions:

- 1. What is the non market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**
- 2. What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**
- 3. How may Personal Construct Repertory Grids aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?**

The structure of this chapter is diagrammatically illustrated in Figure 10 (overleaf). The chapter will open with a historical overview of forest landuses in the Eden area (see section 4.2). This historical analysis will illustrate some of the issues, which may influence community receptiveness to the prospect of an increased focus on national parks in the Eden RFA area. This will be followed by a demographic breakdown of the two Eden sample groups in section 4.3. The chapter will then proceed to discuss the contingent valuation community survey results in section 4.4. The contingent valuation survey was conducted with the aim of determining Eden residents' WTP to reserve public forests in national parks. Such reservation would preclude the utilisation of these forests for timber whilst potentially placing nature tourism in a position of primacy within the local economy. From this contingent valuation survey it was established that the median WTP per respondent for forest reservation was \$93.54 per annum (see section 4.4.1). Response justification questions included in the survey revealed that the majority of sampled Eden residents chiefly rejected the contingent valuation scenario proposition on the grounds that they are satisfied with the existing landuse balance in

the Eden RFA area (see section 4.4.2). In doing so the Eden residents established a link between attitude to forest landuses and local receptiveness to the further development of national parks.

**Figure 10: Results Chapter Outline**



The final part of the chapter will examine contingent valuation attitudinal questions pertaining to different forest landuses, with a view to further understanding the attitudinal underpinnings of contingent valuation WTP estimates. Results from this contingent valuation attitudinal questioning will canvas community perspectives on forest based tourism, nature tourism and their interaction in Eden's forests (see section

4.5). These results will then be further interpreted using PCT repertory grid methods (see section 4.6).

The linkages that this thesis is proposing between contingent valuation attitudes and repertory grid methods can be encapsulated in the idea of social context. Social context has been defined as one of the three principal components of contingent valuations, along with the item which is being valued and the payment vehicle (Mitchell & Carson, 1989; Pouta, 2003). Existing contingent valuation social context work has proceeded on the assumption that 'evaluative judgements [such as WTP] should be sensitive to features of proposed transactions that the respondents consider to be relevant' (Welch & Fischhoff, 2001, p. 209). *Personal Construct Theory*, and by association repertory grid methods are based around an individual interpretation of relevance. Repertory grids allow relevance to be established through the elicitation and mapping of an individual's set of personal constructs regarding a particular topic. This chapter will consider various ways that repertory grids help us understand social relevance through reference to the results of interviews that the researcher completed with 22 residents who had also completed the community contingent valuation survey. The implications of this link for social impact assessors and tourism planners will subsequently be considered in Chapter 5.

## **4.2 The Changing Nature of Landuses in Eden's Forests**

Since the early part of the last century Eden's forests have been a site for recreational and primary industry practices. This section will present a brief historical overview of forest landuses in the Eden area. The purpose of this narration is to illustrate some historical factors, which will later be demonstrated to underlie current landuse attitudes.

The township of Eden began in the 1840s, initially as a centre for commercial whaling and as a stopover point for vessels making the perilous passage from Sydney to Van Diemen's Land (Waite & Hartig, 1997). The development of commercial timber operations began in the mid 1800s. Originally the Eden timber industry made use of pit saw technology prior to the development of steam powered operations in the early 1900s (Commonwealth Department of Primary Industries and Energy, 1998;

Swinbourne & Winters, 2001). Sleeper cutting commenced in Eden in 1903. As in many areas of Australia, sleeper cutting in Eden was focussed on supporting the burgeoning international and domestic rail transport industries (Dargavel, 1987; McManus, 1999). In the 1940s there were moves to export silvertop ash sleepers from the Eden area, but by 1963 this industry was in decline (Bridges, 1983 in Commonwealth Department of Primary Industries and Energy, 1998). Problems with the development of a local silvertop pulp industry were the catalyst for the arrival of Japanese woodchip interests in the 1960s. In 1967 the now entirely Japanese owned Harris Daishowa (Australia) Pty Ltd. (today South East Fibre Exports -SEFE) established a woodchip mill on the shores of Eden's TwoFold Bay (McManus, 2002). In 1996 the Duncan's Sawmill in Eden was closed, typifying a departure from traditional hardwood sawmills.

The shift from hardwood sawmills to woodchipping typifies many of the changes that have inundated Eden over the last 40 years. Beyond this there has also been a broader reappraisal of the role of primary industry sectors (Wynhausen, 2001). As was noted in Chapter 1, the decline in primary industries is characteristic of many rural areas in Australia (Beer et al., 2003). One of the most significant local industry closures in Eden over the last 10 years was the closure of the Heinz Watties tuna cannery in 1999. Tuna had been processed in Eden for over 50 years and in 1999 it was estimated that one in eight local Eden workers were employed at the cannery (Anon, 1999).

Despite changes that have occurred in the local forest industries; Eden has remained an important part of the national forestry sector, which supports 83,000 full-time jobs and contributes 1 percent of GDP (Department of Agriculture Fisheries and Forestry - Bureau of Rural Studies, 2007). Forestry NSW is the group responsible for the management of NSW's 2.8 million hectares of plantations and forests (NSW Department of Primary Industries - Forests, 2005). The only exception to this government control is in the Eden area where contractors are employed by the SEFE group (McManus, 2002). In 2001 "Agriculture, Forestry and Fishing" sectors accounted for 18 percent of Eden's workforce (Public Practices Unit, 2001). At the time of the Eden RFA development in August 1999 it was estimated that 83 percent of the south coasts' forest workers lived in the Eden Township (Social Assessment Unit DPIE,

1998a). Progressively the SEFE woodchip mill has come to dominate the local forest industry in Eden. Recently it was estimated that SEFE provides direct or indirect employment for 350 local workers, which translates into a \$20 million local wage bill (Anon, 2007b).

Synchronized with this change in the local forestry sector has been a growing focus on tourism development around Eden. Tourism as an industry is an important commercial activity on the NSW south coast. In the Bega Valley Shire tourism (of all types) is the Shire's largest employer and the largest contributor to the Shire's economy. Between \$150 and \$200 million is estimated to be spent by tourists in the shire annually (Bega Valley Shire Council, 2005). Over recent years nature tourism attractions have become a prominent component of regional marketing strategies. The Far South Coast Nature Tourism and Recreation Plan was launched in 2004 by a joint agency taskforce<sup>17</sup> in a bid to formalise the forest based nature tourism sector on the NSW south coast and move the industry away from an independent small operator focus. Nature tourism has been defined by NSW south coast commentators as 'all tourism in natural areas ... [ranging from] family picnics to wilderness walks and study tours ... [Nature tourism] focuses on the natural and cultural features of a site and education rather than just the activities undertaken' (Shepherd et al., 2004, p. 6).

The changing nature of forest usage in Eden's forests draws the reader's attention to the idea that there is a broader landuse context in which discussions of tourism industry development potential must be situated. It will be demonstrated in this chapter that personal experience with local forestry operations are an important influence on the values community members attach to particular forest landuses such as tourism. Before outlining the nature of these valuations reference will be made to the demographic nature of the contingent valuation and repertory grid response samples.

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<sup>17</sup> The 2004 *Far South Coast Nature Tourism and Recreation Plan* was developed by the New South Wales National Parks and Wildlife Service, Eurobodalla and Sapphire Coast Tourism, State Forests New South Wales, Umburra Aboriginal Cultural Heritage Tours, NSW Department of Lands and the south coast community. The plan was developed in line with the legislative requirements of the Eden and Southern NSW *Regional Forest Agreements* (Shepherd et al., 2004) and the *Tourism New South Wales Masterplan* (Tourism New South Wales, 2005).

## 4.3 Research Subjects - Descriptive Statistics

### 4.3.1 Response Rate

Some 198 Eden residents took part in the contingent valuation postal survey (128 from the initial mail-out and first follow-up; 75 from the 2nd follow-up). This represented an 18 percent response rate. Subsequent to this 22 follow-up repertory interviews were completed with members of the Eden community who had completed the community contingent valuation. The purpose of this section is to comment on the nature of these response samples.

Response rates for mail-out contingent valuation surveys are usually in the 30 to 60 percent range (Jakobsson & Dragun, 1996). While the rate for this thesis is below the average; 18 percent is comparable with other Australian forest contingent valuations e.g. Dunthy (2002) who recorded a 19 percent response rate (number of respondents – n = 82) in a study of community attitudes to the dedication of national parks in the Whian Whian area of north east NSW. It is, however, considerably less than the 65 percent (sample frame n = 525) recorded by Lockwood, Loomis, & DeLacey (1993) in their study of the willingness of Victorian's to reserve unprotected East Gippsland national estate forests as national parks. Lockwood, Loomis, & DeLacey (1993) note that community interest in the negative effects of logging was the catalyst for their high response rate. Citing a Resource Assessment Commission contingent valuation of the Kakadu Conservation zone, they established that logging of forests is the 2nd most pressing environmental concern for the Australian population after pollution (Lockwood et al., 1993). It is conceivable this high level of public concern for the protection of forests in 1993 was connected to the recent publication of the Commonwealth's National Strategy for Ecologically Sustainable Development (Commonwealth Government of Australia, 1992).

This thesis was completed under different circumstances to the Lockwood, Loomis and DeLacey (1993) study. Thesis fieldwork was completed in late 2006/early 2007. At this time the Eden RFA had been in place for 7 years, meaning that the future of the area's landuse arrangements was in many peoples' minds set in stone till 2019. Anecdotal evidence collected by the researcher has indicated that the 20 year length of RFAs may be partly responsible for the low response rate to this community survey. When asked

for their opinions on forest issues, more than one survey and interview respondent indicated that they feel powerless to influence the nature of forest debates. Many respondents, regardless of the nature of their views, saw decisions regarding landuse being generated by Commonwealth and State authorities. Due to many supposed broken promises on behalf of the before mentioned authorities; many locals are now quite hesitant about involving themselves in forest debates.

Although the researcher has no evidence to support the claim; it is conceivable that this same community apathy also affected the response rate for repertory grid interviews. 11 percent (n=22) of the contingent valuation respondents also completed follow-up interviews, which was considered satisfactory for the achievement of research aims. Owing to the fact that this thesis represents the first attempt to link contingent valuation and repertory grid instruments in a rural development context, it is not possible to speculate on the relative strength of this response rate. What can be said, however, is that n=22 interviews compares favourably with existing tourism based studies that have used the repertory grid technique (see Table 8):

**Table 8: Selected Tourism Based Repertory Grid Study Sample Sizes**

Study	No. of Respondents
Botterill and Crompton (1996)	2
Gyte (1988)	17
Hankinson (2004b)	25
Pike (2003)	25
Pearce (1982)	97
Scherl (1988)	41

#### 4.3.2 Respondent Demographic Characteristics

Of the 198 respondents that took part in the contingent valuation survey, 78 identified themselves as female and 113 as male (n=12 did not indicate their gender). Respondent ages ranged from 22 to 86, with the mean age being 55.69 years. In the case of the 22 repertory grid interviews the average age of respondents was 56.65 years. 16 interviewees were male and 6 female. In both cases the mean age of respondents was



higher than the mean age of the Bega Valley Shire, which in 2006 was 38.4 years (Australian Bureau of Statistics, 2007b). Respondents had lived in the Eden area on average for 23 years, which means that the majority of residents who took part in the survey are not representative of the newer sea-change population, which is becoming more prevalent in the Eden area.

It has been said that the ideal conditions for contingent valuation study are when respondents understand and are familiar with the commodity being valued (Clouston, 2002). The mean age of respondents (and repertory grid interviewees) relative to the broader Bega Valley Shire population, along with their average length of residency in the Eden area means that many of the people canvassed had personally experienced the effects of RFA Comprehensive Regional Assessments and associated changes to local landuse zonings. It also meant that many of the people surveyed for this project had arrived in the area well after the arrival of the SEFE woodchip group had established itself. This is potentially significant with respect to how the sampled group perceives this landuse because it implies that many of the people surveyed arrived in Eden after the clear felling practices of SEFE in the 1970s had been replaced with small alternate coup logging (Margules and Partners Pty Ltd, 1986).

To further understand the familiarity respondents have with local landuse debates; survey respondents and interviewees were also asked to indicate what industries they are either currently or previously employed in (see Table 9 overleaf). Some 18 percent (n = 33) of contingent valuation survey respondents and 25 percent of repertory grid interviewees identified as having worked at some stage in the “forestry/timber” sector. These portions are considerably higher than official figures for the Eden community, where in 2001 agriculture, forestry and fishing together accounted for 14 percent of the local workforce (Public Practices Unit, 2001). Collectively: “retail/trade”, “tourism/recreation operators” and “accommodation/cafes/restaurants” accounted for 30 percent of contingent valuation respondents. This figure compares to the official 2001 figures, which similarly identified 30 percent of Eden’s workforce as belonging to: retail trade (18 percent); accommodation or cafes/restaurants (11 percent) and cultural and recreational services (1 percent) (Public Practices Unit, 2001).

In addition to considering the employment history of respondents, the survey and interviews also canvassed current annual household earnings (see Table 10 overleaf). Some 39 percent of the sampled group earned in excess of \$50,000 per annum and over 49 percent of respondents earned more than the Eden 2001 average family income \$38,000 per annum (\$740 per week) (see Public Practices Unit, 2001). The correlation between income and WTP will be discussed under contingent valuation validity (see section 4.4.3). In the case of the repertory grid interview sample 50 percent of the sample group reported an average earning of \$50,000+.

**Table 9: Respondent Employment History**

Employment Sector <sup>18</sup>	No. of Survey Respondents	No. of Interviewees
Accommodation/Cafes/Restaurants	23	2
Agriculture/Farm	21	5
Council/Government	16	3
Fishing	25	1
Forestry/Timber	33	4
Health/Community Services	22	3
Manufacturing	14	3
Property/Business Services	11	1
Retail/Trade	18	2
Recreation/Tourism Operators	13	1
Transport/Storage	7	-
Other	55	4
Survey Question: Are you currently employed in any of the following industry sectors? If you are retired or unemployed please indicate any industry sector or sectors you have formally been employed in.		

<sup>18</sup> Employment sectors were modeled off the industry breakdown in *A Community Portrait of Eden* (Public Practices Unit, 2001)

**Table 10: Respondent Earnings**

Household Earnings	Contingent Valuation Survey		Repertory Grid Interviews	
	Number of Respondents	Percentage	Number of Respondents	Percentage
\$0 – 9,999	12	6.7	-	-
\$10,000 – 19,999	27	15.0	3	16.6
\$20,000 – 29,999	21	11.7	1	05.5
\$30,000 – 39,999	31	17.2	3	16.6
\$40,000 – 49,999 9	19	10.6	2	11.1
\$50,000+	70	38.9	9	50.0
Total	180	100.0	18	100.0

#### 4.4 Willingness to Pay for an Increase in National Parks

The creation of additional areas of national park in the Eden area necessitates a reduction in the area of publicly owned state forest. National parks and state forests have different approaches to forest management. In Australia, national parks are one of a variety of protected area designations, which are used by Commonwealth and State authorities. Other protected area designations include marine parks, nature reserve, indigenous protected area and conservation reserves. The focus of national park managers is nature conservation. The IUCN has defined national parks as an ‘area of land and/or sea, designated to a) protect the ecological integrity of one or more ecosystems for present and future generations, b) exclude exploitation or occupation inimical to the purposes of designation of the area, and c) provide a foundation for spiritual, scientific, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally compatible’ (Harmon, 2003, p. 14). In contrast the sustainability agendas of State Forest agencies are based around multi use principles. State forests are managed to ensure; continued sustainable timber production, wildlife habitat protection, continued research opportunities and tourism, recreation and education opportunities (Chapman, 1995).

Differences in management approaches mean that a landuse that is appropriate in a state forest is not necessarily appropriate in a national park and vice versa. Each landuse in the forests around Eden (e.g. sawmilling, woodchipping and 4x 4 wheel drive tours) may have its value measured in both market and non- market terms. Market based studies such as Gillespie Economics (1997) have estimated that the total expenditure in the Eden RFA Region from tourist visits to national parks is \$12,730,858. Such figures are important for the continued relevance of tourism in the region, particularly given the continued existence of profitable native timber harvesting which often have to fight for a share of the same finite forest resource. The 163,000 hectares of native state forests around Eden provide an annual revenue stream of approximately \$7.8 million for Forests NSW (Forests New South Wales, 2004a). This is in addition to the \$404,593 total expenditure in the Eden RFA Region from visits to state forests (Gillespie Economics, 1997).

Such figures present a compelling case either for or against the development of further areas of national park reserves in the region. However, do they provide a comprehensive understanding of how the Eden community values the forest landuses that exist in their area? This section will outline the results of a contingent valuation analysis of the non-market value the Eden community ascribes to national park creation in their area.

#### 4.4.1 Contingent Valuation Contributions

The primary aim of the thesis's contingent valuation survey was to elicit the Eden community's WTP for an increase in local reserve creation in their area.

The results of this valuation exercise are canvassed in this section. As has already been noted, 198 people responded to the contingent valuation phase of the survey with n=25 people indicating a WTP for national park creation. Table 11 (overleaf) provides a breakdown of community responses to the payment principle question.

**Table 11: Willingness to Make a Financial Contribution to Reserve Creation**

Response	Number of Respondents	Percentage
Yes	25	12.6
No	157	79.3
Not sure	16	8.1
Total	198	100.0

Pearson's Chi-square ( $\chi^2$ ) was used to assess the association between positive and negative WTP according to the model of equal responses, in order to test whether the proportion of yes, no and not sure respondents is due to chance variation (see Table). The expected counts were speculated to be 33 percent yes, 33 percent no and 33 percent not sure. The hypothesised equal division of people into the 3 different response camps was based on the idea expressed to the researcher anecdotally by residents that the Eden community is divided on the best use of forest resources. This anecdotal data is supported in attitudinal studies that were completed as part of the Forest and Timber Inquiry where it was found that 33 percent of respondents nationally preferred continued logging of National Estate Forests, 45 percent supported a ban on all logging and 22 percent opted for an intermediate position on logging (Resource Assessment Commission, 1992).

**Table 12: Willingness to Pay for National Park Creation – Chi-square Analysis**

Response	Observed Counts	Expected Counts
Yes	25	66
No	157	66
Not sure	16	66
Total	198	
$\chi^2=188$ ; DF = 1; significant at the 5 % level		

The results of this analysis adhered to the expected counts rule (Pallant, 2007; Veal, 2005). The chi-square goodness of fit test rejected the null hypothesis and found that there was a significant difference in the proportion of people willing to accept an increase in the area of national parks as compared with the theoretical position of equal distribution. The results of this analysis lend one to the conclusion that the Eden

community is less polarised on the issue of landuse zoning than may have been expected. The implications of a comprehensive rejection of national park zoning strategies for nature tourism planners will be discussed in Chapter 5.

The estimated proportion of the population willing to contribute to a fund for the establishment of more national parks in the Eden area was approximately 13 percent. Of 198 respondents, 24 provided a payment amount (1 respondent was unable to provide a payment amount). The mean WTP was \$93.54 per annum<sup>19</sup>, which translates into a mean WTP of \$1216 per individual over the 13 year lifespan of the Eden RFA. The median WTP was \$100. Both these figures are estimates in the sense that the three respondents who indicated a WTP 200+ were given a WTP of \$200 for the purpose of statistical analysis. An advantage of the mean is that it allows the results of contingent valuation studies to be integrated into broader cost benefit analyses (Imber et al., 1991). For this reason when the respondent's WTP is referred to in subsequent chapters, it is the mean that will be referred to. Table 13 illustrates the number of respondents who identified with each payment amount.

**Table 13: Willingness to Pay amounts**

Willingness to Pay Amounts	Number of Respondents	Percentage of Respondents
\$10	2	8.3
\$25	1	4.2
\$50	6	25.0
\$100	10	41.7
\$150	2	8.3
\$200+	3	12.5
Total	24	100.0

#### 4.4.2 Response Justification

All respondents were asked to indicate why they would support or reject the creation of more national parks in the Eden area. Often justification is only sought from respondents who rejected the contingent valuation scenario in order to understand

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<sup>19</sup> A similar result of WTP = \$93.75 was recorded in the author's pilot survey of Bega Council employees in October 2006.

protest or zero bids (e.g. Clouston, 2002). In this thesis the researcher has sought justification for all positive contingent valuation bids as well. The rationale for this approach is that the primary focus of this thesis is not with the presentation of contingent valuation results per se. Instead the researcher is focussed on considering the merits in using PCT repertory grids to understand the attitudinal underpinnings of contingent valuation estimates. It is the justification of contingent valuation results, rather than the results themselves that are of interest. This approach builds on the accepted academic approach of using attitudinal questioning as a means of shedding light on WTP estimates. A number of attitudinal questions were included in the contingent valuation survey and will be discussed in section 4.5.

When we examine the specific justification given by respondents for WTP estimates; 40 percent of people who rejected the scenario indicated that they were happy with the existing landuse balance in the Eden RFA area (see Table 14). The Eden RFA processes in the late 1990s saw the reserve area around Eden increase by 66 percent (Australian Bureau of Statistics, 2003). Respondents to this survey were made aware of the geographical nature of this increase through the inclusion of a landuse map in the posted material (see Appendix 1).

**Table 14: Reasons why you would not wish to make a CV contribution?**

Reason	Percentage of Respondents	Number of Respondents
I'm satisfied with the existing landuse balance in the Eden Regional Forest Agreement area	40.39	82
I object to the idea of contributing to the Natural Heritage Trust	21.18	43
Our forested areas should be protected from the timber industry by law, we shouldn't have to pay to protect them	16.75	34
I need more information to answer this question	5.42	11
Other	16.26	33

\* Note: Multiple responses/ rationales possible

Approximately 21 percent of respondents objected to paying to the Natural Heritage Trust and 17 percent objected to local communities fulfilling an environmental

protection role that should be the responsibility of government. Pleasingly for the researcher, only 5 percent of respondents indicated that they needed more information to answer the question, seeming to indicate that the information provided to respondents was of appropriate detail. The provision of the right amount of information to respondents is important because some studies have demonstrated that giving extra information has the tendency to increase bids, but only up to a point where information overload occurs (Hoevenagel & van der Linden, 1993). As such it is important that respondents: a) are familiar with the good in question so that they can formulate a WTP estimate that reflects the true value of the good to them (Anderson and Bishop, 1986 in Clouston, 2002), and b) that the right amount of information is provided to take advantage of respondent knowledge, whilst not overtly leading the respondent to take positions that are contrary to their actual position on the issues.

The reasons why 25 respondents chose to support the development of more national parks around Eden was dominated by concern for forest preservation and the role of Eden citizens in forest protection (see Table 15 overleaf). Approximately 83 percent of respondents who supported the scenario noted that they wanted to preserve native forests and national parks, and that reserve areas are an appropriate means to achieving this. Some 71 percent also felt that Eden residents have a responsibility to be proactive in the area of environmental preservation. This was in direct contrast to those who rejected the contingent valuation, who argued that it was the role of government legislation to protect forests. In addition 71 percent of people who supported the scenario also noted that their views on the need for environmental preservation are not confined to concern for the protection of Eden's forests. Although the development of nature tourism was a specific part of the contingent valuation scenario, only 25 percent of respondents specifically identified nature tourism as being a factor in their decision. In part this may be connected to the fact that only 12 percent of respondents identified themselves as standing to gain financially from the expansion of nature tourism industries in national parks.

From this result the researcher believes that attention should be drawn to the large proportion of respondents (n=82) who indicated that they were happy with the existing



landuse arrangements laid down in the RFA legislation<sup>20</sup>. Within RFA legislation there is scope for significant opportunities for tourism and recreational usage of forests, as part of a broader push to ensure the long term stability of forests and forest industries within a ecological sustainability framework (Commonwealth Government of Australia & State Government of New South Wales, 1999). In spite of this very few respondents (n=6) went as far as to suggest that nature tourism was the only form of commercial development that should be encouraged in forest areas. There seems to be a suggestion that local people in Eden view nature tourism as having an important place in their town's social and economic makeup. However, at the same time they perceive limits to the degree to which tourism will ever achieve a position of primacy over other industries related to forestry.

**Table 15: Reasons why you would wish to make a CV contribution?**

Reason	Percentage of Respondents	Number of Respondents
I want to preserve our native forests and national parks and reserve areas are an appropriate means to achieving this	83.33	20
My answers reflect my views on the need to reserve all of Australia's native forests as national parks not just those in the Eden area of southeast NSW	70.83	17
I feel that nature tourism is the only form of commercial development which should be encouraged in our forest environments.	25	6
Communities have a responsibility to preserve the environment in their immediate area. I believe that national parks are the best means of achieving this.	70.83	17
I would receive some personal benefit from paying to increase the size of the nature tourism industry in Eden's national parks and reserve areas.	12.5	3
Other (please specify)	16.66	4

\* **Note: Multiple responses/ rationales possible**

The next section of this chapter will deal with the validity of the contingent valuation results.

<sup>20</sup> It is accepted that respondents had various levels of knowledge of RFA processes and outcomes

#### 4.4.3 Validity of Willingness to Pay

24 respondents indicated that they were willing to pay an average of \$93.54 per annum to see an increase in the area of national parks in the Eden area. This section will consider the validity of WTP estimates relative to a variety of independent variables. Sinden (1993 in Khorshed, 2003, p. 194) justified the use of income to determine content validity in the following terms:

In any valuation study ... realism cannot be justified solely by arguing that respondents followed instructions, that instructions were carefully derived, and that the derivation followed the best available information. Realism must also be justified by a belief in the values themselves, and their direct relationship to income.

Picking up on this issue of realism, various contingent valuation studies have noted a correlation between increased income and an increased WTP (e.g. Chambers, Chambers, & Whitehead, ND; Nunes, 2002). The issue of whether this principle applies to the valuation of a good like national parks is an issue this author has had to consider. Some authors have (McFadden (1994 in Carson, Flores, & Meade, 2001) described the preservation of wilderness as a luxury, which will be valued by the poor only once the necessities of food and shelter have been taken care of. As such it is speculated that an inability to pay is actually a reflection of how much an individual values the product in question. The researcher has tried to limit the effect of this by ensuring that payment card amounts were realistic to local wage conditions. What constitutes a realistic relationship between WTP amounts and local wage conditions is debated in the published literature. Different contingent valuation studies have found that WTP for changes to environmental amenities are frequently between 1 and 5 percent of stated income (Khorshed, 2003). The payment amounts of \$0 to \$200+ that were included in the survey were modelled off existing East Gippsland based contingent valuation studies (see Lockwood et al., 1993; Rogers, 1992). This is appropriate because the average total income in the Bega Valley Shire Local Government area is comparable to East Gippsland. In 2003 the average Bega Valley income was \$31,134 and in East Gippsland the average was \$31,828 (Australian Bureau of Statistics, 2007a, 2007c).

The principle of rejecting bids over 5 percent of stated income has been used to validate the results of this study. Table 16 (overleaf) illustrates the relationship between average annual income and WTP. Respondents' annual WTP for an increase in the area of national parks around Eden were in all cases found to be less than 1 percent of average annual income. Each contingent valuation was hence deemed to be valid with respect to respondent income.

Comparing the results of contingent valuation questioning to other measures has been used by some authors to validate WTP results. Bennett and Carter (1993) for instance built travel cost of recreational values into their valuation of the conservation benefits of national estate forests. Cameron (1992) justified the link between contingent valuation and travel cost on the basis that hypothetical WTP estimates need to be validated with respect to actual market data on tourist behaviour. The focus of this thesis was not to value nature tourism in the Eden area per se. Such research has already been completed as part of the RFA Comprehensive Regional Assessment process (Gillespie Economics, 1997). Because of this thesis's focus on the links between contingent valuations and psychological theory, the results of attitudinal questioning have been used to understand the apparent accurateness of contingent valuation results. The use of multiple questions on similar issues is a common technique used in questionnaires to test the validity of results (Veal, 2006)

**Table 16: Average Annual Income and Annual Willingness to Pay**

Respondent No.	Average Annual Household Income Range	Annual Willingness to Pay	Willingness to Pay as a percent of Income
1	\$ 0 – 9,999	\$10	0.2
10	\$ 50,000+	\$200+ (\$250)	0.5
20	\$ 30,000 – 39,999	\$50	0.14
24	\$ 50,000+	\$200+ (\$250)	0.5
27	\$ 50,000+	\$100	0.2
40	\$ 50,000+	\$100	0.2
62	\$ 50,000+	\$50	0.1
79	\$10,000 – 19,999	\$50	0.33
80	Not stated	\$100	Not known
82	\$40,000 – 49,999	\$150	0.33
106	\$ 50,000+	\$50	0.1
123	\$ 10,000 – 19,999	\$100	0.66
138	\$ 10,000 – 19,999	\$100	0.66
139	\$ 50,000+	\$150	0.3
140	\$ 30,000 – 39,999	\$200+ (\$250)	0.5
146	\$ 30,000 – 39,999	\$50	0.14
151	\$ 20,000 – 29,999	\$100	0.4
152	\$ 30,000 – 39,999	\$25	0.07
168	\$ 10,000 – 19,999	\$100	0.66
170	\$ 20,000 – 29,999	\$50	0.2
177	\$ 50,000+	\$100	0.2
189	\$ 30,000 – 39,999	\$50	0.14

Note: It was deemed that asking respondents to give an income range would be less confronting than asking for an actual wage amount. The presence of an income wage has meant, however, that the researcher has had to use the range midpoint when determining WTP as a percentage of income. As such a person in the \$30,000 – \$39,999 bracket was deemed to have an income of \$35,000. In the case of those people in the \$50,000+ bracket the researcher has treated these people as having an income of \$50,000. People who indicated a WTP of \$200+ were deemed to have a WTP of \$250.

In section 4.5 references will be made to the level of support in the community for thirteen different landuses, which exist in the Eden RFA area. Table 17 (overleaf) seeks

to compare support for different landuses amongst the people who supported, rejected or were not sure about the valuation scenario. The overwhelming rejection of the contingent valuation scenario by 88 percent of the sampled Eden population implies a preference to multi use approaches to forest management. This was supported in the results of attitudinal questioning of the whole response group. Table 17 (see over leaf) illustrates that all 13 landuses received a positive level of support from the whole sample (i.e. mean greater than 2.5). While the same can generally be said of the yes and no response groups; it can also be seen that there were differences in how these groups perceived individual landuses. People who supported the creation of more national parks in the Eden area were more positively disposed to the idea of indigenous and heritage landuses, as well as the idea that all human uses of forests should be halted to safeguard flora and fauna. People who supported the continued allocation of land for state forest conversely had higher levels of support for landuses such as sawmill harvesting, firewood collection, pulp wood industries and plantations. From these results it can be concluded that the response of people to contingent valuation questioning was broadly reflective of their attitudinal position on the appropriateness of forest landuses in the area around Eden.

**Table 17: Levels of Community Support for Different Forest Landuses**

Landuse Types	Mean Level of Support (Whole Sample)	CV	Std. Deviation	Mean Level of Support (Yes to Scenario)	Std. Deviation	Mean Level of Support (No to Scenario)	Std. Deviation	Mean Level of Support (Not sure about CV Scenario)	Std. Deviation
A place for bushwalking	4.40		.744	4.88	.332	4.30	.785	4.50	.516
A source of material for local sawmills	4.24		1.056	3.26	1.484	4.47	.832	3.63	1.025
A location for camping	4.21		.851	4.04	1.136	4.25	.782	4.00	1.033
The location of local heritage sites	4.07		.947	4.57	.590	3.94	.991	4.40	.632
A location for firewood collection	4.02		.947	3.44	1.158	4.16	.880	3.69	.704
A location for horse riding	3.81		1.092	3.65	1.301	3.84	1.071	3.69	.946
A location for cattle grazing (private land only)	3.74		1.085	3.13	1.076	3.85	1.060	3.56	1.094
Source of material for local pulpwood industries	3.73		1.454	2.00	1.180	4.17	1.172	2.67	1.447
A location for forest plantations	3.72		1.316	3.04	1.601	3.92	1.204	3.19	1.223
A location for indigenous Aboriginal communities to undertake traditional cultural activities	3.56		1.260	4.40	.707	3.38	1.312	3.86	.663
A location for local flora and fauna which should not have to co-exist with any other form of human activity listed above	3.04		1.469	4.25	1.113	2.82	1.457	3.27	1.100
A location for agricultural development	2.95		1.347	2.32	1.345	3.08	1.329	2.94	1.289
A location for commercial hunting	2.63		1.446	1.52	.963	2.81	1.430	2.56	1.504
Question: People value forests in different ways and thus have different views about the ways in which forests may be used. Please indicate your level of support or opposition for each landuse in the Eden area by placing a tick in the appropriate box. Response Measurement: 5 point Likert Scale (5 Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, 1 Strongly Disagree)									

Other demographic variables were also considered likely to affect WTP estimates. Theoretically years spent in the Eden region may affect WTP for national park creation because older residents who have lived in the Shire will have an appreciation of the primary extractive industries that predated the attempts to expand the national park zones in the course of RFA assessment in the late 1990s. Anecdotal evidence collected for this project illustrated a perception amongst many established members of the Eden community that newer residents often have too narrow an appreciation of the effects of different industries on the Eden community.

A chi-square test for independence was conducted to see whether there was any significance in the association between age and WTP. For the purpose of this analysis the n=186 respondents were re-coded into two categories 1-41 years and 41-70 years. The 41 year number was based on the number of years that the SEFE Woodchip Corporation has been operating in Eden. In many respects the arrival of this company in 1967 represented the beginning of the local conflicts over the appropriateness of different forest industries. WTP responses were also re-coded with 'not sure' and 'yes' respondents linked together. This was a necessary concession to ensure that the results adhered to the minimum expected cell frequency rule. The accurateness of these chi-square results is, however, questionable when one considers that there is no way of guaranteeing that every respondent who was unsure of their payment position would have eventually agreed with the scenario premise. Accepting this deficiency the result of the chi-square analysis testing for independence (using Yates Continuity Correction) was that there was a significant association between years spent in Eden and WTP ( $\chi^2=5.512$ ; DF = 1;  $p=.023$ ,  $\phi = .012$ ).

The fact that there is a significant association between years spent in Eden and WTP is understandable for the reasons already stated about the history of forest management and conflict in south east NSW. It is interesting now to consider whether respondent age is similarly connected to contingent valuation response. Older residents are likely to become increasingly central to any efforts to map community views on landuse changes in the Eden area. Drawing on ABS figures, Bega Council has drawn attention to the fact that the shire currently has '55 percent more people in the 70-74 age group than the NSW average of 45 percent in the 65-69 bracket and 43 percent in the 75-79 bracket (Bega Valley Shire Council, ND).

A chi-square test for independence was also conducted to see whether there was any significance in the association between age and WTP. For the purpose of this analysis the 113 respondents who provided their current age in years were re-coded into two age categories 0-40 years and 41-90 years. Respondents who indicated that they were unsure of their contingent valuation position were again grouped with yes respondents. The result of a chi-square analysis for independence (using Yates Continuity Correction) that there was no significant association between WTP and age,  $\chi^2=.503$ ;  $DF = 1$ ;  $p=.478$ ,  $\phi = -0.91$ .

The purpose of the previous sections on contingent valuation justification and validation has been to draw the reader's attention to the idea that the personal characteristics of a respondent have the potential to underpin their WTP. The next section of this chapter will consider how these personal characteristics can be better understood through contingent valuation survey attitude questioning, as well as through the concurrent use of PCT interview techniques.

#### ***4.5 Eden Community Attitudes to Different Forest Landuses***

Section 4.4.2 established that  $n=82$  respondents rejected the contingent valuation survey on the basis that they are satisfied with the existing landuse balance in the Eden RFA area. In making this observation, this group of Eden residents established a link between attitude to forest landuses and opinion on the benefits of national park creation.

This section will consider some of the attitudes to different forest landuses, which the respondents expressed in the course of completing the contingent valuation exercise. The connections that are being made between attitude to landuse and support for a change in local landuse zoning is built on an idea from McKercher (1992). In the course of a discussion of tourism/forestry conflict in Northern Ontario, McKercher (1992, p. 469) noted that 'conflicts between the forestry industry, resident anglers and tourist operators relates to differences in their observed attitudes towards the use and subsequent management philosophy towards wilderness'. This researcher has taken this idea and has proposed that a person's attitude to national park creation in Eden's forests can be understood in terms of their views on different forest industries.



This section will be arranged according to a discussion of community perceptions on the relationship between tourism and timber industries; community attitude to timber industries in Eden's forests; community attitude to forest based nature tourism and community attitude to regional land managers. Section 4.6 will then illustrate how repertory grid techniques can allow researchers to develop a deeper understanding of these respondent attitudes, linking landuse perceptions to personal histories and social context.

Before commencing this discussion of contingent valuation survey results it is necessary to realise that the attitudes that the Eden community expressed in the contingent valuation survey were developed in the context of continued conflict in Eden over the "correct" use of Australia's forest estate. Section 4.2 provided a historical overview of Eden's forest development over the last 150 years. Coinciding with the diversification of Eden's industry based over the last 40 years, the region has also become one of the many focal points for local forest stakeholder conflict in Australia (Broder, Collins, Holmgren, & Macdonald, 2006). Conflicts have emerged over issues including the continued existence of woodchipping operations, the decline of traditional hardwood sawmills and the role of nature tourism in regional survival. These conflicts have mirrored the broader conservation versus resource extraction debate, which has characterised Australia's forest areas over the same period (Brown, 2005; Dargavel, 2004; Kirkpatrick, 1998; Lane, 1999, 2003; Vanclay, 1996).

This section will now start with a discussion of the community relationship between tourism and other forest industries.

#### 4.5.1 Relationship between Tourism and other Forest Industries

The Bega Valley Shire is characterised by a broad industry base with profitable timber (woodchip, plantation), fishing, and manufacturing and tourism sectors. For this reason the opening question in the community contingent valuation survey sought respondent perceptions of 13 diverse forest landuses in the Eden area. In Table 18 it can be seen that there was community support for all the landuses canvassed. All 13 landuses received a positive level of support (i.e. a mean score of 2.5+ on a 5 point Likert Scale).

**Table 18: Community Support for Different Forest Landuses**

Landuse Types	Mean Level of Support	Std. Deviation
A place for bushwalking	4.40	.744
A source of material for local sawmills	4.24	1.056
A location for camping	4.21	.851
The location of local heritage sites	4.07	.947
A location for firewood collection	4.02	.947
A location for horse riding	3.81	1.092
A location for cattle grazing (private land only)	3.74	1.085
Source of material for local pulpwood industries	3.73	1.454
A location for forest plantations	3.72	1.316
A location for indigenous Aboriginal communities to undertake traditional cultural activities	3.56	1.260
A location for local flora and fauna which should not have to co-exist with any other form of human activity listed above	3.04	1.469
A location for agricultural development	2.95	1.347
A location for commercial hunting	2.63	1.446
Question: People value forests in different ways and thus have different views about the ways in which forests may be used. Please indicate your level of support or opposition for each landuse in the Eden area by placing a tick in the appropriate box. Response Measurement: 5 point Likert Scale (5 Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, 1 Strongly Disagree)		

### **Landuse Correlation Analysis**

In order to understand the relationship between tourism and timber industries in the Eden area, the above results were subject to a correlation analysis to determine any perceived association between the landuse variables. If one examines the sawmill variable (see Table 19 overleaf – shaded section) it can be seen that there is a large<sup>21</sup> positive correlation between sawmills and pulpwood industries (.639) and medium correlation between sawmills and plantations (.373). The idea that there is a positive correlation between support for sawmills and other timber harvesting industries is shown also in the repertory grid interviews (see section 4.6). Cluster analysis of repertory grid results frequently yielded a timber harvesting element cluster. These element clusters were typically aligned with constructs which emphasised the contribution that said industries make to Eden's economic security and the importance of ensuring that forests are used by humans in the future. The idea that forests in Eden are meant to be used also helps explain the medium correlation between sawmills and firewood collection (.435) and the small positive correlation between sawmills and commercial hunting (.284).

In contrast to the positive correlations exhibited between sawmills and other timber harvesting landuses, negative correlations existed between sawmills and the majority of landuses that can be connected to tourism. Negative correlations existed between sawmills and bushwalking (-.081), heritage sites (-.084) and traditional Aboriginal landuses (-.199). A positive relationship was seen between sawmills and camping, but it was small at .092.

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<sup>21</sup> Pallant (2007) described a small relationship as .10 to .29; medium as .30 to .49 and large as .50 to 1.

**Table 19: Landuse Correlation**

		Sawmills	Plantations	Bushwalking	Heritage Sites	Pulpwood	Hoarse Riding	Agriculture	Commercial Hunting	Cattle Grazing	Traditional Aboriginal Landuses	Firewood Collection	Camping	No human use
Sawmills	Pearson Correlation	1	<b>.373(**)</b>	-0.081	-0.084	<b>.639(**)</b>	.163(*)	.288(**)	.284(**)	.188(**)	-.199(**)	<b>.435(**)</b>	0.092	-.269(**)
	Sig. (2-tailed)		<b>0.000</b>	0.260	0.256	<b>0.000</b>	0.024	0.000	0.000	0.009	0.006	<b>0.000</b>	0.201	0.000
	N	198	<b>194</b>	196	184	<b>192</b>	191	190	192	192	192	<b>194</b>	195	192
Plantations	Pearson Correlation	.373(**)	1	0.018	-0.081	<b>.438(**)</b>	0.139	<b>.468(**)</b>	<b>.301(**)</b>	<b>.390(**)</b>	-.177(*)	.216(**)	0.111	-.191(**)
	Sig. (2-tailed)	0.000		0.803	0.272	<b>0.000</b>	0.055	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	0.014	0.003	0.123	0.008
	N	194	196	195	184	<b>190</b>	190	<b>189</b>	<b>191</b>	<b>191</b>	191	193	194	191
Bushwalking	Pearson Correlation	-0.081	0.018	1	<b>.563(**)</b>	-0.134	<b>.372(**)</b>	-0.013	-0.085	0.131	<b>.407(**)</b>	0.046	<b>.423(**)</b>	.235(**)
	Sig. (2-tailed)	0.260	0.803		<b>0.000</b>	0.064	<b>0.000</b>	0.863	0.242	0.070	<b>0.000</b>	0.519	<b>0.000</b>	0.001
	N	196	195	199	<b>187</b>	193	<b>193</b>	192	193	193	<b>194</b>	196	<b>197</b>	194
Heritage Sites	Pearson Correlation	-0.084	-0.081	<b>.563(**)</b>	1	-0.132	.245(**)	-0.069	-0.138	0.028	<b>.443(**)</b>	0.048	.236(**)	.275(**)
	Sig. (2-tailed)	0.256	0.272	<b>0.000</b>		0.077	0.001	0.357	0.065	0.707	<b>0.000</b>	0.520	0.001	0.000
	N	184	184	<b>187</b>	187	182	182	181	181	183	<b>185</b>	184	186	182
Pulpwood	Pearson Correlation	<b>.639(**)</b>	<b>.438(**)</b>	-0.134	-0.132	1	.211(**)	.365(**)	<b>.358(**)</b>	<b>.304(**)</b>	-.201(**)	<b>.387(**)</b>	0.141	-.295(**)
	Sig. (2-tailed)	<b>0.000</b>	<b>0.000</b>	0.064	0.077		0.003	0.000	<b>0.000</b>	<b>0.000</b>	0.005	<b>0.000</b>	0.050	0.000
	N	<b>192</b>	<b>190</b>	193	182	195	190	189	<b>189</b>	<b>189</b>	192	<b>192</b>	194	191
Hoarse Riding	Pearson Correlation	.163(*)	0.139	<b>.372(**)</b>	.245(**)	.211(**)	1	.308(**)	<b>.314(**)</b>	<b>.346(**)</b>	.263(**)	<b>.387(**)</b>	<b>.335(**)</b>	-0.126
	Sig. (2-tailed)	0.024	0.055	<b>0.000</b>	0.001	0.003		0.000	<b>0.000</b>	<b>0.000</b>	0.000	<b>0.000</b>	<b>0.000</b>	0.083
	N	191	190	<b>193</b>	193	190	194	188	<b>190</b>	<b>190</b>	190	<b>192</b>	<b>193</b>	190
Agriculture	Pearson Correlation	.288(**)	<b>.468(**)</b>	-0.013	-0.069	.365(**)	<b>.308(**)</b>	1	<b>.441(**)</b>	<b>.497(**)</b>	-0.054	.259(**)	.167(*)	-0.130
	Sig. (2-tailed)	0.000	<b>0.000</b>	0.863	0.357	0.000	<b>0.000</b>		<b>0.000</b>	<b>0.000</b>	0.456	0.000	0.020	0.076
	N	190	<b>189</b>	192	181	189	<b>188</b>	193	<b>189</b>	<b>188</b>	190	191	193	189
Commercial Hunting	Pearson Correlation	.284(**)	<b>.301(**)</b>	-0.085	-0.138	<b>.358(**)</b>	<b>.314(**)</b>	.441(**)	1	<b>.459(**)</b>	-0.040	<b>.332(**)</b>	.185(*)	-.311(**)
	Sig. (2-tailed)	0.000	<b>0.000</b>	0.242	0.065	<b>0.000</b>	<b>0.000</b>	0.000		<b>0.000</b>	0.579	<b>0.000</b>	0.010	0.000
	N	192	<b>191</b>	193	181	<b>189</b>	<b>190</b>	189	194	<b>190</b>	190	<b>192</b>	193	190
Cattle Grazing	Pearson Correlation	.188(**)	<b>.390(**)</b>	0.131	0.028	.304(**)	<b>.346(**)</b>	.497(**)	<b>.459(**)</b>	1	0.021	.281(**)	.289(**)	-.153(*)
	Sig. (2-tailed)	0.009	<b>0.000</b>	0.070	0.707	0.000	<b>0.000</b>	0.000	<b>0.000</b>		0.772	0.000	0.000	0.035
	N	192	<b>191</b>	193	183	189	<b>190</b>	188	<b>190</b>	194	191	192	193	190
Traditional Aboriginal Landuses	Pearson Correlation	-.199(**)	-.177(*)	<b>.407(**)</b>	<b>.443(**)</b>	-.201(**)	.263(**)	-0.054	-0.040	0.021	1	0.054	.157(*)	.217(**)
	Sig. (2-tailed)	0.006	0.014	<b>0.000</b>	<b>0.000</b>	0.005	0.000	0.456	0.579	0.772		0.455	0.029	0.002
	N	192	191	<b>194</b>	<b>185</b>	192	190	190	190	190	195	193	195	192
Firewood Collection	Pearson Correlation	<b>.435(**)</b>	.216(**)	0.046	0.048	<b>.387(**)</b>	<b>.387(**)</b>	.259(**)	<b>.332(**)</b>	.281(**)	0.054	1	.219(**)	-.169(*)
	Sig. (2-tailed)	<b>0.000</b>	0.003	0.519	0.520	<b>0.000</b>	<b>0.000</b>	0.000	<b>0.000</b>	0.000	0.455		0.002	0.019
	N	<b>194</b>	193	196	184	<b>192</b>	<b>192</b>	191	<b>192</b>	<b>192</b>	193	193	197	196
Camping	Pearson Correlation	0.092	0.111	<b>.423(**)</b>	.236(**)	0.141	<b>.335(**)</b>	.167(*)	.185(*)	.289(**)	.157(*)	.219(**)	1	-0.003
	Sig. (2-tailed)	0.201	0.123	<b>0.000</b>	0.001	0.050	<b>0.000</b>	0.020	0.010	0.000	0.029	0.002		0.965
	N	195	194	<b>197</b>	186	194	<b>193</b>	193	193	193	195	196	198	194
No human use	Pearson Correlation	-.269(**)	-.191(**)	.235(**)	.275(**)	-.295(**)	-0.126	-0.130	-.311(**)	-.153(*)	.217(**)	-.169(*)	-0.003	1
	Sig. (2-tailed)	0.000	0.008	0.001	0.000	0.000	0.083	0.076	0.000	0.035	0.002	0.019	0.965	
	N	192	191	194	182	191	190	189	190	190	192	193	194	196

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed)

### **Principal Components Analysis to Determine Landuse Relationship**

To further understand the relationship that the sampled Eden community perceives between different landuses, the 13 item list of forest landuses in question one was subjected to principal component analysis using SPSS Version 15. Prior to performing the principal component analysis, the factorability of the data was assessed. Factorability 'refers to the extent to which there are sufficient interrelationships amongst the variables to produce a convincing (or valid) factor structure' (Gardner, 2006, p. 43). A visual appraisal of the correlation matrix revealed the presence of some coefficients of .3 or above. The Kaiser – Meyer – Olkin measure of sampling adequacy was .778, which is above the recommended value of .6 (Pallant, 2007). Also the Bartlett Test of Sphericity reached statistical significance with a score of 0.0 (note: significance refers to a value of less than 0.6 (Gardner, 2006)).

Principal component analysis revealed the presence of four components with eigenvalues exceeding 1 (components explained 64.1%, 56%, 47.1% and 26.6% percent of the variance respectively). An analysis of the scree plot (see Appendix 3) revealed that a 3 factor solution was likely, given the presence of a clear break after the 3rd component. The three component solution explained a total of 56 percent of the variance, with component one contributing 28 percent, component two 21 percent and component three approximately 9 percent. The rotated solution revealed close to simple structure once the variable 'A location for local flora and fauna which should not have to co-exist with any other form of human activity listed above' was removed (see Table 20 overleaf). This variable was removed because it was illustrated in the other thesis results that human utilisation of forests is supported by the majority of people within the Eden community. While opinions on the composition of said landuses will by definition vary according to personal values, few people canvassed advocated a cessation of all human contact with the forests. This issue will be illustrated for specific individuals in the Eden community in the course of the later discussion of interview results.

**Table 20: Rotated 3 Factor Component Matrixes for Eden Community Perceptions of Forest Landuses**

Items	Components		
	1	2	3
A place for bushwalking	.824	.056	-.082
The location of local heritage sites	.734	-.181	-.069
A location for indigenous Aboriginal communities to undertake traditional cultural activities	.690	-.115	-.112
A location for horse riding	.623	.239	.328
A location for camping	.565	.298	.129
A location for agricultural development	.011	.789	.161
A location for cattle grazing (private land only)	.205	.784	.046
A location for forest plantations	-.120	.693	.165
A location for commercial hunting	.017	.594	.362
A source of material for local sawmills	-.139	.171	.815
A location for firewood collection	.252	.079	.736
Source of material for local pulpwood industries	-.154	.352	.715
Major loadings for each item are in bold			
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
A Rotation converged in 4 iterations.			

Allowing for some deficiencies in simple structure, a number of observations can be made about data reduction results in Table 20. Firstly the researcher has defined the components in the following terms; component one – forest recreation and heritage land uses; component two – primary/extractive industries located away from Eden; and component three – Eden based primary/extractive industries. This classification is commensurate with the aims of the thesis to understand the different ways that the Eden community perceives tourism and primary industries. The idea that community perception of industries may be connected to geographical proximity is an issue that will be explored throughout this chapter.

Secondly it can be seen that there are some split loadings across some landuses in Table 20. Split loadings occur when a variable has a substantial loading of +/- .30 on two or

more factors (Gardner, 2006). The fact that there are split loadings across some landuse items is in some respects expected, given that people may interpret the significance of landuses in different ways. For instance the presence of horse riding in the 1st component makes sense to this researcher given the aims of this thesis and his somewhat limited connections, as a Sydney based researcher, with the actual local effects of forest industries. If, however the researcher was a land owner with a property bordering a track frequented by horse riders; he may interpret this activity more in terms of the negative effects of trampling and grazing (Beeton, 2001). The idea that horse riding may not always be an environmentally benign activity may result in it being linked more with the primary extractive industries of component three.

The demarcation of factor analysis components according to a divide between nature tourism and extractive industries may be an overly simplistic illustration of the industry relationship perceived by the community. In an area like Eden, the forest based nature tourism has in many respects developed in tandem with the modern timber industry in the Eden area over the last 40 years. There are a number of ways that the two broad industry sectors are linked.

### **Different links between tourism and forestry industries**

The first linkage between forest based nature tourism and timber industries relates to the idea of shared infrastructure. This is an issue that is not confined to Eden and the south coast of NSW. For instance on the North East Peninsula of Tasmania's Recherche Bay, timber tram way routes are allocated for use by tourism stakeholders for the development of low impact tourism operations (Kitchell, 2007). In Eden, people accessing areas of State Forest for recreational purposes will often rely on already existing logging trails (State Forests NSW, 2007, personal communication). The idea that logging trails in State Forests make tourism access easier is an issue that will be touched on later with respect to community perceptions of tourism infrastructure in national parks. Although strictly not located in the forest, the multi-purpose wharf in Two Fold Bay is another example of shared timber/tourism infrastructure. The wharf is used to service the burgeoning cruise ship industry in TwoFold Bay, as well as aiding in the export of softwood chips from inland sawmills (SEFE, 2006, personal communication).

Another aspect of the relationship between forest based tourism and timber industries is the idea of shared environments of operation. Throughout the Eden area there is a significant number of tourism localities in areas controlled by State Forests NSW (see Gillespie Economics, 1997). Reflective of the fact that different industries use state forest areas; State Forest NSW has historically employed a multi use conceptualisation of ecologically sustainable forest management. In addition to optimising the supply of timber products within current ecological constraints; State Forests NSW supports the use of state forest areas by accredited tourism operators, community groups and individuals (Forests New South Wales, 2004a). The result of this forest management approach is that up to 16,000 visitors per annum must coexist with a variety of different timber operations (Gillespie Economics, 1997).

A third aspect of the relationship between tourism and traditional industries in Eden concerns the development of “eco friendly” tourism operations to replace traditional industries that are now considered to be socially and environmentally unacceptable. The classic example of this is in Eden are the offshore whaling/ whale watching industries. Whaling developed in Eden in the late 18th century in response to British and American firms shifting their operations from the Atlantic to Pacific waters (Waitt & Hartig, 1997). The industry declined in the mid nineteenth century due to various issues relating to international demand for whale products (Waitt & Hartig, 1997). Many Eden residents today vehemently oppose whale harvesting:

It is wonderful and heart-warming to see the development of eco friendly businesses such as whale watching ... Coastal communities who embrace these magical animals are to be congratulated, and they add to the voice of horror at their senseless slaughter by pro whaling nations. (Ortega, 2007)

Nature and heritage tourism operations have offered a means for the local community to continue to profit from whales, but in a more environmentally benign manner (Wearing & Neil, 1999). Heritage tourism<sup>22</sup> attractions relating to the traditional whaling industry

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<sup>22</sup> Heritage tourism may be defined as a subgroup of tourism, in which *‘the main motivation for visiting the site is based on the place’s heritage characteristics according to the tourist’s perception of their own heritage’* (Christou, 2005, p. 5).



include the Eden Whale Museum, Davidson Whaling Station, Boydtown and Boyd's Tower. Whale based nature tourism industries are focussed on off-shore and on-shore whale watching.

The relationship between timber industries and forest based nature tourism has developed slightly differently to the whaling/whale watching relationship. This is because unlike whaling, woodchipping plantation timber and hardwood sawmill operations are still accepted uses of forest areas. While some people do perceive nature tourism to be more environmentally appropriate than woodchipping:

Clearly the future of the town relies on tourism. The area has many beautiful locations (rivers, waterfalls etc.) in forest areas. They must be protected and promoted as tourist destinations and not destroyed by woodchipping.  
(Community Survey - Respondent 62)

The reality is that the Commonwealth Department of Agriculture, Fisheries and Forestry is still committed to 'assist[ing] our forestry industry to grow, improve and capitalise on new opportunities while protecting the environment and contributing to the prosperity and quality of life in rural and regional Australia' (Department of Agriculture Fisheries and Forestry, 2007b). The idea that forestry operations are both acceptable and necessary for the development of Eden has prompted some people to consider that nature tourism industries may have the potential to help educate the visitors about the nature of local forestry operations. The following quote illustrates:

The pulp industry can be of interest to visitors. Over at the chip mill they have a visitor's centre and that is very well supported. I think there is an interest for visitors in seeing industry at work. I don't know the size of that industry sector but I think it's important.

(Ian, 2006, personal communication)

Education of visitors has also been an established component of operations at the SEFE woodchip plant since its inception. Traditionally tourism at the mill was in the form of guided tours, which at their peak were drawing between 7000 and 8000 people to the site annually (SEFE, 2006, personal communication). Today concern over security has

reduced this to approximately 2500 people per annum (SEFE, 2006, personal communication).

Talking to industry stakeholders gives one the impression that any formal linkages between the different groups that use the forests are in their formative stages (State Forests NSW, 2007, personal communication; Eden Chamber of Commerce, 2007, personal communication). One rationale for industry cooperation on forest management issues concerns the perceived need for a collective voice to lobby the government on management issues (Timber Communities Australia, 2007, personal communication). The issue of government management of forests will be referred to later in a discussion on the role of NSW National Parks and Wildlife Service (NPWS) in nature tourism development in the Eden area.

This chapter has thus far established that links exist between the timber and forest based nature tourism industries in the Eden area. It is important to recognise, however, that such industry linkages are not always viewed positively in the community. For instance the recent decision of Sapphire Coast Tourism to continue to work with the SEFE group has been criticised as being just another example of the woodchip mill's propaganda machine (Chipstop, 2006, personal communication). Connections between tourism and timber, whether for better or worse, are at the heart of the thesis contingent valuation survey instrument. Essentially this project proposed a hypothetical future for Eden's forests where there will be an increased focus on nature tourism as the primary economic earner for Eden's forests. Such a shift in local landuse focus, which would come through the rezoning of state forests as national parks, would reduce the degree that the Eden community can rely on an integrated approach to forest management. It has already been established that the majority of respondents rejected the scenario. The next two sections will consider why this may be the case through an in-depth discussion of the sampled community's perceptions of timber and tourism industries around Eden.

#### 4.5.2 Community Attitude to Timber Industries in Eden's Forests

'The RFA established a CAR reserve system covering about one third of the region and more than half of the region's public land. More than 255 000 hectares of the region is in dedicated reserves, with another 12 000 hectares in informal and other reserves (Department of Agriculture Fisheries and Forestry, 2007c)

The Eden RFA legislation allocated a substantial portion of public land for reserve uses. It also simultaneously provided resource security for the region's hardwood and softwood industries. How the Eden community views different forest industries such as tourism and timber is bound up in history (personal and community), levels of potential economic contribution and perceptions of environmental impact. Within the timber industry there is evidence to suggest that exact levels of community support vary according to the type of industry under discussion; although all timber sectors canvassed have previously been identified as receiving a positive level of support at a community level in this research.

Traditional sawmills, which were identified earlier in this chapter as being connected to the history of the Eden Township received the highest mean level of support of 4.24 (see Table 17). Lower, but still positive levels of support were indicated for newer forest plantations (3.72) and pulpwood industries (3.72). The higher standard deviation registered for pulpwood industries (1.454) and plantations (1.316), as opposed to sawmills (1.056), and is taken as evidence of the contention that exists in the Eden area over the value of woodchipping and plantation forest industries.

Woodchip and pulp industries have a tendency to divide communities such as Eden, as local people debate issues of environmental preservation versus economic development. In 2007, the election campaign of the current NSW state member for the Eden Monaro was built around economic security:

In my door knocking throughout Eden many people are concerned about the lack of opportunities for young people and the social issues that arise as a result of youth unemployment ... We should be looking to broaden the opportunities for industry in Eden (Constance in Anon, 2007e)

The idea that industry development is essential for the social and economic development of Eden augurs well for the local woodchip sector. It has recently been estimated that woodchips comprise 90 percent of the log cut taken from Eden's native hardwood forests each year (Ajani, 2007). Figures published in the Eden Magnet newspaper estimate that the SEFE group can provide direct and indirect employment for up to 350 local people, which amounts to a local wage bill of \$20 million (Anon, 2007b). Between 70 and 81 employees work at the group's Two Fold Bay mill (Ajani, 2007; SEFE, 2006, personal communication).

The contribution of the SEFE group to the Eden economy should not, however, be seen solely in terms of jobs. Publicly available figures note also the charitable donation from the SEFE group to community groups/registered local charities and the like. In 2007 the company, in conjunction with the Eden Magnet, launched a \$10,000 Community Wishing Well program to help local community groups and promote community spirit (Anon, 2007c). From 1984 to 1996 SEFE contributed an average of \$31, 297 per year to community organisations such as schools, sporting clubs, hospitals and shows (Rush Social Research, 1997). Significant infrastructure contributions have also included \$2.25 million for the Merimbula Bypass (SEFE, 2006 pers. communication). A SEFE representative noted that many of the contributions made to community organisations are not reported in the media, and are made to organisations that have a hard time attracting other commercial interest (SEFE, 2006 personal communication).

Evidence collected in this project points to community acceptance of the contribution of timber industries to the local community. In question two of the contingent valuation survey, respondents indicated a higher level of support for the statement Local forestry industries make important contributions to infrastructure development throughout the Eden region than they did for Local forest based tourism industries make important contributions to infrastructure development throughout the Eden region (see Table 21). This is understandable when one considers the formative stage of forest based tourism in Eden. The presence of only a small number of owner operated ecotour companies makes it difficult for the industry to contribute to infrastructure in a manner similar to groups such as SEFE.

**Table 21: Industry Contributions to Infrastructure Development in Eden**

Survey Statement	Mean Level of Statement Support	Std. Deviation
Local forestry industries make important contributions to infrastructure development throughout the Eden region	4.06	1.023
Local forest based tourism industries make important contributions to infrastructure development throughout the Eden region	3.27	1.201
Question: The following are a series of statements regarding forests in the Eden area. Please read the statement and identify your position by ticking the appropriate box - Response Measurement: 5 point Likert Scale (5 Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, 1 Strongly Disagree)		

The economic contribution of SEFE to the local (and national) economy is, however, not accepted by all stakeholders. Some people question the degree to which the whole community feels the positive effects of the industry’s presence:

Woodchipping mainly benefits SEFE employees, Forests NSW employees and logging contractors. Indirect benefits also occur in the wider economy through their expenditure. However, alternative employment options would provide similar or greater benefits. (Digwood, 2007)

With respect to charitable donations, some local stakeholder groups note that they are made with the aim of buying community support. One prominent anti woodchip campaign group went as far as to suggest that infrastructure developments like the Merimbula Bypass were entered into solely to improve the company’s public image. SEFE are alleged to have financed an alternative route for logging trucks that kept logging truck traffic to a minimum in the main street of Merimbula (Chip stop, 2006, personal communication).

Concern over the economic sustainability of the SEFE woodchip group also exists at a state level. Concern here is related to the price paid by SEFE to extract material from forests in the Eden management area. Responding to a freedom of information request

from a group of anti logging groups, the NSW Primary Industries Minister Ian Macdonald noted that SEFE has been charged up to \$16 a tonne for logs taken from the Eden agreement area (Anon, 2007d). The government rationale for the continuation of the woodchip industry was to get a financial return from all forest products:

We don't want to leave marketable wood lying around in the forests and the pulp wood which is produced is a by-product of the sawlog recovery operation and so if we can sell that it all contributes to the bottom line and the overall return that ultimately the whole of NSW gets from the forest. (Anon, 2007d)

Objecting to the timber sale figures supplied by the Commonwealth, various anti woodchip campaigners and forestry analysts have alleged that, far from paying its own way, the government actually lost \$3.5 million dollars in 2005-06 from supplying timber to the mill (Frew, 2007).

Ongoing issues surrounding the development of a softwood processing mill in Bombala by the Timbermans group, the relatively small size of softwood mills in the Bombala area (e.g. Prime Pine and Wilmott Forest), and the closure of the Boral group's Eden mill in 1996 will mean that SEFE will probably remain a dominant player in the local forest industry for a number of years. The SEFE group has been able to weather the reductions the NSW Government has made to chip log sales from public native forests by drawing material from East Gippsland (Ajani, 2007). It has been estimated that 32 percent of SEFE's woodchip material is sourced from Victoria (McManus, 2002).

In spite of the economic primacy of SEFE in the local economy, many locals debate the mill's benefit to the community on social and environmental grounds. Forest community wellbeing cannot be confined to the economic security provided by forest industries (Overdevest & Green, 1994). One must also consider amenity and other forest values (Overdevest & Green, 1994). A variety of Eden residents objected to the impacts they perceived the mill was having on the local environment, e.g.:

The use of our forests for woodchips is criminal. The amount of accumulated energy needed to harvest and process and ship the chips so they can be returned to us once in a computer, is something this area should not be proud of. The

streams, creeks and rivers are also suffering greatly after logging. (Community survey - Respondent 123)

Other concerns relate to the foreign ownership of the SEFE group. Earlier in this chapter it was noted that Harris Daishowa (as it was previously known) arrived in Eden in the late 1960s. The establishment of a \$5 million mill on the shores of Twofold Bay was originally to be a partnership between the Australian owned Harris Holdings and the Japanese Daishowa Paper Manufacturing Company. The company is today wholly Japanese owned by Nippon Paper Industries. It has been alleged that Japanese paper groups allowed Australian investment in their operations to provide a buffer between themselves and residual anti Japanese sentiment from World War 2 (Ajani, 2007). Anti Japanese sentiment, or the Changi issue, was mentioned by one community member in an interview for this project:

The woodchipping is a dicey one. I've always thought personally that had the company (SEFE) been wholly Australian owned that it never would have drawn the flack that it has done. It was the Daishowa not the Harris ... There was a big anti Japanese sentiment ... Yet lots of these early environmentalists couldn't or wouldn't see that it was the rubbish timber that was going to the woodchip mill; the best timber was going to the sawmills. They just saw red when they saw the wood being chipped and when they learned it was Japanese that was it ... there was also the Changi issue. (Natalie, 2007, Personal Communication)

Attitudes to plantation forests are similarly divided in the Eden community, with most concerns relating to the environmental cost of land clearing:

The pine plantations in mass are probably detrimental to the native environment ... Some areas up around Bombala have been cleared ground with nothing growing on it apart from tussocks, and they then put pines in and they die. (Lloyd, 2007, personal communication)

The preoccupation of respondents with the environmental impacts of plantations was surprising when one considers that Eden is not the geographical focus of plantation forestry in NSW. In NSW softwood plantations are located inland around Tumut and

Bombala and hardwood plantations are located in the north of the state around Port Macquarie, Coffs Harbour and Grafton (Adams, ND; Forests New South Wales, 2005-2006; Private Forestry, 2000; Willmott Forests, ND). Individual plantation companies such as Willmott Forests manage over 18 000 hectares of plantation estate, employ over 135 people from the Bombala region and produce output of almost \$15.9 million per annum (Centre for International Economics, 2005).

Over recent years there has been an increasing focus on plantation timber amongst Eden based timber stakeholders. A SEFE representative identified that there is an interest in the company moving into the production of softwood plantation chips in the next five years (2006, personal communication). Already the multi purpose wharf is used for softwood export. In 2001 SEFE's parent corporation Nippon Paper arranged for a trial shipment of plantation chips from the NSW State Forests' plantations around Bombala. This was with a view to using the chips to make newsprint or higher-quality paper, which could be processed in any of the mills owned by Nippon Paper (New South Wales Department of Primary Industries, 2001). In May 2004 12,000 tonnes of pine logs were shipped to China from the Eden Multi-purpose wharf by State Forests NSW in conjunction with the Pentarch export group (Chester, 2004).

The final area of the Eden timber industry that was canvassed in the contingent valuation survey was traditional hardwood sawmills. Hardwood sawmills have been in decline for the last 40 years, due in part to the impact of plantation development (Ajani, 2007). Over this period the fortunes of sawmills have been closely aligned to the woodchip sector. By providing a market for log off cuts the woodchip sector was able to help struggling sawmills, which were a major source of local employment which survived on the sawmill export market (Ajani, 2007). Today around Eden there are two companies that work exclusively in the hardwood sawmill market, Blue Ridge Hardwoods (formerly Duncan Sawmill) and North Eden Timbers. While the hardwood sawmill market will probably not dominate the timber market again in the foreseeable future, there was still support in the community for the continuation of high value timber industries:

Sawmilling should continue based on high value usage – flooring, furniture, structural timber, wooden boat building ... Woodchipping and log exports



should end as soon as possible (Community Survey - Respondent 10)

Like in many areas of Australia, working families in Eden are feeling the effects of the rising cost of living. In the lead up to the 2007 Federal Election, the Labor candidate for the Eden Monaro alleged that working families are struggling to 'make ends meet as they face increasing grocery bills, higher petrol prices and huge mortgages' (Anon, 2007a). In such difficult times it is easy to see the economic value in preserving established industries such as woodchipping. But if, however, such preservation is impossible on social and environmental grounds, can forest based nature tourism offer a way forward? The next section will consider community perceptions of forest based nature tourism.

#### 4.5.3 Community Attitudes to Nature Tourism in Eden's Forests

In 2006 the Bega Valley Shire Council published the Draft 20 year plan for the area (Bega Valley Shire Council, 2006a). The sections of the plan relating to tourism illustrate the preferred official direction for it in the next quarter century. The ultimate aim of the council strategy is the development of the Bega Valley Shire as an 'excellent holiday destination' (Bega Valley Shire Council, 2006a, p. 35). To this end a series of actions are proposed; working to promote the Shire as a year-round holiday destination; working with the Economic Development and Tourism Committee to set policy and procedures that support the local tourism industry; supporting projects that improve road networks; identifying available funding for transportation for new and emerging industries, and ensuring maintenance of essential infrastructure (Bega Valley Shire Council, 2006a). These objectives bring to our attention a number of issues that can influence community attitude to tourism development. The issues that will be discussed here include: community access to forest resources, the perceived difference between formal tourism and private recreation and the way the community relates to regional tourism managers.

The first issue that must be addressed when discussing community perceptions of nature tourism is the idea that community appreciation of recreation related uses does not always translate to acceptance of formalised tourism industries. McKercher (1996, p. 565) has noted that the 'distinction between tourists and non tourists ... reflects the

attitudes and values of the observer'. The almost universally high level of support given in the community survey for private forest based leisure activities around Eden suggests that the Eden community does view forests in utilitarian recreational terms. In Table 17 it was illustrated that bushwalking received mean level of support of 4.4, camping 4.21, heritage sites 4.07, horse riding 3.81 and indigenous cultural practices 3.56.

This high level of support for different recreation landuses taps into the idea that forests around Eden are meant to be used by locals for private/informal recreation, as they are perceived to have done sustainably for decades. A representative of State Forests NSW (2007, Personal Communication) noted the informal nature of a lot of the forest use in and around Eden:

We've got a number of people using the forests but they're generally operating in family groups as opposed to going to a designated site with a board walk, information sign and the like. So people walk their dogs in the forest, they ride their trail bikes and those sorts of things ...

The informal nature of recreational activities such as dog walking has meant that a lot of the tourism in the Eden area is not traded on competitive markets (Scarpa, Hutchinson, Chilton, & Buongiorno, 2000). Contingent valuations are one economic method that can tap into these non market valuations, hence its use in this thesis.

One of the principal concerns raised by locals about the formal tourism sector is the issue of industry seasonality. Since its earliest days the tourism potential of Eden has been influenced by market seasonality and operating climate. In 1915, a Tourist Guide to the South Coast Districts of New South Wales: By Rail, Road and Sea described Eden's potential as a summer health resort (Comyns, 1915). The potential for growth in this tourism sector was 'on account of the salubrity of its (Eden's) climate' (Comyns, 1915, p. 76). Since these early days, the sector has been focussed around Eden's Two Fold Bay, which is described as a popular area for yachting (Comyns, 1915). Today the Eden tourism sector is dominated around the Christmas and Easter school holiday periods (New South Wales Tourism Commission Planning and Development Division, 1990), as well as by cultural festivals such as the Eden Whale Festival in November. Outside of these periods moves are afoot to ensure year round tourism traffic through initiatives such as, Sapphire Coast Tourism's 'Cruise the Gardens of Eden' campaign

and the development of a Sapphire Coast Marine Discovery Centre as a source of maritime education, in conjunction with the existing Eden Whale Museum. Even with the success of these initiatives, however, a common concern in the community continues to relate to the seasonality of the tourism industry:

There's just not enough of an influx of people. In winter it gets too cold for people to travel, or they pass through going up to the Daintree where it's nice and warm. (Bruce, 2007, Personal Communication)

The effects of seasonality and other market forces such as Eden's isolation are seen as having a particular impact on the fledgling forest based ecotour sector. Throughout the southern Sapphire Coast area there are only a few isolated forest based ecotour operators, e.g. Sapphire Coast Ecotours <http://www.sapphirecoastecotours.com.au/> and Sapphire Ecotours <http://www.sapphireecotours.com.au/>. A commonly recognised characteristic of nature based tourism developments worldwide is that there must be natural attractions sufficient to maintain tourist interest (Holden & Sparrowhawk, 2002; Mehmetoglu, 2007; Nyaupane, Morais, & Graefe, 2004). Throughout Australia there are a number of forest based nature tourism attractions, e.g. the Tahune Airwalk in Tasmania and the Sky Rail Rainforest Cable Way in northern Queensland, which have developed to take advantage of the natural beauty of iconic southern Tasmania and northern Queensland. In the Sky Rail case near Cairns, visitors identified that a rainforest experience was central to their desire to visit the area (Moscardo & Pearce, 1997). In spite of RFA assessments considering this issue and developing a list of aesthetically pleasing sites for the Eden region (see Gillespie Economics, 1997), some locals continue to draw attention to the lack of iconic features in Eden's forests compared to other areas of Australia, '... people come here for the beaches not the boring ugly Australian bush' (Community Survey - Respondent 94).

One of the results of the seasonality of tourism industries in the Eden area has been concern amongst groups such as State Forest NSW that forest based operators will struggle to survive:

I've been to a few places up and down the coast and have seen people trying to develop forest based ecotourism, and there's a person here at the moment that's

going through the process ... I think he's got a difficult road ahead. He's going to work his but off for a while trying to build a business and then he will disappear from it ... It's a pattern that I've seen time and time again ... there's just not enough to sustain an operator ... Magnificent forests, some really special stuff and the people who were running tours were not limiting themselves to state forests they were going into some of the finest parks and flora reserves around the place ... Magnificent ... But they were going broke and couldn't sustain it ... And it's been an observation of mine for a number of years that the forest based tourism does not generate jobs.

(State Forests, 2007, personal communication)

The economic and other difficulties being experienced by forest based nature tourism operators has prompted some people in the community to suggest that forest based nature tourism will always be a subsidiary to water based tourism operations:

[Forest based tourism] will always be an adjunct to the coast based tourism such as fishing, surfing etc. i.e. somewhere to go when it's too cold or hot to go to the beach. (Community Survey – Respondent 12)

One way that niche forest ecotourism markets may continue to be able to operate independently of other tourism sectors in Eden's forests is to promote stronger links between the ecotourism and forestry sectors. Earlier in this chapter reference was made to some of the infrastructure and other linkages that have existed between traditional industries and tourism. There is some degree of interest amongst the core tourism and forestry groups in the area for a closer relationship. For instance, State Forest NSW would in theory welcome a closer relationship with forest based ecotour operators than that which currently exists (2007, personal communication). Other groups such as Bega Valley Shire Council and Timber Communities Australia noted the potential for tourism development around an authentic timber experience (2006, personal communication; 2006, personal communication). Discussions with the SEFE woodchip group indicate that the continued profitability of the on site visitors centre is an indication of how the primary industry arm of Eden's economy can play a role in the area's tourism industry (2006, personal communication). The continued existence of these tours is not surprising when one considers the idea that nature tourists are often after experiences,

which amount to more than simply wandering the forests (Sapphire Coast Tourism, 2006 Personal Communication).

So what are the desired experiences of nature tourists in Eden's forest areas? This question was beyond the scope of this thesis, which is focusing on the perceptions of tourism held by the Eden community. Nonetheless, it is an important consideration for researchers that are interested in understanding how best to manage tourist focussed change in rural areas. Rural tourism, as with any other form of tourism can be defined as a system of interrelating components, namely the destination region, generating region and transit route region (Leiper, 1990).

An important characteristic of Leiper's tourism systems model is the notion that systems function at a personal level (McKercher, 1999). The idea that tourism systems are individual has parallels in the idea of a personally constructed tourist experience (see Cohen, 1979; Mannell & Iso-Ahola, 1987; Ryan, 2002). A variety of authors have considered what constitutes the experience of tourists in a national park or other reserve setting (Archer & Griffin, 2005; Archer & Wearing, 2002; Borrie & Birzell, 2001; Chapman, 1995; Dahms & McComb, 1999; Dawson, Newman, & Watson, 1998; Glaspell, Watson, Kneeshaw, & Pendergrast, 2003; Godfrey-Smith, 1979; Griffin & Vacaflores, 2004; Hocht, Lehringer, & Konold, 2005; Lynn & Brown, 2003; Patterson, Watson, Williams, & Roggenbuck, 1998; Stewart, 1998; Watson & Roggenbuck, 1999; Watson, Roggenbuck, & Williams, 1991; Watson, Williams, Roggenbuck, & Daigle, 1992).

Authors such as Chapman (1995, p. 65) have defined ecotourist experience preferences in terms of generic measures such as 'to be in an undisturbed natural area' and 'to look at the scenic beauty'. These characteristics are reflected in the work of Driver (1983) who developed a master list of items for recreation experience preference scales. While there is nothing wrong with this approach, other authors have commented that many of the common characteristics of the nature experience are subjective and open to differing personal interpretations (Dawson et al., 1998). This draws into focus the psychological nature of the tourist experience (Mannell & Iso-Ahola, 1987; Urry, 1990). The idea that individual tourists can construe their experiences in different ways has paved the way for researchers to use PCT techniques to understand more about what tourists see in a

destination, often with respect to destination image analysis (Botterill & Crompton, 1996; Coshall, 2000; Embacher & Buttle, 1989; Jenkins, 1999; Naoia et al., 2006; Pike, 2007; Scherl, 1988). There is thus potential for PCT techniques to be used to understand the preferences of visitors to the forests of the Eden area of NSW. Such research would conceivably shed light on the degree to which visitors view a lack of iconic forest features, as well as industry seasonality as being likely to influence their desire to visit the forests of south east NSW.

#### 4.5.4 Community attitude to Forest Land Managers

The stated aim of the contingent valuation scenario was to understand the non market Eden residents ascribe to the creation of more areas of national parks in their locality. In order to fulfil this aim the researcher has identified two issues that may affect community receptiveness/attitude to national park landuse rezoning. The first issue relates to the before mentioned community attitude towards the different landuses that will be allowed/disallowed within a national park management plan (see sections 4.5.1 – 4.5.3). The second issue relates to the community's opinion of the change in management arrangements that will accompany national park development on formerly state forest land. This second issue stems from the fact that national parks are government zoning strategies, which are designed by governments through legislative processes such as the Forestry and National Park Estate Act 1998 (NSW Government Department of Environment and Climate Change, 2008). The purpose of this section is to consider the relationship between the Eden community and the various regional stakeholders who are responsible for changes in local landuse arrangements. The first group which will be considered is Bega Council.

One of the actions proposed by the Bega Valley Shire Council in their 2026 20 Year Plan was to work with the Economic Development and Tourism Committee to set policy and procedures that support the local tourism industry (Bega Valley Shire Council, 2006a). An analysis of council records shows that Bega Valley Shire Council does make significant contributions to the local tourism industry; for the year ending June 2006, \$875,000 was provided by the council for tourism and area promotion (Bega Valley Shire Council, 2006b). In 2007, however, the management of tourism in the Shire underwent significant changes with Bega Council handing over tourism

management responsibilities to the Bega Valley Shire Business Forum<sup>23</sup> (Bega Valley Shire Business Forum, 2007). It is beyond the scope of this thesis, with its Eden community focus, to consider the degree to which Bega Council's tourism policies have adequately supported the local tourism industry. Such analysis would involve a detailed review of the views of tourism operators and support industries in the Eden area. Instead, as has been noted, this section will make some broader observations of the interactions between the Eden community and other tourism/forest management stakeholders. A stakeholder can be defined as 'any group or individual living in the Eden township who can affect or be affected by a change in the nature of the local tourism landscape' (adapted from Goodpaster, Maines, & Rovang, 2002, p. 44).

It was noted in the methodology chapter that contextualising interviews were conducted with 10 regional stakeholders representing tourism, forestry and other interests in the Eden area. Although the issue of community interaction was not canvassed directly with all interviewees, there was evident a recognition amongst some land managers of the need to engage with local populations. The need to engage with the local population is in part connected to the fact that local people have been estimated to provide between 18 and 59 percent of visitor traffic to local forest reserve areas (Lindberg and Lockwood, 1996 in Shepherd et al., 2004). It is also indicative of a broader trend in resource management circles to support 'the emergence of communities as institutions endowed with meaningful powers for resource management' (IUCN World Conservation Union, 2005).

A Bega Council representative interviewed for this project noted that he is a firm believer in the idea that managers must engage with local people when making landuse decisions (2006, Personal Communication). At the same time, however, the council representative went on to note that the canvassing of stakeholder views does not mean that everyone will be happy with the final decision. In the end elected representatives are paid to take a considered position, which hopefully will be in the interests of the majority of the community:

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<sup>23</sup> This is the representative body for the Bega Valley Shire Chambers of Commerce and Industry/Business Group.

.... you listen [to people] ... but you at the end of the day have to make a decision. And sometimes that decision will not square with what people have been telling you. You have to use a whole different range of assessment criteria to help you make your decision. These may be criteria that the people in the community might not be aware of. When people complain that we didn't listen to them when they told us what they thought about an issue, my response to them usually is to say that yes we did listen, we just didn't do what you wanted us to do ... At the end of the day people like councils ... are put in place to make those decisions. (Bega Valley Shire Council, 2006, Personal Communication)

The idea that regional tourism stakeholders must ultimately make a decision that is in the best interest of the whole stakeholder community is complicated by the fact that in any tourism context, 'stakeholders engage with issues in different ways and at different times' (Dredge & Jenkins, 2007, p. 207). Over the last year there have been a number of individuals and groups in the Eden community that have been proactive in continuing to push a particular tourism agenda for the region. Recent tourism development initiatives have included the restoration of the Eden Chamber of Commerce Tourism, the ongoing proposal to establish a marina at Boydtown, the creation of the Eden Marine Discovery Centre and the development of the Eden Cruise Ship Market. The Eden Cruise ship market is estimated to be worth \$635,000 to the local economy (Anon, 2006a). In spite of this, there is evidence that the local business community is shunning public meetings designed to brief business owners on the ways that cruise ship visitors may influence their operations (Anon, 2006a).

One of the unique individual tourism stakeholder groups whose views must be factored into development decisions is the local indigenous population. Tribal groups in the coastal area immediately around Eden are collectively known as the Ratungal Yuin. In the 1996 census 523<sup>24</sup> people identified themselves as either indigenous Aboriginal or Torres Strait Islander (Meriman's Aboriginal Community, Bega Aboriginal Community, Eden Aboriginal Community, & Department of Primary Industries and Energy Social Assessment Unit, 1998). Reports completed as part of the Eden RFA impact assessment process in the late 1990s identified the need 'for support for the creation of small

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<sup>24</sup> It is recognised that there are significant deficiencies in adequately collating statistics on the true size and nature of the aboriginal population (Pink, 2007).



businesses e.g., local crafts people, artists, bush tucker etc' (Meriman's Aboriginal Community et al., 1998, p. 5). To this end there have been initiatives such as the development of the Jigamy Farm complex and the promotion of the local Bundian Way as indigenous tourism attractions. Recent cruise ship visitors were identified as visiting Jigamy Farm and Sapphire Coast Tourism employs Aboriginal people in a front line tourism capacity (Sapphire Coast Tourism, 2007, personal communication).

The development of close links between the tourism industry and indigenous populations, the employment of Aboriginal people in paid tourism positions and the development of appropriate/sensitive cultural attractions can help the positive development of Aboriginal populations. This is particularly important when one notes that at the time of RFA development there was allegedly no comparable involvement of indigenous people in local forest industries (Meriman's Aboriginal Community et al., 1998). Today the issue of training indigenous workers in the timber industry is still around. A representative of SEFE noted in an interview for this project that there are moves to fund 3 new apprenticeships for Aboriginal people (2006, Personal Communication). Hindering this move, however, are issues of appropriate levels of education amongst applicants to complete the apprenticeships program (SEFE, 2006 Personal Communication). The positive effects of Aboriginal employment in tourism are also dampened by the broader issue of commodification in the tourism sector (Beeton, 2000). The degree to which the Aboriginal community has been commodified by tourism was not a major topic of investigation in this thesis. It was nonetheless identified by the Eden Aboriginal Land Council (2007, Personal Communication) that many people within the Aboriginal communities are concerned about the extent to which tourists are being educated to respect and value indigenous culture.

Retraining people for employment in tourism or other industries is not a concern which is confined to the indigenous community. Over the last 20 years the issue of stakeholder participation has become an issue in global forest management debates. This can be illustrated firstly in the development of Community Based Forest Management initiatives in countries such as India, Cambodia and Nepal (Menzies, 2004; Nightingale, 2003; Shrestha, 2005; Sunderlin, In Press Corrected Proof). It is also central to the RFA process where, through initiatives such as Community Forest Forums, there is provision for the inclusion of a broad range of stakeholders in the forest management process.

This thesis referred to stakeholder involvement in Chapter 2 when it was noted that many stakeholders felt let down by the tendency for RFAs to remain a technocratic, centralised political process, which allegedly only paid lip service to the call for local stakeholder participation in forest governance.

The idea that there are different levels of community participation in tourism development means that this project must now consider; what is an appropriate level of community participation in forest management, and by implication, the development of forest based tourism industries? Also does the Eden community favour active participation in forest management, or is there merely an acceptance of the idea that they will inevitably be manipulated by more powerful management forces?

The contingent valuation survey or community interviews illustrated some considerable animosity in the community towards regional forest stakeholders. The following comments were recorded in response to the question, 'what do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?' Many of the issues identified related to lack of transparency on the part of land managers:

Tunnel vision of green movement and the NPWS organisation ... Example Merimbula women phoned the radio re: 50,000 tonne woodchip shipment (complaint) ... No mention of 50,000 tonnes carbon CO<sub>2</sub> locked up for extended period and exported to pay for imported goods she uses. (Community survey - Respondent 107)

I think that this applies not just to the forests of Eden but to various forests. It's one of those debates where it's very hard to tell who's telling the truth. There are so many vested interests and extremists/nutters that are prepared to lie for their cause; you just cannot get at the truth of the issue ... (Stephen, 2007, Personal Communication)

The most frustrating thing that I found from my 22 years with the timber industry and the green lobby is that everybody lies. If they could only all tell the truth we could work out a strategy of how to manage it, which would allocate suitable portions. The fact that I don't like the pulp industry, or bloody

bushwalking or whatever is irrelevant ... I just think that there is a lot of emotion given the timber industry and green industry ... It's very frustrating for somebody who can honestly see both sides of the argument. (Daniel, 2007, Personal Communication)

Communities who are seeking to engage with forest debates must learn how to decipher the difference between fact and fiction from the timber industry, conservationists and other stakeholders. This complexity draws our attention to the role of national and local media in environmental management debates. There is a body of empirical research being conducted by communications and public opinion researchers, which suggest that the news media can both shape and reflect public opinion (Fan 1988, McCombs 2004 in Webb, Bengston, & Fan, 2008). This idea is reflective of the approach of the media to environmental management debates such as the Franklin River (see Law, 2001 for a historical overview of the Franklin River campaigns). In this particular instance the media were identified as viewing themselves as 'the legitimate mediators of public discourse' (Hutchins & Lester, 2006, p. 444). Today there is evidence of similar perceptions being held by the media in Eden. Recently the editor of the *Eden Magnet* Kate Lincoln described her organisation as an 'engine for the community' (Anon, 2007f).

The role of the media in setting the agenda for forest usage around Eden was canvassed in interviews with the community and other forest stakeholders. In the south coast area, local media includes the *Eden Magnet*, ABC and East Coast Radio 2EC. The editor of the *Eden Magnet* (2006, personal communication) noted that her organisation prefers to remain as impartial as possible when dealing with contentious forest issues:

[Forest landuse] is a very touchy issue; especially in Eden itself ... It's something that we try to keep as balanced as possible ... For example last week we had a letter from the anti woodchipping group, advocating that it's all wrong etc and so naturally we published that ... Again this week we received a story regarding new standards of woodchipping that had been done at the mill itself, and so naturally we published that as well ... So we're trying to keep a balanced view and express from both sides ...

The idea that the media needs to remain in some way detached from the emotions of forest management debates is not new. In the case of the Franklin River controversy, the editors of publications such as *The Age* and *The Mercury* saw their role and message as being threatened by paying too close attention to basic human values (Hutchins & Lester, 2006). The degree that media outlets in Eden have been successful in presenting unbiased information on forest management debates, and by implication involving the public in land use discussions is open to debate. Divergent views were expressed by community members:

When I've been at the publication (blank)<sup>25</sup> in the past I've got the opinion that they run from the local debates rather than engaging with them. (Lisa, 2007, Personal Communication)

I think that locally people get a reasonable hearing. They'll put in a bit from the greens and from the logging companies ...  
(Lloyd, 2007, Personal Communication)

Similarly in discussions with forest and tourism stakeholders there was evidence of both positive and negative sentiments towards the local media:

We've never had a problem getting access to the media ... If you put a press release out it tends to get run pretty much as it's written ... If you want to get on the radio either to put out a message or respond to somebody else, that's available to you. We don't find that there's usually any agenda to stop us putting out information into the public arena.  
(State Forests NSW, 2007, Personal Communication)

Every time there's an action we put a media release out. The hard thing is getting them to consider it as news.  
(Chipstop, 2007, Personal Communication)

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<sup>25</sup> Newspaper titles removed by the author

We get the green's view constantly from all sorts of sources. I said that in contrast we're never allowed to put our point view. The answer I got from the editor was that they were not prepared to publish unchallenged opinion. I said, "Well you do every other week". (SEFE, 2006, Personal Communication)

The degree to which the agendas of any of the above organisations strike a chord with people in Eden varies from individual to individual. Locals will engage with regional stakeholders when they view the actions of said stakeholders as influencing their lives. One of the principal ways that this can occur is through changes to forest access routes and road networks.

The need to improve local road networks was a component of Bega Valley Shire Council's 20 Year Plan for the tourism industry (Bega Valley Shire Council, 2006a). It was recognised that forest access, either by road or river, is a fundamental requirement for the development of recreation values in a forest setting (Pearce, 2001). Some 94 percent of visitors to the south coast region of NSW use private automobiles (Bureau of Transport and Rural Economics, 2000). Public access was also an important consideration in the 2004 Far South Coast Nature Tourism and Recreation Plan (see Shepherd et al., 2004). It was recognised that there is a need to 'encourage high quality NTR programs and tours that enable better access and experience to the regions outstanding natural environments for visitors, and especially to Aboriginal Cultural Heritage Programs' (Shepherd et al., 2004, p. 5). In addition, the importance of encouraging access for indigenous communities and the local Eden population more generally was recognised (Shepherd et al., 2004). The Eden community represents a significant proportion of the annual visitor load to state forests and national parks. In the contingent valuation survey 80 percent of respondents (n= 121<sup>26</sup>) indicated that they had visited an area of State Forest or National Park around Eden for recreational purposes in the last year (see Table 22 overleaf).

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<sup>26</sup> Question not included in the 2<sup>nd</sup> survey follow-up (see section #)

**Table 22: Recreational Visits to State Forests/ National Parks in the Last Year**

Response	Number of Respondents	Percentage of Respondents
Yes	97	80.2
No	24	19.8
Total	121	100

A review of the operational objectives of some of the various groups involved in the development of the 2004 Far South Coast Nature Tourism and Recreation Plan goes a long way towards explaining why access features so prominently in their blueprint for south coast tourism. The NSW Department of Primary Industries, which oversees the work of Forests NSW aims to help 'generate social and economic benefits for the people of NSW, including recreation and regional employment opportunities' (NSW Department of Primary Industries, 2005). Similarly a core function of the NSW NPWS is the promotion of 'community awareness, understanding and appreciation of the conservation of nature and our cultural heritage' (National Parks and Wildlife Service, 2004). One example of this is the work the NPWS has continued to do to encourage public access to sites of local significance like the Davidson Whaling Station (Department of Environment and Conservation, 2006).

The ability of local people and visitors to access forest areas is a recognised priority of local forest managers. However, opinion on whether adequate recreation access has been facilitated varies throughout the Eden area:

The major factor that has influenced my attitude to the management of our forests is the arrogant attitude of the national parks and goodlife's in locking up various areas of forest and the regimentation of others (where you can park, what you can do - practically nothing - how much it will cost you (there was never going to be any entry charges to our parks HA!) to the point that it is no longer one of life's privileges to live in the Bega Valley. They can't manage what they have but they always want more. (Anon in Schweinsberg 2006, Thesis pilot survey)

The NPWS has a variety of issues to consider when deciding on appropriate levels of public access to reserves. The NPWS has to balance public access objectives with often “higher” conservation objectives. This tourism/conservation balance is central to national parks and reserve areas the world over (De Lacey & Whitmore, 2006; Eagles & McCool, 2002; Wearing & Archer, 2002). How it is resolved reflects the sustainability priorities of the organisations involved.

The Rio Earth Summit involved the signing of a set of non binding forest principles designed to ensure management, conservation and sustainable development of all forest types on an international level (Hodge, 2005; Osborn & Bigg, 1998). Imbedded in these principles was an appreciation of the principles of the triple bottom line (United Nations General Assembly, 1992). Moves towards the adoption of triple bottom line approaches to forest management in Australia had their foundation in the development of a national policy of ecologically sustainable development (ESD) (Kirkpatrick, 1998). In 1990 the Commonwealth Government established a working group on forests as part of the broader push towards the development of a national strategy on ecologically sustainable development. The goal of this working group was to maintain ecological processes, while also maximizing potential economic benefits to communities from forest activity within the boundaries of existing ecological constraints (Bartlett, 1999). Integrative forest legislation such as the National Forest Policy and RFAs developed from these ecological sustainable development initiatives (Standing Committee for Forestry & Standing Committee of the Australian and New Zealand Environment and Conservation Council, 1992; Ward, 2000).

The following quote shows how integrated sustainability approaches have been applied by the NPWS to the management of the Nadgee Nature Reserve<sup>27</sup> south of Eden:

The [Nadgee] reserve will be managed to protect its natural and cultural values, with emphasis on maintenance of habitat diversity and conservation of populations of rare and threatened species. Historic and Aboriginal sites will be protected from disturbance, educational programs and approved scientific

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<sup>27</sup> It is recognised that the Nadgee Nature Reserve is the only coastal wilderness area on the NSW south coast. The designation of the area as wilderness means that under IUCN Guidelines such areas are managed mainly for wilderness protection, as opposed to national parks that are managed for ecosystem protection and recreation (Lockwood, 2006).

research will continue to be encouraged. The scenery of the reserve is outstanding and its naturalness and sense of isolation contribute to making the reserve a rare and special area. It contains the only declared coastal wilderness area in NSW and the most isolated beaches and undisturbed estuaries in NSW. The wilderness area will be managed to protect its natural heritage and value for solitude and self-reliant recreation by such measures as minimising vehicle tracks and limiting the amount of use. Low key visitor use will continue to be permitted at existing sites in the northern part of the reserve. These provide opportunities for walking, picnicking, beach and lake oriented recreational activities. (New South Wales National Parks and Wildlife Service, 2003)

Whether the Eden community supports the creation of national parks in areas that are currently characterised by state forests comes down to a cost benefit analysis of a particular proposal. Those community members that see nature tourism as an important economic foundation for the area may support the creation of national parks and the exclusion of other, less environmentally benign industries such as logging which are characteristic of state forest management strategies. The results of the contingent valuation questioning have been discussed in section 4.4. It is worth noting at this point that survey respondents were asked for their opinion on the sustainability potential of state forests versus national park management authorities in the Eden area. A higher level of support was in evidence for the state forest sector (mean = 3.48) than the national park sector (mean = 2.26) (see Table 23 overleaf).



**Table 23: Contributions to Forest Sustainability<sup>28</sup>**

Survey Statement	Number of Respondents	Mean Support for Survey Statement
The sustainability of Eden's forests is dependent upon the growth of the State Forest sector	122	3.48
The sustainability of Eden's forests is dependent upon the growth of the National Park sector	124	2.26
Survey Question: The following are a series of statements regarding forests in the Eden area. Please read the statement and identify your position by ticking the appropriate box Response Measurement: 5 point Likert Scale (5 Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, 1 Strongly Disagree)		

Whatever the parameters of the management plan that is introduced, there is a requirement that tourism and other managers ensure a ‘coincidence of interest between their own perceptions of the benefits of conservation and those experienced by the local community’ (Bushell et al., 2002, p. 25). The need to involve the community in determining the merits of a development proposal is a foundation of studies that have used the techniques such as the *Theory of Social Exchange* to assess community support for tourism developments (Gursoy & Rutherford, 2004; Harrill, 2004; McGehee & Andereck, 2004). So how does the Eden community perceive the effects of restrictive access put in place by NPWS management plans? In the first instance the limiting of public access to areas such as Nadgee is seen as threatening local peoples’ ability to continue to recreate in the same manner as previous generations:

NPWS are regarded by locals as having stolen their favourite local spots from them. (Community Survey - Respondent 23)

National parks have closed off areas that were access to all ... Put a price tag (\$) on areas (e.g. camping) ... Places that used to be accessible are now overgrown and neglected.

(Community Survey - Respondent 65)

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<sup>28</sup> Statements on sustainability were not included in the 2<sup>nd</sup> survey follow-up for reasons already stated. The fact that these questions were only presented to the first 128 respondents means that these figures cannot be claimed to be representative of the views of the whole sample.

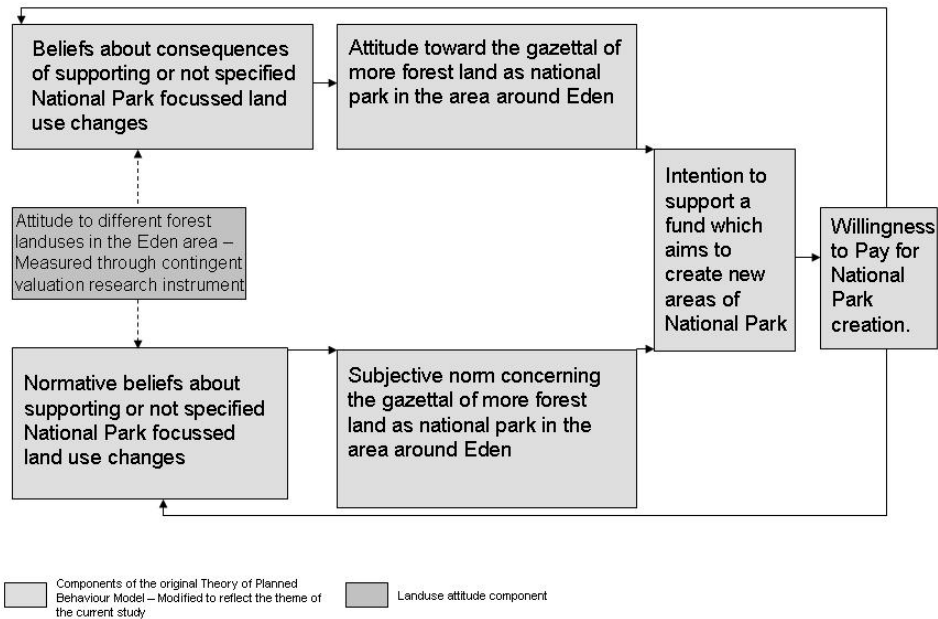
Also of concern to locals was the impact that NPWS policies on access would have on local tourism industries:

Sadly some of the most spectacular [tourist] locations are now in wilderness areas and locked up e.g. Nadgee. It would be a huge tourist attraction if properly managed and promoted. Only 1 percent of the wilderness area needs access, roads are already there. This is only one example ... there are caves, beaches, rivers of rare beauty, lakes unique with fish life and remoteness and birds. What a goal. TAS allows access to their wilderness areas and endangered wildlife. Tourists love it and respect how special it is and educated can't get enough. We should do the same. (Community Survey – Respondent 159)

[There is] fuck all [potential for tourism development]. National Parks won't let you in. And if there was potential the greenies wouldn't let you forget it. Also if there was money in it somebody would be doing it. (Community Survey – Respondent 184)

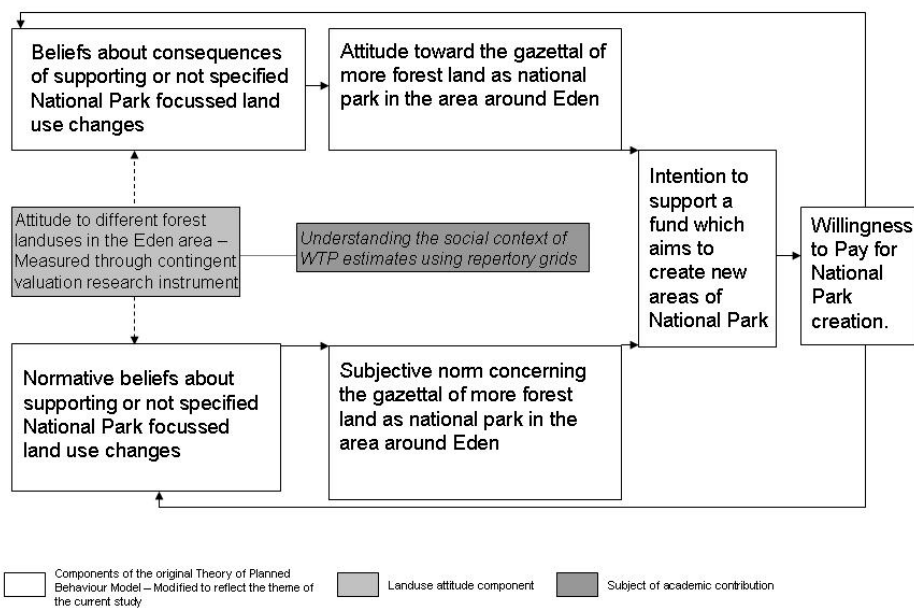
So far this chapter has sought to illustrate some of the different ways that members of the Eden community may perceive the presence of timber and tourism industries in their locality. Attitudinal information that was presented in this section was gathered in the course of the contingent valuation community survey. The landuse attitudes that have been summarised in section 4.5 have previously been identified as influencing resident WTP for an increase in the area of national park land in the Eden area (see Figure 11 overleaf)

**Figure 11: Attitude and Willingness to Pay in a Contingent Valuation Study**



In an effort to further understand how these attitudes are formed, the final part of this chapter will report on the results of repertory grid interviews that were completed with a group of 22 Eden residents. The link between this psychological data and the previously cited contingent valuation material is illustrated in Figure 12.

**Figure 12: Contingent Valuation Attitude – Repertory Grid Link**



## **4.6 Constructions of Different Forest Landuses in the Eden area**

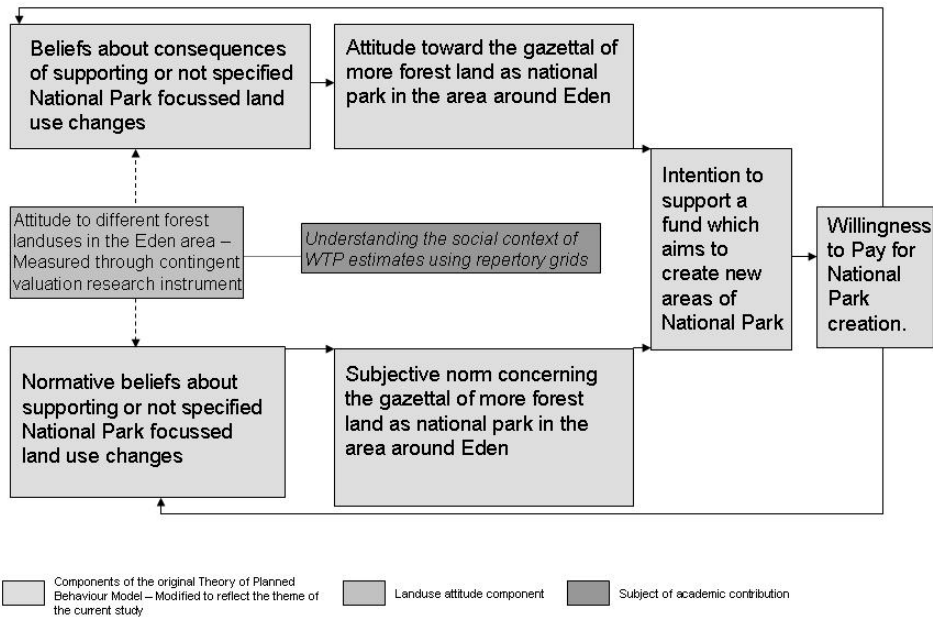
The focus of this inquiry is with the exploration of a new economic/psychology approach for understanding attitudes in a contingent valuation study. This objective has been achieved through the completion of 22 psychological repertory grid interviews with residents who also completed the community contingent valuation survey. A full breakdown of the contingent valuation survey results and interviewee repertory grids for each of the 22 participants is available on request. This chapter will refer to select interviews in order to provide examples of ways that the researcher perceives that repertory grids can expand our understanding of attitudes to forest landuses, beyond what is normally possible in contingent valuation questioning.

### 4.6.1 Restating the Proposed Contingent Valuation/PCT Conceptual Link

As was previously noted, the links that this thesis is proposing between PCT repertory grids and contingent valuations are built on previously accepted connections that have been made between contingent valuation and the *Theory of Planned Behaviour*. Ajzen and Driver (1992a) proposed a *Theory of Planned Behaviour*/contingent valuation model where beliefs about the consequences of an action were seen as directly influencing contingent valuation WTP. This thesis has taken this idea and has proposed that beliefs about the consequences of supporting (or not) specified national park focussed land use changes are directly connected to WTP for national park creation.

This inquiry has sought to apply Ajzen and Driver's (1992a) *Theory of Planned Behaviour* model to include reference to landuse attitudes and their social context (see conceptual model – reproduced below). Social context has been defined as one of the three principal components of contingent valuations, along with the good in question and payment vehicle (R. Mitchell & Carson, 1989; Pouta, 2003). In Chapter 3 it was noted that state forest and national park management agencies have different approaches to sustainable land management in their own forest areas (see section 3.5.2). Therefore it is hypothesised that a community member will make the decision to support (or not) the growth in national parks in place of state forests on the basis of their attitude to the industries that will be sanctioned/disqualified from Eden's forests under more restrictive national park land management arrangements.

## Conceptual Model



Modified from: Mitchell, R., & Carson, R. (1989, p. 179)

In a bid to further understand the social context of the landuse attitudes that underpin WTP the researcher has subsequently incorporated PCT repertory grid methods into the conceptual model (see above). The decision to use repertory grids to understand the social context of landuse attitudes developed from the idea that PCT, as with the *Theory of Planned Behaviour*, is based on past personal experience and social context. Ajzen and Driver (1992a) note that two of the independent determinants of an individual's behavioural intention are subjective norms and perceived behavioural control. Subjective norm refers to 'the perceived social pressure to perform or not perform the behaviour' (Ajzen & Driver, 1992a, p. 208). Perceived behavioural control refers to the perceived 'ease or difficulty of performing the behaviour, assuming past experience' (Ajzen & Driver, 1992a, p. 208).

PCT is in a unique position to help researchers understand both subjective norms and perceived behavioural control. With reference to social context, PCT theorists recognise that individuals will actively seek validation of their view on a phenomenon by comparing themselves to other people with similar constructs. The PCT sociality corollary states that, 'to the extent that one person construes the construction process of another, he (sic) plays a role in a sociological process involving the other person'

(Kelly, 2003, p. 14). The next section will illustrate 3 ways in which PCT repertory grid methods can help us understand the social context of WTP estimates. PCT can also assist in understanding the effect of personal experience on behavioural decisions. The constructs that are developed by Eden residents to describe the different forest landuses in their area were framed according to the PCT individuality and experience corollaries. The individuality corollary states that 'people differ from each other in their constructions of events', while the experience corollary states that a 'person's construction system varies as he successively construes the replications of events' (Kelly, 2003, p. 9).

This next section will seek to illustrate three ways that repertory grids allow researchers to better understand the social context of a contingent valuation decision. Through a series of selected case studies reference will be made to the composition of constructs that were used by the interviewees to define the appropriateness of different forest landuses in the Eden area.

## 4.6.2 Repertory Grids and the Social Context of Contingent Valuations

### **Social Context Issue 1: A Question of Personal Experience**

It has been demonstrated in previous sections that the nature of forest landuse debates in Eden has changed over the last few decades (see section 4.2). Over the last 40 years a series of events including the SEFE woodchip mill development, downturns in the local hardwood sawmill sector and the publication of the 2004 Far South Coast Nature Tourism and Recreation Plan have fundamentally changed the character of the Eden forest environment. The effect of these and other changes to the local forest landscape is that the Eden community has been forced to constantly update their views on the sustainability of different forest industries. Further complicating this process has been the recent arrival of tree-changers/sea-changes and other similar social groups. These new arrivals often exhibit an interest in ecocentric rather than anthropocentric view of sustainable land management, which have to be factored into development decisions.

The idea that different generations of residents have varying perceptions of sustainable forest usage was borne out in the contingent valuation results. In section 4.4.3 it was observed that a significant association existed between years spent in Eden and WTP for national park creation. It is in this light that the discussion of PCT will begin with the issue of the personal experience. The PCT experience corollary, on which repertory grid methods are based states that ‘a person’s construction system varies as he (sic) successively construes the replications of events’ (Kelly, 1963, p. 72).

The following four examples highlight different ways that the researcher identified personal experiences as affecting landuse perceptions

E.g. 1 Ethan

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA	<b>WTP</b>	Not willing to pay	
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	A	<b>Rationale</b>	Forestry operations undertaken on State Forest land make important contributions to local community economic and social development. - I’m satisfied with the existing land use balance in the Eden Regional Forest Agreement area	
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	A			
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SD	<b>Opinion on 13 Forest Landuses</b>	A source of material for local sawmills	SA
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	A		A location for forest plantations	SA
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	A		A place for bushwalking	SA
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	SD		The location of local heritage sites	SA
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	SD		Source of material for local pulpwood industries	SA
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	N		A location for horse riding	S
	The nature tourism industry in Eden’s National Parks should be expanded	A		A location for agricultural development	N
	The nature tourism industry in Eden’s State Forests should be expanded	A		A location for commercial hunting	A
				A location for cattle grazing (private land only)	N
				A location for indigenous Aboriginal communities to undertake traditional cultural activities	A
		A location for firewood collection	A		
		A location for camping	A		
		A location for flora and fauna ...	SD		
<b>What role can forest based nature tourism play in the future of the Eden community?</b>	A small role only. Contrary to public belief/that is green slanted belief most Australians do not have an interest in nature tourism				
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Handwriting unclear				
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	Both pulp and sawlogs can utilise forests in harmony. Trees regrow.				
<b>Additional Comments</b>	Before one makes Sydney centric assumptions re: national parks one should be more conversant with practices employed by Parks in their management of parks, for the fire control and public access to parks, they are ignorant of the desires of the public				



### *Comment on Ethan's Repertory Grid Interview*

Ethan is a 55 year old male who has lived in the Eden community his whole life. He earns over \$50,000 per annum working in "retail/trade" and did not support the contingent valuation scenario. The overriding theme running through Ethan's contingent valuation and repertory grid questioning was a belief in the importance of forest utilisation.

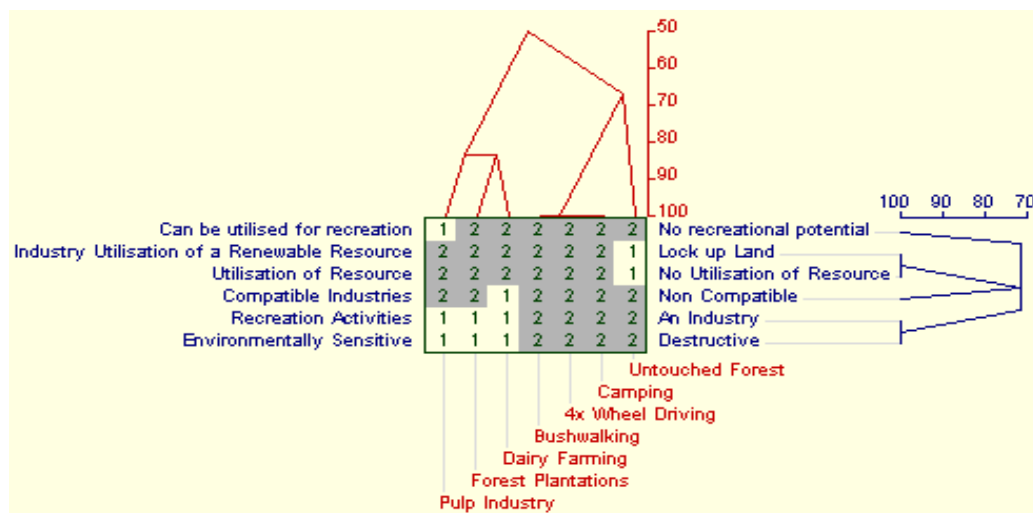
Ethan was of the view that forests can and should be used repeatedly in a responsible manner. He viewed that there is 'room in Eden's forests for recreation activities, alongside tourism, alongside traditional industries of pine plantation and logging' (Ethan, 2007 Personal Communication). In his repertory grid interview, constructions continued this utilisation theme, e.g. can be utilised for recreation/no recreational potential and industry utilisation of a renewable resource/lock up land. Ethan viewed locking up the land as a negative approach to what could be a renewable resource. This distinction helps explain his concerns about the contingent valuation. Ethan objected to the contingent valuation on the grounds that a) forestry operations make important contributions to local community development, and b) that he was satisfied with the land use balance in the Eden RFA area.

Anecdotal comments recorded in the repertory grid interview appear to indicate that Ethan's concern for the continued utilisation of resources is connected to personal experience. In this case the personal experience related to the maintenance of a community which is in harmony with the natural environment. Throughout rural Australia there are a number of threats to rural communities including outmigration of local youth to the cities and the loss of rural identity (Barraket, 2001; Bushell et al., 2002; Pritchard & McManus, 2000; Smailes, 1995). It was established earlier in this chapter that a number of historical timber industries in the Eden area such as hardwood sawmills are inherently connected to the character of the area. The threat that outsiders may pose to the maintenance of these industries was alluded to by Ethan when he referred to a case where his daughter had clashed with a university professor over the notion that all forest industries are inherently bad. It was clear to the interviewer that this event had created very negative feelings in Ethan's mind about the problems that can occur when outsiders (a tertiary environmental lecturer in this case) makes comments about landuses that do not adequately account for the needs of a community

like Eden, which needs to be supported by viable local industries if it is to survive.

Ethan’s FOCUS grid (Figure 13) reveals two distinct element clusters. The first cluster included the elements of camping, 4 x 4 wheel driving and bushwalking which had a 100 percent match. These recreational landuses were all viewed in terms of constructions which emphasised environmentally sensitive uses of a renewable resource. Ethan indicated in his interview that he saw a need for the Eden community to actively develop tourism industries in their area. He cautioned, however, that in his view ‘90 percent of Australian’s when they want to go camping are five star campers; not ecotourists as such’ (Ethan, 2007 Personal communication). This view was reinforced by Ethan’s comment in the contingent valuation survey that ‘contrary to public belief/that is green slanted belief most Australians do not have an interest in nature tourism’ (Ethan, 2007 Personal communication). Ethan based this view on his own experiences owning a holiday house at Wonboyn Lake.

**Figure 13: Ethan’s FOCUS Grid**



The other distinct element cluster related to the three primary industry landuses of dairy farming, forest plantation and the pulp industry. Ethan viewed these landuses as environmentally destructive, in contrast to the recreation industries. The primary industry cluster matched at close to 85 percent. The idea that primary industries are linked to the destructive pole of the environmentally sensitive construct is, however, slightly misleading. The nature of the repertory grid process whereby bipolar constructs

are sought meant that the construct environmentally sensitive/destructive was developed to describe the relationship between plantation forests, bushwalking and 4 x 4 wheel driving elements. In other words, pine plantations are viewed as destructive by the interviewee, but only in relation to the greater environmental sensitivity that he perceived as being exhibited in the two before mentioned recreational sectors. In the course of the interview Ethan noted that a more accurate representation of his views would be that: 'I wouldn't term pine plantations as being environmentally destructive in that it's using a resource that is renewable ... [it's not environmentally destructive] just a different utilisation of what's there' (Ethan, 2007 Personal Communication).

E.g. 2 Lisa

Value Statements	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA
	Local economic security is the most important issue to consider when deciding how best to manage Eden's forests	N
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests	SA
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	A
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	N
	In deciding how best to use Eden's forests, it is more important to consider the needs of future generations than our own	SA
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	D
	The sustainability of Eden's forests is dependent upon the growth of the National Park sector	N
	The sustainability of Eden's forests is dependent upon the growth of the State Forest sector	N
	The nature tourism industry in Eden's National Parks should be expanded	SA
The nature tourism industry in Eden's State Forests should be expanded	SA	

WTP	Was not willing to pay	
Rationale	I cannot afford to pay	
Opinion on 13 Forest Landuses	A source of material for local sawmills	A
	A location for forest plantations	D
	A place for bushwalking	SA
	The location of local heritage sites	SA
	Source of material for local pulpwood industries	SD
	A location for horse riding	N
	A location for agricultural development	D
	A location for commercial hunting	SD
	A location for cattle grazing (private land only)	SD
	A location for indigenous Aboriginal communities to undertake traditional cultural activities	SA
	A location for firewood collection	A
	A location for camping	SA
	A location for flora and fauna ...	SA

<b>What role can forest based NT play in the future of the Eden community?</b>	I think that forest based tourism along with marine based tourism are extremely important. I'd like Eden to attract visitors who actually engage with nature. Our history and heritage are significant and there's Aboriginal culture here as well. I reckon what Eden has to offer is extraordinary; second to none.
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	I have been here 8 years, arriving after the greenie wars, and coming from a green base myself have found the issues more complex than it looked from the outside. I have respect for the Cocks family who are reviled by some conservationists. Outsiders condemning people like the Cockses hardened peoples' attitudes. I could go on for pages here
<b>Are some forest industries appropriate in Eden's forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	It's an unpopular attitude here but I think that our forests should not be plundered. Old growth – important habitat – should be left alone. Milling for building use has history and heritage here and if forests are managed well that's more appropriate. I'd like to see more furniture making here – there is some and it's beautiful work. I think we need to stick with local forests. Pine plantations are awful.
<b>Additional Comments</b>	This is a very special community and I love being a part of it. The issues here are very personal. I remember criticising the wood chip mill and a young woman looked at me with tears in her eyes and said that her father had raised his family by working at the mill and without it they would have had to move away. I think that the media treated the local people as though they are red necks and morons. I think everyone here cares passionately about the environment but it means different things to different people. Frankly I think that we are all ignorant about how to manage forests and we need to listen to each other more. For example there are people here who are being treated as though they are ignorant, yet they have been foresters for generations and know an immense amount about the forests. It would be great if it was a compulsory part of Australian education to learn about fauna and flora and people come to Eden to learn this. We can identify European trees but how many people can pick a Woollybutt?

### **Comment on Lisa's Repertory Grid Interview**

Experience with forest landuse debates was similarly a dominant theme in Lisa's interview. Throughout the survey and interview process Lisa illustrated a great deal of pride in the Eden community. Anecdotal evidence appears to suggest that Lisa is a recent arrival in the Eden area and in many respects she could be seen to characterise the sea (or tree) changer cultural revolution, which now characterises many areas of rural Australia (McLeod, 2005). Tree changers and other refugees from metropolitan areas are said to have injected a focus on environmentalism into rural areas which historically had been more focussed on economic development (Hay, 2008). At the time of her interview Lisa identified that many of her views put her at odds with the mainstream Eden community.

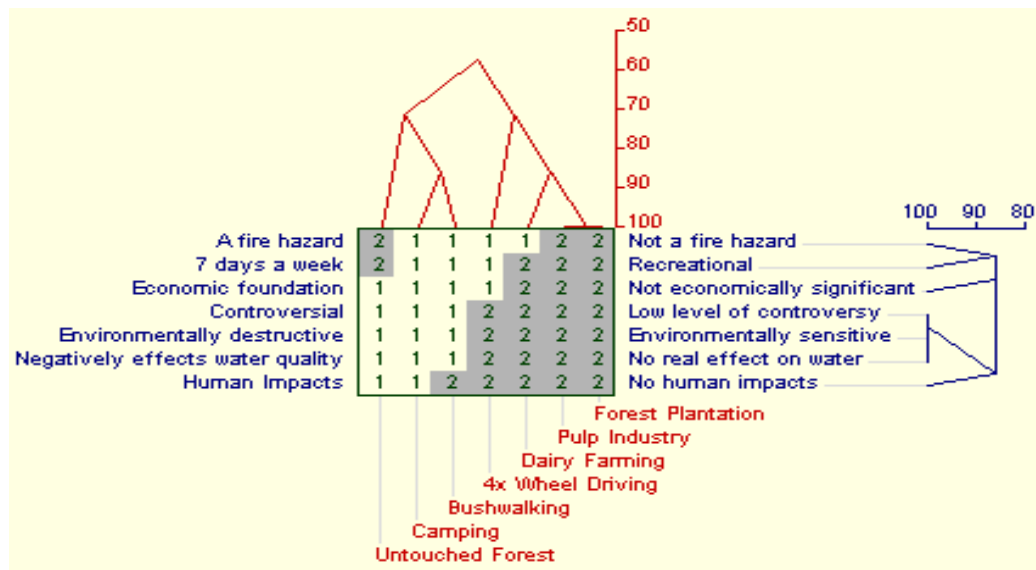
Lisa demonstrated a disdain for the plundering of old growth forest, along with a recognition in the historical importance of forestry to the Eden area. Throughout Lisa's interview there was evidence that she admired families who had been involved in the early development of timber industries in the region. Lisa was identified as agreeing with the use of forests for sawmill operations, whilst strongly objecting to the presence of woodchip operations.

Lisa emphasised that her views on forest landuses have changed over the course of her time in the community. This, the author argues is an illustration of the ways in which constructs regarding forest usage are open to revision and replacement. Lisa's change in perception did not develop as a result of simply living in the Eden community. Kelly (1955) noted that experience for PCT theorists is not connected to the occurrence of a series of events. Rather experience is the product of an individual successively construing and reconstruing those events. Lisa identified that she had been forced to reconsider her perception of forest landuses on the basis of run-ins with other members of the community. A story that featured in her additional survey comments referenced an incident from Lisa's past when she criticised the woodchip mill. The fact that this comment was made in public caused consternation for a young woman she was with who burst into tears and told Lisa how her father had worked at the mill with the noble aim of supporting his family. Insights such as this has caused Lisa to re-evaluate her perceptions of rural people .She notes a tendency for rural people to be viewed as ignorant red-necks by the media, and presumably other metropolitan stakeholders who

she formerly identified with. Such perceptions she notes are often inaccurate as the majority of local people care passionately about the bush and their knowledge is often the product of years of experience in local forest operations.

Lisa's FOCUS grid (Figure 14 overleaf) is based around constructions which emphasise issues such as the ability of landuses to provide an economic foundation for the Eden community and their environmental sensitivity. It is assumed that these constructions are the result of increased experience in the nature of forest debates that was referred to above. Forest plantations and pulp industries matched at a 100 percent level. Along with dairy farming which matched with the before mentioned landuses at just under 90 percent; these landuses were perceived as providing an economic foundation for the community. They were also perceived as being related in terms of their tendency to have significant environmental impacts, for instance on the local water quality. In her interview Lisa made reference to what she perceives to be a significant issue of dust from woodchip piles effecting local ecosystems. 4 x 4 wheel driving was seen as being related to this primary industry cluster in the sense that it carried with it the potential for negative impacts on the environment. It was not, however, viewed as an economic foundation for the area because the number of vehicles needed to make for a viable industry would have negative effects on the environment. Bushwalking and camping formed the other distinct cluster matching at a 90 percent level. These forest based recreation industries were viewed as being uncontroversial, environmentally neutral landuses that do little to support the local economy.

**Figure 14: Lisa's FOCUS Grid**



Lisa's preoccupation with whether industries such as tourism can support the local economy in a sustainable manner is reflective of her own interests. She noted that she has recently become a discovery ranger for the NPWS; a job that she states has given her a more thorough understanding of the bush. She noted that her views on environmental protection have forced her to consider other means by which industries such as seed collection could be developed in the town. If tourism were to be developed she would advocate tourism that is 'respectful of the character of the community and its existing industries' (Lisa, 2007 Personal Communication).

E.g. 3 Daniel

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA	<b>WTP</b> Not willing to pay <b>Rationale</b> Balance! Balance! End user (timber purchaser – should pay) (other)
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	SA	
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	SA	<b>Opinion on 13 Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SA	
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	SA	
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	SA	
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	SA	
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	SA	
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	SA	
	The nature tourism industry in Eden’s National Parks should be expanded	SA	
The nature tourism industry in Eden’s State Forests should be expanded	SA		
<b>What role can forest based nature tourism play in the future of the Eden community?</b>	No comment		
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Lack of thought and consideration for others		
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	Same as logging and timber production		
<b>Additional Comments</b>	Our forests are unique. We all need to use them and protect them. The continual string of lies from both the greens and industry reps is comparable to parents in a nasty divorce fighting over children. All parties need to grow up and respect each other’s views.		



### **Comment on Daniel's Repertory Grid Interview**

Daniel is a 44 year old builder who has lived in the Eden community for the last 3 years. He earns \$50,000+ per annum and rejected the contingent valuation scenario which advocated an increased prominence of national parks and nature tourism development on the grounds of landuse balance. Daniel advocated a continuation of the current balance between recreation and harvesting landuses, noting that 'at the end of the day there's probably very few things (landuses) that I wouldn't say ... have their place' (Daniel, 2007 Personal Communication). This statement, which was elicited during the repertory grid interview squares with his strong support for all 13 landuses that were discussed in the contingent valuation survey.

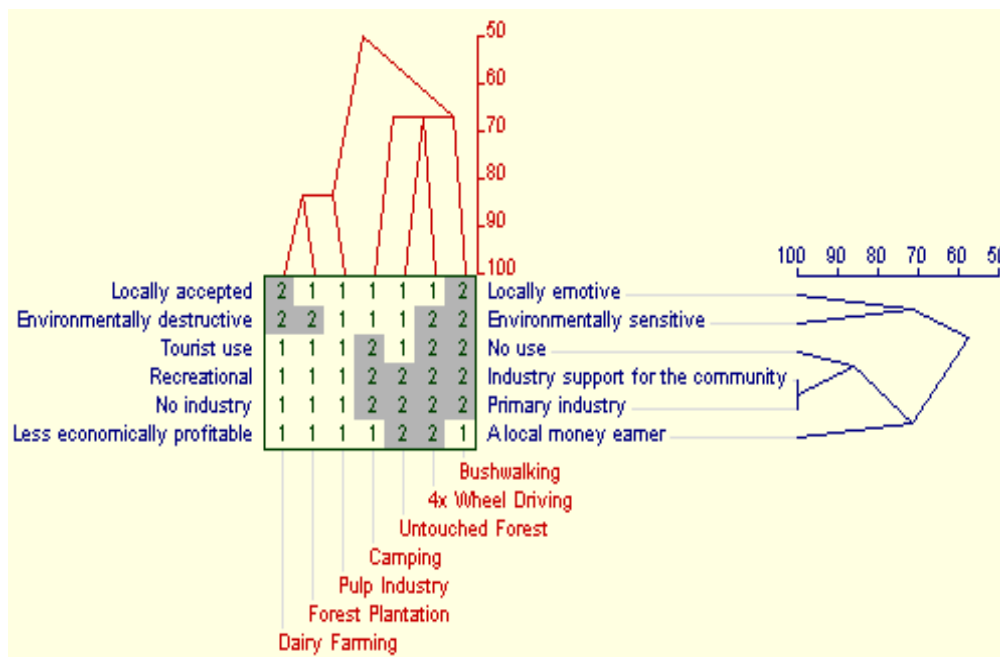
The idea that Daniel believed that all landuses in the Eden area have their place makes it not surprising that he would also support the continued development of both national parks and state forests. Daniel believed that both landuse zonings are important for the sustainable development of Eden's forest estate. The reason given for rejecting the contingent valuation scenario picked up on this idea of balance between landuses. Daniel rejected the scenario on the grounds that 'Balance! Balance End user (timber purchaser – should pay)'. Exactly what Daniel meant by this statement is unclear. What is clear is his belief that all land users/stakeholders need to take some responsibility for the management of local forests; he is essentially saying that he wants the end user of timber products to pay for a reduction in the area of land available for timber harvesting. Owing to the nature of the postal survey it was not possible to seek clarification. The idea that various land users should take responsibility for management was also reflected in Daniel's open ended survey responses where he indicated a desire that all 'parties (stakeholders) grow up and respect each other's views' (Daniel, 2007 Personal Communication).

Analysis of Daniel's contingent valuation survey illustrates a broad support for the future development of a variety of forest industries in Eden, along with recognition of the value of both state forest and national park zoning arrangements. As was noted previously, however, not all forest landuses can operate in national parks. Restrictive conservation objectives prohibit the use of reserve areas for extractive timber operations. It is therefore useful to know how a resident such as Daniel perceives the relationship between different forest land uses. This is where an analysis of repertory

grid bi-polar constructs can be useful.

Daniel’s FOCUS grid (see Figure 15) reveals that distinctions between land uses are made on the basis of economic profitability (for the local community) and sensitivity of landuses to the environment. Constructs included less economically profitable/a local money earner and environmentally destructive/environmentally sensitive. It was on the basis of these and other constructs that the cluster analysis of Daniel’s interview revealed a distinction between a primary industry cluster of dairy farming, forest plantation and pulp industry, which matched at just over 80 percent and a recreation/untouched forest cluster, which matched at 70 percent. Daniel viewed tourism as a secondary industry, which will probably never reach a level of prominence in Eden as it has in Merimbula owing to the different nature of the communities.

**Figure 15: Daniel’s FOCUS Grid**



While Daniel accepted the need for a balance between landuses, he also noted that the degree to which he aligned landuses to different poles on the environmentally sensitive/environmentally destructive construct depended on issues such as management and individual responsibility of users. Some landuses such as dairy farming were aligned with environmentally destructive pole outright in that they necessitate, in the interviewee’s perspective, the total clearing of land prior to development

commencement. Daniel's negative perceptions on these industries was in part related to his personal experiences as a frequent passenger at Merimbula airport; 'I don't know if you've ever flown in or out of Merimbula airport ... the one thing that you notice is that where there is environmental destruction and land clearing is where there are farms' (Daniel, 2007 Personal Communication). This is a clear example of the PCT experience corollary. As has previously been noted, experience in PCT terms is the product of successive constructions of the same event over an extended period (Kelly, 1963). When the specifics of Daniel's case are applied to Kelly's original vision the following observation can be made: 'It is not what happened around him [e.g. flying in and out of Merimbula airport] that makes him (Daniel) experienced; it is the successive construing and reconstruing of what happens [i.e. the environmental damage of farms that Daniel sees from the plane], as it happens, that enriches the experiences of his life' (adapted from Kelly, 1963, p. 72).

While it may be obvious to define dairy farming as destructive in the sense that it by necessity results in changes to the natural environment, Daniel also included the 4 x 4 wheel driving in the environmentally destructive construct. This was connected to Daniel's perception that frequently users will ignore forest trails put in specifically to control the movement of vehicles. The idea that more attention had to be paid to end users was an important component of Daniel's response to the contingent valuation scenario where he noted that end users, not the broader community should be asked to pay for any proposed changes to local landuse arrangements.

The end users in the case of 4 x 4 wheel driving are the vehicle owners themselves. In the repertory grid interview Daniel indicated a degree of tension in terms of the way he perceives some 4 x 4 wheel drive holiday makers, describing them as 'ratbags in the 4 x 4 wheel drives' (Daniel, 2007 Personal Communication). This may be connected to a perception that other 4 x 4 wheel drive users may damage the way he is perceived in the community. Daniel noted that 'I own 2 4 x 4 wheel drives ... we use them because of the work we do and we have a property' (Daniel, 2007 Personal Communication). That Daniel can align 4 x 4 wheel driving with the construct environmentally destructive, in contrast to the majority of other interviewees reported in this chapter, is an example of the PCT individuality corollary, which states that 'persons differ from each other in their construction of events' (Kelly, 1963, p. 55). The value of PCT and repertory grid

technique is the way it can illuminate the individual nature of community member perceptions of landuses. This will now be discussed in the next section

### **Social Context Issue 2: The Individuality of Landuse Perceptions**

The second social context theme to emerge from the interview process relates to the ability of repertory grids to give equal weight to a set of divergent community perceptions of forest landuses. Work in this area is important because while the contingent valuation scenario proposes one tourism focussed future for the Eden area, the reality is, that there is no ‘one model that can act as a blueprint for how tourism, the natural environment and local communities can interact in the most beneficial manner’ (Holden, 2004, p. 204). Every environment will have its own carrying capacity and the ‘central paradox of outdoor recreation is that its very presence can lead to the degradation of the social and ecological attributes that draw visitors to a destination’ (Shultis, 2003, pp. 67-68). It is therefore necessary to develop methods that can tap into the multitude of ways that people can interpret the effects of tourism development. The individual is a central factor in PCT philosophies. Kelly (1955) proposed the idea of humankind as a collection of scientists who are able to interpret the world around them according to their own positions, experiences, prejudices and the like. The following three examples tap into various aspects of this individual perception issue.

E.g. I Robert

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	SD
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	SA
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SA
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	D
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	SA
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	SA
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	SA
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	SD
	The nature tourism industry in Eden's National Parks should be expanded	SA
The nature tourism industry in Eden's State Forests should be expanded	SA	

<b>WTP</b>	Not willing to pay	
<b>Rationale</b>	Balance! Balance! End user (timber purchaser – should pay) (other)	

<b>Opinion on Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	A source of material for local sawmills	A
	A location for forest plantations	SD
	A place for bushwalking	SA
	The location of local heritage sites	SA
	Source of material for local pulpwood industries	SD
	A location for horse riding	A
	A location for agricultural development	SD
	A location for commercial hunting	SD
	A location for cattle grazing (private land only)	A
	A location for indigenous Aboriginal communities to undertake traditional cultural activities	SD
A location for firewood collection	SD	
A location for camping	SA	
A location for flora and fauna ...	SA	

<b>What role can forest based nature tourism play in the future of the Eden community?</b>	Provide another source of income for locals – any reduction in jobs would need to be offset by an equal creation of new jobs – dole is not an option.
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Economic survival of local communities ... all they have is resource based industry ... Stupidity of weekend warriors preventing hardworking, honest, working people from paying off mortgages. People have to educate their kids, clothe and feed them.
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	Sawmilling on a reduced scale so it didn’t impact on flora, fauna or sustainability. Farmland acquired for plantation used for pulping
<b>Additional Comments</b>	Eden like a lot of small timber/fishing villages is barely surviving and with a low education level (only 120 bachelor degrees in a population of 3500) jobs are limited. People would like to preserve nature but can not afford to. We educate our kids and they never come back ... If the kids can’t be educated they have to look for local jobs usually resource based.

### *Comment on Robert's Repertory Grid Interview*

Robert is a 59 year old health/community services worker who has lived in Eden his whole life. He objected to the contingent valuation scenario on the grounds that he could not afford to pay any of the amounts listed. He earns between \$40,000 and \$49,999 per annum.

The rural issue which is at the heart of this thesis is the shifting focus of forest landuses that have accompanied changes in the nation's rural equation (McKenzie, 2000). McKenzie (2000) undertook a study of three statistical divisions within the Western Australian Wheat Belt. The purpose of this study was to examine the effect of policy changes in the wheat industry on local rural populations. In the course of the study, targeted residents were asked if they agreed with the idea that a town should be allowed to die if the local economic circumstances had changed to an extent that the town's original reason for being was no longer valid. This assertion caused considerable consternation in the communities canvassed (McKenzie, 2000). Residents of these areas illustrated a very prominent community spirit and a desire to maintain a local identity.

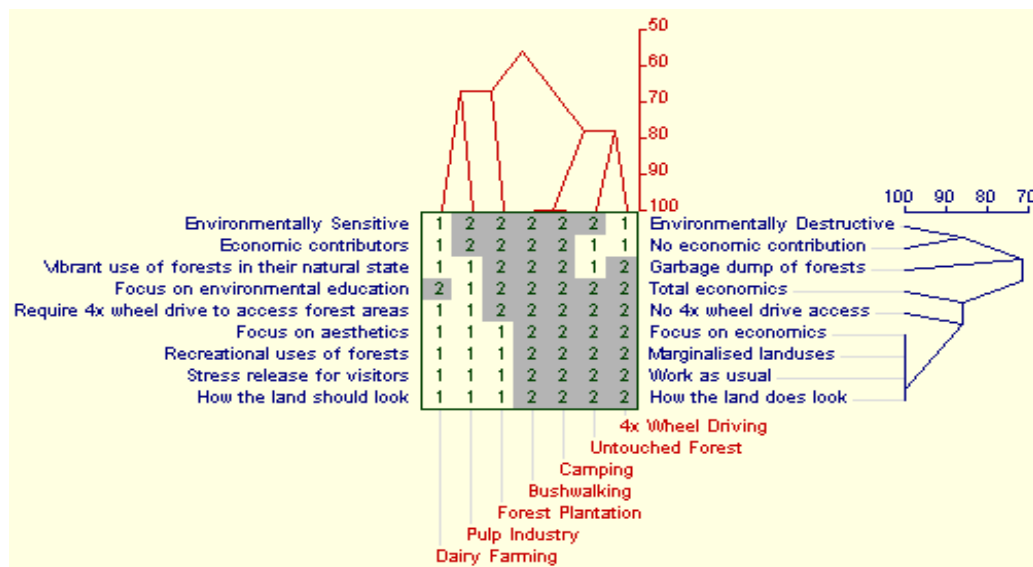
In Eden there is a similar fight to maintain cultural identity in the face of often concerted political tactics. The marginal political nature of the Eden electorate has meant the town has been 'gift wrapped and wrapped more often than a loaf of sliced white' (Wynhausen, 2001, p. 35). The effect of political/external forces on the Eden population has resulted in suspicions being levelled against a variety of outside groups. City based environmentalists came in for particular criticism, being described by Robert as stupid weekend warriors preventing hardworking honest people from paying off mortgages. Constant changes to the direction of the Eden Township have divided the community. Some residents like Robert are particularly worried about the effects that low education levels and the like will have on the economic stability of the area<sup>29</sup>. Other residents, such as Denisse are focussed on the protection of the Eden environment. Robert demonstrated an appreciation of these complexities and the individuality of his own position: 'locals basically are polarised into one of two camps. I was born a free thinker so I look at it my own way' (Robert, 2007 Personal Communication).

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<sup>29</sup> In the 2001 census it was estimated that 101 Eden residents or 4.6% of the population had a Bachelor's Degrees (Public Practices Unit, 2001)

While it is debatable whether there is any such thing as a truly independent thinker, the idea that Robert is seeking to interpret the world in his own way has parallels to the “man as scientist” model, which is a central tenant of PCT (Kelly, 1963). Robert’s FOCUS grid (see Figure 16) is based around constructions which place particular emphasis on issues related to environmental sensitivity, environmental education and forest aesthetics. In the grid Robert illustrates a preference for tourism industries, in as much as he views the camping and bushwalking cluster (100 percent match) as being positively related to constructs, which emphasise economic contributions and preservation of the natural environment. The ability of tourism industries to behave in this way was, however, connected to local ownership. Robert was of the view that the focus of Eden’s tourism industry will always be on the aesthetics/natural beauty of the area and not to allow big speculators in. He also noted that ‘speculators tend to override local groups who try to control these sorts of things; they don’t have the same regard for sustainability or site [maintenance]’ (Robert, 2007 Personal Communication).

**Figure 16: Robert’s FOCUS Grid**



The issue of how the local community views small independent operators, as opposed to large speculators was not examined in this thesis. None-the-less it would be an important area for future research, given that it would help dictate whether a community like Eden would ever accept the presence of mass tourism industries, which are controlled by outside interest groups.



E.g. 2 Jenny

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	N	<b>WTP</b> Not willing to pay  <b>Rationale</b> Balance! Balance! End user (timber purchaser – should pay) (other)
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	N	
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	N	<b>Opinion on 13 Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	D	
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	A	
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	N	
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	D	
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	N	
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	N	
	The nature tourism industry in Eden's National Parks should be expanded	D	
	The nature tourism industry in Eden's State Forests should be expanded	D	
<b>What role can forest based nature tourism play in the future of the Eden community?</b>	More education and knowledge available to people starting with the local community. Stop propaganda and explain what is happening in plain/honest dialogue		
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Actually the Eden locals are not that well informed of what goes on in regard to the forest industry		
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	No comment		
<b>Additional Comments</b>	I thank you for your interest in this subject. Sorry I am not much help but like most of us who live in Eden I am not well informed of what really goes on in the industry. I do have my own opinions but again they are probably biased as they are personal values rather than properly informed ones. Good Luck.		

### **Comment on Jenny's Repertory Grid Interview**

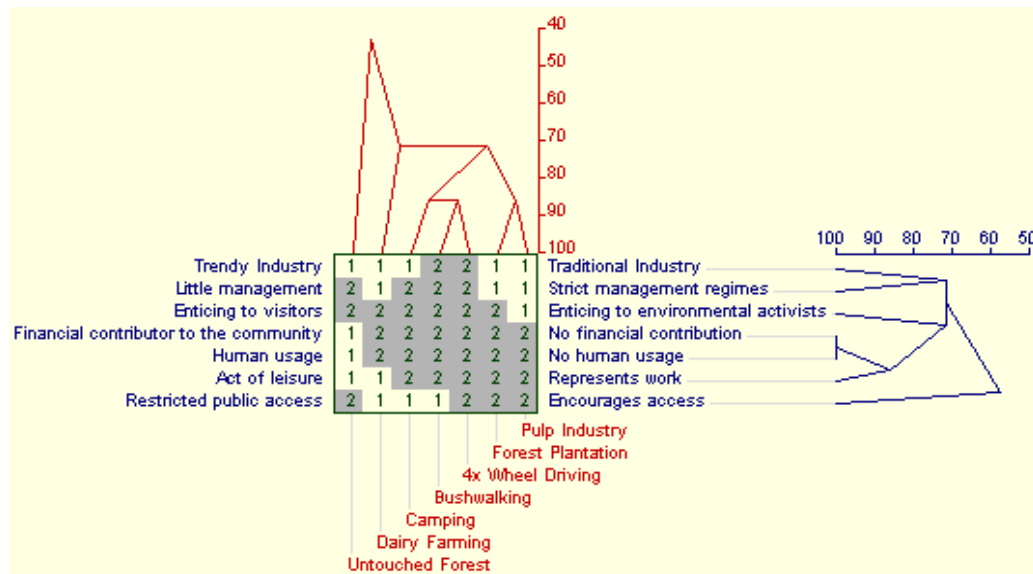
Jenny is a 39 year old female who has lived in Eden her whole life. She is a part time university student who has worked in the cafe sector and primary school education. She earns between \$40,000 and \$49,999 per annum. She rejected the contingent valuation scenario on the grounds that she is satisfied with the existing land use arrangements in the Eden RFA area. In the course of her interview and survey Jenny expressed a desire there always be human usage of forests in the Eden area if it is properly managed.

While Jenny was supportive of human beings using the forests, she also advocated that people consider very carefully the pros and cons of industry development. The need for local people to consider the impacts of forest development is made harder by Jenny's assertion that locals by and large are not well informed on the intricacies of forest debates. It was this perceived lack of personal understanding that caused Jenny to make the following statement regarding her participation in this research project: 'Sorry I am not much help but like most of us who live in Eden I am not well informed of what really goes on in the industry. I do have my own opinions but again they are probably biased as they are personal values rather than properly informed ones' (Jenny, 2006 Personal Communication).

This statement is illuminating with respect to the value of using repertory grid methods in SIA research. In Chapter 5 it will be asserted that repertory grids can be of value to SIA commentators because they allow ideographic values data to be presented in a structured manner (Botterill & Crompton, 1996). This is an important selling point for researchers interested in encouraging people like Jenny to take part in assessment processes because it can be emphasised to residents that impact assessors are giving equal weight to all view points.

Jenny's FOCUS grid (see Figure 17 overleaf) was arranged according to two distinct element clusters. The first cluster related to recreation (camping, bushwalking and 4 x 4 wheel driving) and the second to primary industries (pulp industry and forest plantation). The components of these groups matched at approximately 90 percent. The key differentiation between these groups that Jenny made is that although recreation industries are trendy, they are not subject to the same strict management regimes as harvesting industries such as plantation forestry and the pulp industry.

**Figure 17: Jenny's FOCUS Grid**



Jenny noted that her views on the management of forest resources have developed over time. In the course of offering anecdotal explanation for aligning pulp industry and forest plantation elements with the negative pole of the little management construct. Jenny noted that:

I remember driving through Victoria heading to the Margaret River and they had cleared the forest and just left everything ... It was horrendous, it was disgusting ... And it wasn't until I did a bit of reading that I discovered that they had to leave it there so that it could regenerate ... I truly believe that ignorant people like me should be told why it's happening. (Jenny, 2007 Personal Communication).

The fact that Jenny is a lifelong member of the Eden community and yet has changed her perception of industries like woodchipping and plantation forestry illustrates another reason for using repertory grid methods in conjunction with contingent valuation cost benefit methods in a SIA. Lounsbury (1983) notes that SIAs are a temporal process and that it is possible for peoples' views on a development proposal to change over time. Reference has already been made to the temporal nature of forest debates in Eden and

the different ways that people view national parks today, as opposed to when they were first created in the mid 19<sup>th</sup> century. There was recognition amongst RFA impact assessors that there is a social history for every community that was affected by a particular RFA (Coakes, 1998). The development of social case studies of every community in the Eden RFA region (Social Assessment Unit DPIE, 1998b) provides useful background data for researchers interested in measuring the cost/benefits of a particular forest development proposal. Traditionally RFA social case studies have been developed through community workshops, participant observations, review of secondary data etc. (Coakes, 1998). It is argued that it is important for data collection methods such as community workshops to be framed with reference to a theoretical position, which views human values as a temporal phenomenon. The development of constructs in PCT is a temporal process in that they are open to revision and/or replacement (Kelly, 1963).

E.g. 3 Denisse

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	SD
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	SA
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SD
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	SD
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	SD
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	N
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	N
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	N
	The nature tourism industry in Eden's National Parks should be expanded	D
The nature tourism industry in Eden's State Forests should be expanded	D	

<b>WTP</b>	Willing to pay \$50 per annum
<b>Rationale</b>	I want to preserve our native forests and national parks and reserve areas are an appropriate means to achieving this - My answers reflect my views on the need to reserve all of Australia’s native forests as national parks not just those in the Eden area of southeast NSW - Communities have a responsibility to preserve the environment in their immediate area –

<b>Opinion on 13 Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	A source of material for local sawmills	SD
	A location for forest plantations	SA
	A place for bushwalking	SA
	The location of local heritage sites	SA
	Source of material for local pulpwood industries	SD
	A location for horse riding	A
	A location for agricultural development	SD
	A location for commercial hunting	SD
	A location for cattle grazing (private land only)	A
	A location for indigenous Aboriginal communities to undertake traditional cultural activities	A
	A location for firewood collection	A
	A location for camping	A
	A location for flora and fauna ...	SA

<b>What role can forest based nature tourism play in the future of the Eden community?</b>	If we didn’t start to take better care of what we have now, there’s not going to be much to see aside from more destruction and less of what really matters. No amount of money provided by tourism-nature, or otherwise can undo damage one it’s done.
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Many are opposed to the conservation because of the jobs provided by local logging companies and the woodchip mill as well as sawmills in the area. While I understand others’ attitudes regarding employment opportunities, I am personally for the trees and conserving our forests no matter what.
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	I don’t know enough about this to answer honestly
<b>Additional Comments</b>	I personally feel very strongly that conserving what we have now ...As far as I’m concerned tourism, logging and the whole industry can go to hell. We’ve taken enough from mother earth. It’s time we give something back.

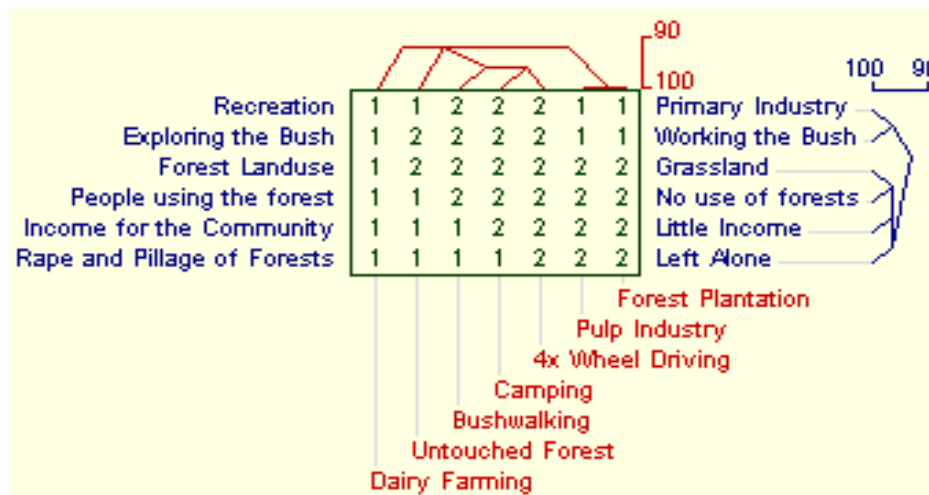
Denisse is a 35 year old female who has lived in the Eden community for the past 14 years. She works part time in the accommodation/cafes/restaurants sector, earns between \$10,000 and \$19,999 per annum and has two young children. She supported the creation of additional areas of national parks on a number of grounds and was willing to pay \$50 per annum across the lifespan of the Eden RFA.

Denisse's survey and interview responses illustrated something of a deep ecology mindset with respect to forest landuse debates (see Doyle & McEachern, 1998 for an outline of core principles). Denisse demonstrated a clear focus on the right of the natural environment to be protected from human interference. Uniquely amongst the interview group Denisse did not support the continuation of either timber or tourism industries. In the additional comments for her contingent valuation survey, Denisse summed up her position: 'I personally feel very strongly that conserving what we have now – not in years to come – is a very high priority not only for myself but for every living thing on this planet ... As far as I'm concerned tourism, logging and the whole industry can go to hell ...' (Denisse, 2007 Personal Communication).

This position was unique with respect to the respondents who sought to complete the contingent valuation scenario. It also illustrates a weakness in both the current scenario and with contingent valuation methods more generally. In Chapter 3 it was noted that the scenario was designed to develop a hypothetical set of circumstances whereby tourism and the development of forestry products were mutually exclusive. Both tourism and forestry are accepted components of state forest management plans. In contrast protected areas are usually managed under a more restrictive set of management objectives where tourism is often the only form of commercial activity that is actively encouraged. What the researcher did not foresee was that many of the respondents would ignore the tourism component of the scenario and base their response entirely on their views regarding the appropriateness or not of reserve systems. In most cases respondents objected to the scenario based on a dislike of the NPWS. In Denisse's case, however, there was an objection both to the current reality and to the proposed scenario.

Denisse’s FOCUS grid (see Figure 18) illustrates a degree of tension in the interviewee’s mind between the generation of income for the community and the rape and pillage of forests. The only real distinction between the timber harvesting cluster of forest plantations and pulp industry (match 100 percent) and the forest recreation cluster of 4 x 4 wheel driving, camping and bushwalking (match 90 percent) relates to a simple distinction of the types of activities being undertaken. While it is interesting that Denisse did not identify camping and 4 x 4 wheel driving with rape and pillage of forests; it has already been illustrated that she would not be likely to support the development of a formalised industry based around these landuses.

**Figure 18: Denisse’s FOCUS Grid**



An issue that can be drawn from Denisse’s interview was the importance of conducting a series of one-on-one interviews in the community and using techniques that allow the individual’s values to come to the fore. Reference has already been made to the importance of the individual to PCT, specifically in terms of the individuality corollary and the idea of people as scientist (see section 2.3). In the course of the interview with Denisse she identified herself openly as a greenie. While she liked the idea of sustainability and grudgingly recognised the inevitability of a balance developing between environmental preservation and human usage of forests, she also noted that ‘inwardly I’ve always been a greenie and would happily see the woodchip mill gone’ (Denisse, 2007 Personal Communication). Such views have created problems for Denisse in the past as she has felt intimidated by those people in the Eden community

who, rightly or wrongly, favour consideration of the economic benefits of continued timber harvesting. Anecdotal evidence collected by the researcher in the course of the interview suggests that Denisse was relieved to have the opportunity to state her views on forest usage in a manner that reduced the possibility of intimidation from other community members.

Repertory grid methods have proven very useful in allowing residents such as Denisse to state their views on an equal footing to the more dominant pro timber stakeholders. The chief advantage of PCT is that no values position can be prioritised because the researcher does not come to a debate imposing his/her own hypotheses on a sample population. Rather, through the generation of cognitive constructs it is up to the individual respondents to define the issues that are relevant to them as they discuss sustainable landuses in the forests of Eden.

### **Social Context Issue 3: The Effect of Externalities**

#### The Effect of Other Community Members on an Individual Repertory Grid

The previous section established the ways that repertory grid methods can allow divergent/personalised interpretations of forest landuse to be given equal weight within a single research instrument. On a related front, repertory grids that were completed for this project also illustrated different levels of concern over the importance of factoring local populace externalities into WTP decisions. This represents the third way that PCT repertory grids can help explain the social context of contingent valuation estimates.

There are a number of ways that social issues affecting the broader community can be factored into WTP decisions. Firstly there is the potential for respondents to change their landuse constructions as a result of time spent in the Eden region and contact with other residents. This is illustrated in Angela's interview results.



E.g. Angela

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	A
	Local economic security is the most important issue to consider when deciding how best to manage Eden's forests	N
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests	A
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SD
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	SA
	In deciding how best to use Eden's forests, it is more important to consider the needs of future generations than our own	SA
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	D
	The sustainability of Eden's forests is dependent upon the growth of the National Park sector	SD
	The sustainability of Eden's forests is dependent upon the growth of the State Forest sector	SA
	The nature tourism industry in Eden's National Parks should be expanded	A
	The nature tourism industry in Eden's State Forests should be expanded	N
<b>WTP</b>	Not willing to pay	
<b>Rationale</b>	Forestry operations undertaken on State Forest land make important contributions to local community economic and social development - I'm satisfied with the existing land use balance in the Eden Regional Forest Agreement area.	
<b>Opinion on Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	A source of material for local sawmills	A
	A location for forest plantations	D
	A place for bushwalking	SA
	The location of local heritage sites	N
	Source of material for local pulpwood industries	A
	A location for horse riding	N
	A location for agricultural development	D
	A location for commercial hunting	N
	A location for cattle grazing (private land only)	A
	A location for indigenous Aboriginal communities to undertake traditional cultural activities	N
A location for firewood collection	A	
A location for camping	SA	
A location for flora and fauna ...	A	
<b>What role can forest based nature tourism play in the future of the Eden community?</b>	Eden is a beautiful, clean, pristine locality surrounded by national parks and reserves and forests. National parks could definitely improve walking access to local features i.e. long beach steps near the Pinnacles ... not expand the mismanaged area.	
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Strong local employment in the timber industry ... Local pride in the natural beauty of the area ... City dwellers lack of education re: sustainable forest management	
<b>Are some forest industries appropriate in Eden's forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	New growth hardwood timber is totally appropriate in this area. National parks are appropriate in view of the history of the area. However copying Aboriginal customs of control burning would be much better for the forest, flora and fauna	
<b>Additional Comments</b>	No comment	

### **Comment on Angela's Repertory Grid Interview**

Angela is 59 and has lived in Eden for 5 years and works in retail/trade and tourism/recreation sectors. She earns \$50,000+ per year and rejected the contingent valuation scenario on economic benefit grounds and a belief that the landuse balance as it currently stands is appropriate. Angela would best be characterised as one of the newer generation of Eden workers who would love to see tourism become a core primary industry in the region through innovative strategies; '... the idea that fishermen could do guided tours of the fishing fleet; what the different boats are and relating it to displays in the museum' (Angela, 2007 Personal Communication). Angela would also advocate the continued development of closer linkages between recreation sectors and the timber industry in order to educate visitors about the industries that exist in the region. City dwellers were identified as being ignorant about sustainable forest management.

The biggest impediment to tourism development that Angela could see was the attitude of some town's people who refuse to countenance the idea of developing a profitable service sector. The tensions that exist in the community regarding the proper use of resources has impacted on Angela personally as she is now hesitant to expose friends who are visiting to the local's dry sense of humour, which in her opinion can be misinterpreted as abusive.

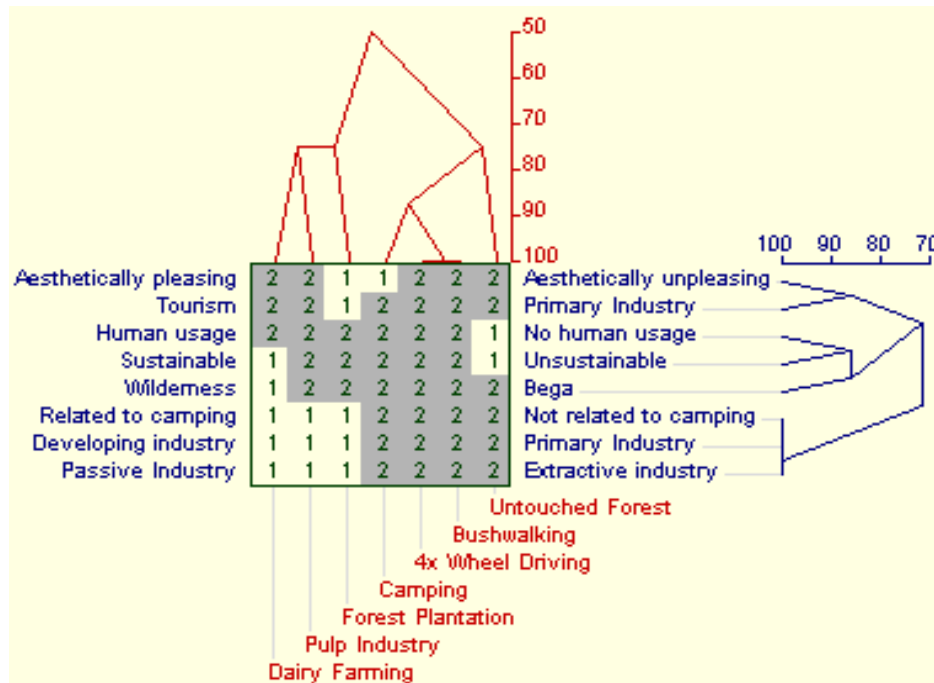
The focus output of Angela's interview (see Figure 19 overleaf) illustrates the presence of two distinct clusters, primary industry and recreation. The recreation industry cluster (4x wheel driving, camping and bushwalking) had a 90 percent match and were related to constructs which included sustainable and passive industry and developing industry. The untouched forest element related to this recreation cluster at the 80 percent level. The primary point of difference for the interviewee in distinguishing between recreation and untouched forest is the idea that untouched forests align negatively with the sustainable construct. Angela was critical of the lack of NPWS management of reserve areas.

The other distinct construct was the trio of primary industries (pulp industry, dairy farming and plantation forestry) which had an approximately 75 percent match. If one views the construct/element relationship for this industry cluster it can be seen that these

industries have variously been considered to be aesthetically pleasing, sustainable and as part of the tourism industry. Angela recognised that she would not have associated the timber industry with such landuse constructs 5 years ago. She noted that living in the community ‘has been a major education on forest issues. When I came here I was a tree hugger, but now I’m an educated tree hugger’ (Angela, 2007 Personal Communication). The idea that people’s perceptions of forest debates change as they spend longer in a community is reflective of Hay’s (2008, p. 225) comment on forest activism:

‘There is a tendency for local anti-forestry campaigns to be mounted by comparative newcomers to the communities in which they now live – in contrast to the pro-logging Timber Communities Australia personnel, who consistently pitch for legitimacy’s high ground through a claimed generations-long involvement in the forest industries’

**Figure 19: Angela’s FOCUS Grid**



The effect of personal experience on the perception of timber industries can be illustrated easily by focussing on the alignment of pulp industries with the aesthetically pleasing construct in Figure 20. Angela noted that this perception was based on the location of her home on the northern shores of Twofold Bay. Angela identified the chip mill as aesthetically pleasing ‘because they’ve put in more lights, which we can see across Twofold Bay’ (Angela, 2007 Personal Communication). When she was developing her family home, Angela was concerned with being able to gaze through the bush to the water. Large sections of the southern shore of TwoFold Bay are currently undeveloped and, at night, only offer a black hold to look into. Anecdotal evidence suggests that this was not viewed as positively by Angela when she was trying to entertain visitors.

#### Concern for the Effect of a Repertory Grid on others in the Community

The second way that the issues affecting the broader Eden community were factored into valuation decisions was in the form of social externalities and concern for the effects of one’s WTP decision on others in the community. Some community members illustrated little concern for social externalities, arguing for an end to all forest industries regardless of the social consequences:

I personally feel very strongly that conserving what we have now – not in years to come – is a very high priority not only for myself but for every living thing on this planet ... As far as I’m concerned tourism, logging and the whole industry can go to hell. We’ve already taken enough from mother earth. (Denisse, 2007 Personal Communication)

In contrast other interviewees illustrated an appreciation of the fact that any decision they made would have negative (and positive) impacts on different sections of the community:

I’m careful not to get into the polarised arguments around here. People know that I’m green, but I don’t ram my views down people’s throats. (Lisa, 2006 Personal Communication)

The concept of social externalities and the idea that people can play a role in the formation of another's construct system was an important component of Kelly's original PCT vision. Kelly's PCT sociality corollary states that 'to the extent that one person construes the construction processes of another, he (sic) plays a role in a social process involving another person' (Kelly, 1963, p. 95). Essentially what this corollary is saying is that the more an individual cares about the impacts of a decision on other people, the more likely they are to try to see things from that other person's point of view and interact with them. In order to understand how the sampled community members perceived the social externalities of their contingent valuation decision one must first appreciate how the community members in question defined the Eden "community".

The project's working definition of "community", which served as a basis for data collection was **'a grouping of up to several thousand households [in a forest environment], who's occupants share common experiences and bonds derived from living in the same locality'** (Long, 2000, p. 6). What has, however, become apparent over the course of the project is that different community members will perceive the notion of "community" in different ways. Simply living within the confines of the Eden 2551 area code does not mean that an individual has a perception of being part of the Eden community.

Different conceptualisations of "community" will result in different core motivators of WTP and different levels of concern regarding the social externalities of a valuation. It was explained to respondents that support or opposition to the contingent valuation scenario would result in different impacts for the Eden area. How a community member weights considerations such as the need to maintain the existing balance of forest landuses, environmental protection and economic security will depend on that community member's own definition of sustainable forest landuse. It is difficult for any contingent valuation scenario to tap into the complexity of human motivations behind WTP for an issue such as timber harvesting (Lockwood, Loomis, & De Lacey, 1994). Instead what is needed is a method which allows different sustainability ideologies equal weight. The repertory grids that were completed for this project were useful in this regard because PCT allowed forest landuse valuations to be framed according to an individual's personal definition of forest sustainability.

E.g. 1 Emma

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	N	<b>WTP</b> Willing to pay \$100 per annum  <b>Rationale</b> I want to preserve our native forests and national parks and reserve areas are an appropriate means to achieving this - My answers reflect my views on the need to reserve all of Australia's native forests as national parks not just those in the Eden area of southeast NSW.  <b>Opinion on 13 Forest Landuses</b> A source of material for local sawmills A location for forest plantations A place for bushwalking The location of local heritage sites Source of material for local pulpwood industries A location for horse riding A location for agricultural development A location for commercial hunting A location for cattle grazing (private land only) A location for indigenous Aboriginal communities to undertake traditional cultural activities A location for firewood collection A location for camping A location for flora and fauna ...	
	Local economic security is the most important issue to consider when deciding how best to manage Eden's forests	SD		
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests	SA		SD
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SD		D
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	SD		SA
	In deciding how best to use Eden's forests, it is more important to consider the needs of future generations than our own	A		SA
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	D		D
	The sustainability of Eden's forests is dependent upon the growth of the National Park sector	D		A
	The sustainability of Eden's forests is dependent upon the growth of the State Forest sector	D		A
	The nature tourism industry in Eden's National Parks should be expanded	A		A
The nature tourism industry in Eden's State Forests should be expanded	A	A		
<b>What role can forest based nature tourism play in the future of the Eden community?</b>	Eden has a huge future in tourism and forests and parks can play a huge role in this.			
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	A great deal of the so called greenie movement have had unfortunate results due to their thug tactics, which have resulted in the attitude that greenies are the time wasters and loggers are to be encouraged			
<b>Are some forest industries appropriate in Eden's forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	The woodchip industry supposedly takes away some timbers but harder timbers such as Red Bloodwood are routinely pushed over and left on the forest floor. I have photographic evidence. Re-seeding is also not done.			
<b>Additional Comments</b>	The use of our forests for woodchips is criminal. The amount of accumulated energy needed to harvest and process and ship the chips so they can be returned to us once in a computer, is something this area should not be proud of. The streams, creeks and rivers are also suffering greatly after logging. The siltation, creek flow slowing and poor water quality can all, I believe, be attributed to logging ... The real amount of employment generated by harvesting is basically very small and involves one or two families that own the logging trucks. You may think that I am biased, however I believe there are many other things we can do around the natural environment.			

### **Comment on Emma's Repertory Grid Interview**

Emma is 42 years old and has been self employed in agriculture/farming and forestry/timber sectors over the 12 years she has lived in Eden. She earns between \$10,000 and \$19,999 per annum operating a farm outside of Eden, which means that she earns about the average wage for women in the Eden community (see Public Practices Unit, 2001). She perceived a huge future for park based tourism in the area and was prepared to pay \$100 per annum to support the contingent valuation scenario. While Emma was generally supportive of the development of more national parks in the area<sup>i</sup>; she did draw attention to what she described as the thuggery tactics and the negative effects this has had on the green movement in the Eden area.

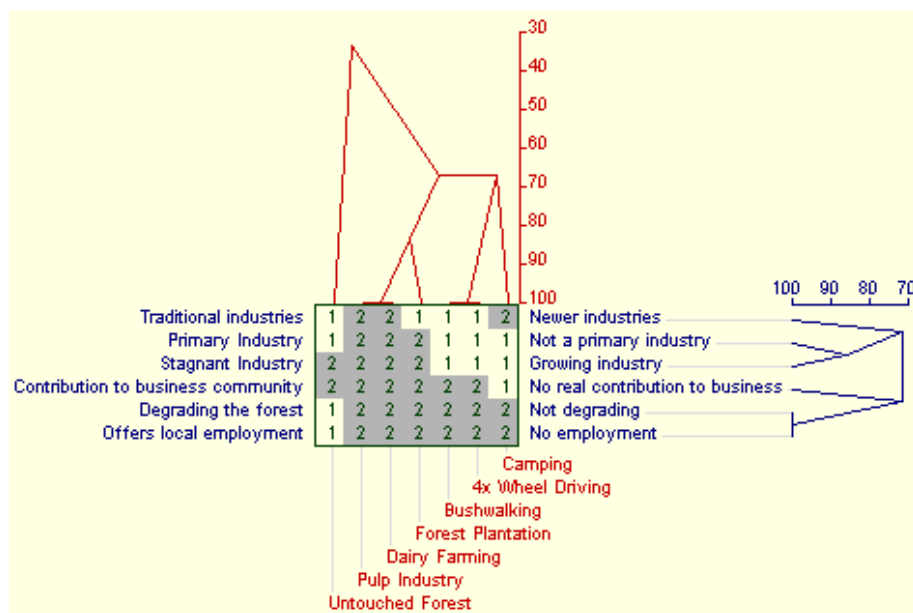
Emma's views on forest based tourism illustrate many of the contradictions in the way individuals respond to tourism development in their area. On the one hand she describes forest based tourism as an untouched resource, which has the potential to sustain the local economy in peak periods. The potential use of ecotourism as a teaching resource was also highlighted. In spite of these benefits Emma was dubious as to whether the community at large would ever embrace a service economy. She noted that many people are hesitant about any form of change, even if they can see the benefits; 'Eden is Eden is Eden. There's the pulp industry, the tourists come once or twice a year and you've either got a job or you haven't' (Emma, 2007 Personal communication). She later portrayed herself as being characteristic of that portion of the population who has difficulty reconciling the issue of change when she talked about moves by Bega Council to upgrade Eden's main street; 'I'm not sure that it is because Eden is Eden and it's nice for it to stay as it is' (Emma, 2007 Personal Communication). The apparent bizarreness of this attitude to an outsider is amplified when one considers the following quote from an article in the Eden Magnet, which elaborated on some of the problems with the main street in an article entitled "Money to beautify Eden? Cough, splutter, cough" (Lincoln, 2007):

The state of Eden's main street has much to be desired ... When it comes to council funding we appear to be treated more like the poor cousins and as a result the aesthetic nature of the town suffers ... The main drag of Merimbula looks pristine by comparison - cobbled paths, perfect curb and guttering, notable gardens and rest areas, tidy shop fronts glistening with merchandise and roads

void of troublesome potholes. And here in Eden ... Where do we start? Let's take a punt on the 80-odd potholes engorging our main street ... The garden areas look unkempt, the shop facades have a lot to be desired and the footpath would send any roller bladder to hospital on the first touch ... Let's hope I get to see things change before my time is up. Oh, by the way, I am only in my mid-30s.

The FOCUS output of Emma's interview (see Figure 20) and other anecdotal comments recorded by the interviewer illustrated the important interplay between economic and environmental sustainability issues. All landuses canvassed, with the exception of untouched forest were aligned simultaneously with the constructs degrading the forest and offers local employment. In the case of the pulp industry Emma was of the view that 'sometimes the pulp industry does have a "we don't care attitude" regarding environmental degradation ... [but] yes they do offer employment opportunities' (Emma, 2007 Personal Communication).

**Figure 20: Emma's FOCUS Grid**



In Figure 20 the three recreation elements are simultaneously aligned with the construct offers local employment and the growing industry pole of the stagnant industry construct. In the interview Emma made specific reference to the moves by camping, caravan and other service sectors to employ local people. She also noted, however, that



positive moves in the employment area have been offset by disappointments for the community from the failure of various ventures including the closure of the tuna cannery and the Matilda's Bakery.

Emma illustrated in her repertory grid interview that she is struggling to reconcile the competing economic and environmental sustainability considerations that were inherent in the contingent valuation scenario. In contrast, other interviewees such as Stephen who rejected the contingent valuation scenario often defined the sustainability of landuses more in anthropocentric terms, focussing on economic potential.

E.g: 2. Stephen

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	A
	Local economic security is the most important issue to consider when deciding how best to manage Eden's forests	A
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests	D
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	SD
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	D
	In deciding how best to use Eden's forests, it is more important to consider the needs of future generations than our own	N
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	D
	The sustainability of Eden's forests is dependent upon the growth of the National Park sector	N
	The sustainability of Eden's forests is dependent upon the growth of the State Forest sector	N
	The nature tourism industry in Eden's National Parks should be expanded	A
The nature tourism industry in Eden's State Forests should be expanded	A	

<b>WTP</b>	Not willing to pay
<b>Rationale</b>	Our forested areas should be protected from the timber industry by law, we shouldn't have to pay to protect them

<b>Opinion on 13 Forest Landuses</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	A source of material for local sawmills	SA
	A location for forest plantations	SA
	A place for bushwalking	SA
	The location of local heritage sites	N
	Source of material for local pulpwood industries	SA
	A location for horse riding	SA
	A location for agricultural development	SA
	A location for commercial hunting	N
	A location for cattle grazing (private land only)	D
	A location for indigenous Aboriginal communities to undertake traditional cultural activities	SD
A location for firewood collection	A	
A location for camping	A	
A location for flora and fauna ...	D	

<b>What role can forest based nature tourism play in the future of the Eden community?</b>	Positive and growing
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	Incompetence and deliberate miss-information
<b>Are some forest industries appropriate in Eden's forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	No comment
<b>Additional Comments</b>	No comment

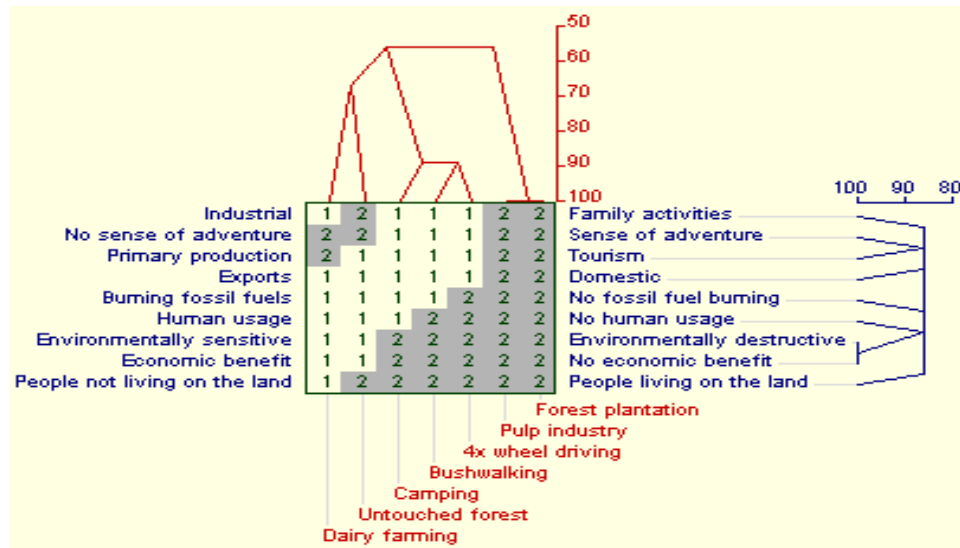
### **Comment on Stephen's Repertory Grid Interview**

Stephen is a 59 year old male who has lived in the Eden community for the last 2 years. He once considered working with his neighbours to set up a 4x wheel drive tour company in the area, to take advantage of his friend's local knowledge and the growth potential he perceives in 4x wheel drive and camping sectors. This idea was eventually abandoned due to set up cost impediments. He now earns over \$50,000 per annum in tertiary education. He rejected the contingent valuation scenario out of a belief that forests should be protected by law and that responsibility should not fall to local populations.

Stephen's FOCUS grid (see Figure 21 overleaf) demonstrates a perception that the relationship between recreational and industrial forest land uses should be defined in terms of economic benefit, environmental sensitivity and human usage. Interestingly while two distinct landuse clusters developed (i.e. forest plantation and pulp industry – 100 percent match; 4x wheel driving, bushwalking and camping – 90 percent match); the divisions between the groups were based largely around constructions which amounted to a simple description of the type of industry. An example of this sort of construct is primary production/tourism. Anecdotal comments from the interviewee demonstrated a view that tourism and forestry both have a role in the future of the Eden community; 'my view is that no human usage is ridiculous' (Stephen, 2007 Personal Communication). As such divisions could not be made between the majority of timber landuses on grounds of environmental sensitivity and economics. A viewing of Figure 22 (overleaf) illustrates that all elements, bar untouched forest and dairy farming were aligned positively with the construct economic benefit.

One of the major impediments against further growth of tourism that was noted by Stephen in the interview related to government inaction. Although this was not borne out in the cluster analysis, Stephen noted that potential business owners need more assistance from the landuse managers to develop niche products, which he perceives as having great potential. This issue of inaction on the part of regional managers also extended to concern over the role and competency of local council and the Commonwealth, both of whom were perceived as reactionary and lacking in vision.

**Figure 21: Stephen’s FOCUS Grid**



Analysis of Emma and Stephen’s interview results illustrates different interpretations of the risks that support or opposition of the WTP scenario will carry for the “other” in the Eden community. But how exactly should this “other” be conceptualised?

The variable boundaries of the Eden community means that the “other”, which can be affected by WTP externalities, can include institutional stakeholders who are responsible for local landuse developments, as well as other residents of the Eden Township. Institutional stakeholders who are often not based in the Eden Township itself are responsible for the development of complex RFA legislation which now dictates what landuses are permissible in the Eden area. RFA legislation was developed in the Eden area with the expressed aim of ensuring the sustainable management of the local public forest estate and resolving entrenched forest conflicts. The success of the Commonwealth Government and other institutional stakeholders in achieving this aim is questionable. Reference has already been made to some of the concerns that have been raised regarding the participatory nature of the RFA legislation. The level of participation (or lack of it) that the Eden community is afforded in forest landuse debates draws attention to the balance of power in a contingent valuation mechanism between the buyer and seller.

Power relations between contingent valuation buyer and seller are a central part of Welch and Fischhoff's (2001) social context model. Welch and Fischhoff note that 'respondents might provide candid valuation if they believed that the provision of the good depended on their response. If they doubted that policy makers would take their answers literally, they might choose to exaggerate their WTP or refuse to provide one' (2001, p. 211). This concern parallels discussions in the contingent valuation literature where issues such as embedding and strategic bias can be seen as often affecting WTP (Bennett & Carter, 1993; Carson et al., 2001).

Canvassed members of the Eden community have a variety of divergent/passionate perspectives on those stakeholders that are responsible for local land management decisions such as RFAs. Welch and Fischhoff (2001) note that negative perceptions of institutional stakeholders who are responsible for implementing the contingent valuation scenario can result in a stigmatization of the scenario itself. So who was the source of this contingent valuation's scenario? The source of the contingent valuation scenario in this thesis was ultimately the author. As has been previously noted, the contingent valuation results that were reported in Chapter 4 were not designed to contribute to the research agenda of any forest stakeholder group in the Eden area. Instead they were undertaken for an independent student research project. It was emphasised to all respondents that there is, to the researcher's knowledge, no current Commonwealth or NSW State Government intention to change the nature of the RFA legislation. And as such that the landuse changes being proposed in the WTP scenario were purely hypothetical.

A purely hypothetical scenario will not, however, yield an accurate WTP estimate. Whitehead (2000) notes that contingent valuation scenarios must ideally be realistic, as well as simple and concise. It became necessary therefore to ground this survey in data drawn from existing Eden RFA reports. A hypothetical Natural Heritage Trust fund was also developed as a payment vehicle. It was noted in section 3.5.3 that the Natural Heritage Trust has a history of involvement in RFA debates. The Strategic Plan for the Private Land Component of the CAR Reserve System approved by the Commonwealth in 1998 was for instance implemented on a budget of \$30 million that was partially funded by the Natural Heritage Trust (Price Waterhouse Coopers, 1999). Attempts by the researcher to make the contingent valuation scenario as realistic as possible means

that it is difficult to establish who the respondents viewed as being the source of the exercise. It was previously noted that considerable scepticism exists in the Eden community over the motives of the timber industry and other regional land managers. Throughout the research process the researcher repeatedly had to quell concern in the community that this project was being undertaken to support the agendas of timber industries and government stakeholders.

The repertory grids did not yield any specific information on the degree to which resident perceptions of the Natural Heritage Trust influenced WTP estimates. It is known from attitude questioning in the contingent valuation that there are some negative feelings about this group. In the course of attitudinal questioning it was identified that 21.18 percent of the survey respondents ( $n = 198$  residents) rejected the valuation scenario on the basis that they objected to the idea of contributing to the Natural Heritage Trust. Repertory grids were not able to shed light on this issue because the Natural Heritage Trust was not a relevant feature for the respondents in the course of generating bi-polar constructs regarding the sustainability of local landuses. Repertory grids did, however, yield comment on why particular community members exhibited positive or negative views on other regional management bodies such as the NPWS and State Forests NSW in their contingent valuation survey. These stakeholders were often seen as being negatively aligned with constructs emphasising the importance of forest utility to sustainable forest usage. This is illustrated in the following discussion of Alan's repertory grid interview:

E.g. Alan

<b>Value Statements</b>  Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree	Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources	SA
	Local economic security is the most important issue to consider when deciding how best to manage Eden’s forests	A
	Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden’s forests	A
	Harvesting of native hardwood forests should only be allowed to proceed if the industry only uses refuse material from sawmills	D
	Forest based timber and tourism industries have been prepared to work together to ensure the survival of both their industries, whilst also protecting forest resources	A
	In deciding how best to use Eden’s forests, it is more important to consider the needs of future generations than our own	A
	The forest based tourism sector has encouraged the retraining of timber industry employees and is thus a means for ensuring the economic and social security of local communities	N
	The sustainability of Eden’s forests is dependent upon the growth of the National Park sector	SD
	The sustainability of Eden’s forests is dependent upon the growth of the State Forest sector	SA
	The nature tourism industry in Eden's National Parks should be expanded	SD
	The nature tourism industry in Eden's State Forests should be expanded	A

<b>WTP</b>	Not willing to pay
<b>Rationale</b>	I’m satisfied with the existing land use balance in the Eden Regional Forest Agreement area - I object to the idea of contributing to the Natural Heritage Trust – There is already more than enough land set aside for conservation and the NPWS can’t handle what they already have (other)
<b>Opinion 13</b>	A source of material for local sawmills SA
<b>Forest</b>	A location for forest plantations SA
<b>Landuses</b>	A place for bushwalking A
	The location of local heritage sites A
	Source of material for local pulpwood industries SA
<b>Key: SA – Strongly agree; A – Agree; N – Neutral; D – Disagree; SD – Strongly Disagree</b>	A location for horse riding A
	A location for agricultural development A
	A location for commercial hunting SA
	A location for cattle grazing (private land only) A
	A location for indigenous Aboriginal communities to undertake traditional cultural activities N
	A location for firewood collection SA
	A location for camping SA
	A location for flora and fauna ... D

<b>What role can forest based nature tourism play in the future of the Eden community?</b>	It would probably play a backseat role compared to industry but there is room for both.
<b>What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?</b>	The main factors are the Eden timber heritage and the way the government sells out industry to try and entice the green vote
<b>Are some forest industries appropriate in Eden’s forested areas? Please discuss with reference to different forest industries as is appropriate.</b>	Most important is the supply of sawlogs and pulp and after that the supply of pine logs and last in the line is tourism.
<b>Additional Comments</b>	NPWS should be disbanded and some organisation should take over what they have mismanaged i.e. lack of hazard reduction burning, taking away access to park areas, paying to go into parks is a joke. We pay taxes and the national parks are supposed to be there for the people and we should be able to use them for various purposes (4WD, horse riding, fishing, camping etc.). Letting forest thinning crews into national parks would more than likely do them the world of good and also remove all the crap old timber

### **Comment on Alan's Repertory Grid Interview**

Alan is 40 years of age and has lived in the Eden community for 26 years. He has been employed in agriculture and framing sectors, along with work in tourism/recreation. He earns \$50,000+ per annum and rejected the contingent valuation scenario.

Alan's contingent valuation survey illustrated a fundamental disdain for the NPWS management approach and a belief in the importance of continued timber production to the local economy and society. Comments on the NPWS itself were scathing. Alan notes:

NPWS should be disbanded and some organisation should take over what they have mismanaged i.e. lack of hazard reduction burning, taking away access to park areas, paying to go into parks is a joke. We pay taxes and the national parks are supposed to be there for the people and we should be able to use them for various purposes (4WD, horse riding, fishing, camping etc.). Letting forest thinning crews into national parks would more than likely do them the world of good and also remove all the crap old timber. (Alan, 2006 Personal Communication).

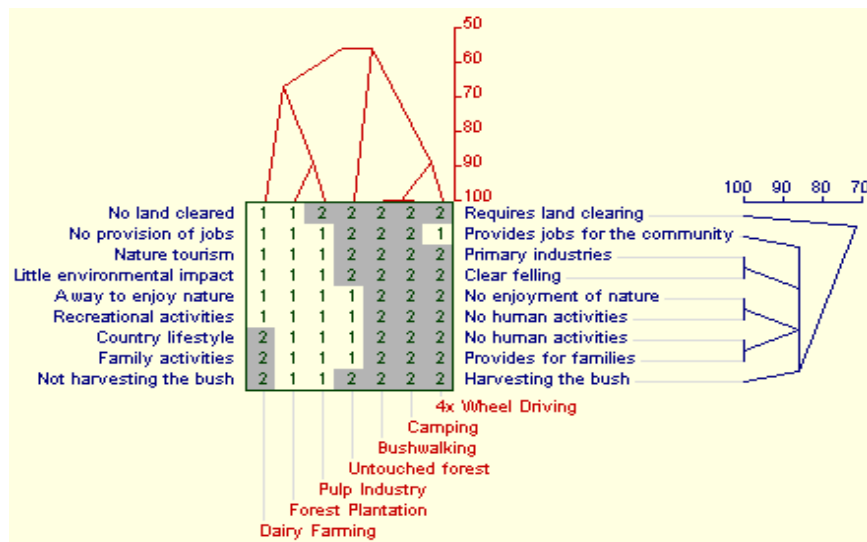
Disdain for the NPWS as a management agency has resulted in Alan strongly disagreeing with the notion that forest sustainability is, in any way, connected to national parks. He also objected to any growth in the national park nature tourism industries. The statement above that old growth forests are characterised by 'crap old timber' is contrary to the views of the environmental movement who note that many old trees are used as hollows by wildlife in those areas (Chipstop, 2006, Personal Communication).

Cluster analysis of Alan's FOCUS grid (see Figure 22 overleaf) revealed clusters developing along standard recreation/primary industry divisions. 4x wheel driving, camping and bushwalking elements were clustered together at a 90 percent+ level. These recreational landuses were aligned with constructs which emphasised recreational enjoyment of nature, country lifestyle and limited land clearing. In contrast the pulp industry and forest plantations matched at a 90 percent level specifically because they provided jobs for the community, had no connection to recreation and are characterised



by clear felling. In determining the sustainability potential of state forest timber harvesting, Alan had to weigh up the economic potential of the industry with its environmental impacts. The fact that Alan chose to reject the contingent valuation scenario indicates that the potential for job creation may be more important than the potential environmental impacts of clear felling.

**Figure 22: Alan’s FOCUS Grid**



The principal issue regarding tourism that emerges from Alan’s interview relates to the provision of jobs by different industries. The timber industry was identified as aligning with the construct provides jobs for the community. Tourism is, in Alan’s view, stuck in a catch 22 situation where it cannot develop without appropriate infrastructure, while at the same time nobody is going to invest and provide jobs for the community without evidence or appropriate tourist numbers. Tourism, which is respectful of local conditions, does have the potential according to Alan to make a niche contribution to the local area. The 4x wheel driving element is for instance aligned with the construct provides jobs for the community. Alan, however, would object to a situation whereby nature tourism becomes the dominant feature in the local economy, which was essentially what was being advocated in the contingent valuation scenario (section 3.5.2). He objected to this not out of a dislike for tourism per se, but rather because the scenario also required that more land be managed by the NPWS.

## 4.7 Conclusions

The purpose of this chapter has been to present the data analysis processes used to address the three thesis research questions in this study.

- 1. What is the non market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?**
- 2. What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?**
- 3. How may *Personal Construct Theory* based repertory grid methods aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?**

As was discussed in Chapter 3, the research design for the study utilised a group of Eden community members to test a new means of understanding value formation processes in an economic contingent valuation exercise. The researcher developed a hypothetical contingent valuation whereby residents were asked to consider their WTP for an increase in the area of national park in the Eden RFA area. The core focus of this thesis has been with assessing the ways that PCT repertory grid methods can increase our understanding of the attitudes, which underpin a residents' WTP in a contingent valuation exercise.

The first stage of the data analysis was to establish the sampled population's WTP for an increase in the area of national park in the Eden RFA area. This addressed the first research question (see above). In the course of this analysis it was found that the proportion of the population willing to contribute to a fund for the establishment of more national parks in the Eden area was approximately 13 percent. Of 198 respondents, 24 provided a payment amount (1 respondent was unable to provide a payment amount). The mean WTP was \$93.54 per annum, which translates into a mean WTP of \$1216 per individual over the 13 year lifespan of the Eden RFA. The legitimacy of this data was discussed in section 4.4.3 with respect to various content validity, criterion validity and construct validity measures.

In a bid to further understand the respondents’ reasoning for accepting or rejecting the contingent valuation scenario, all respondents were requested to provide justification for their WTP estimates. Justification data was presented in section 4.4.2. Discussion of results justification revealed that there are a plethora of issues, which may or may not underpin WTP valuations. The most significant criteria for rejecting the contingent valuation scenario was a perceived satisfaction with the current landuse balance in the Eden RFA area (see below).

**Reasons why you would not wish to make a CV contribution?**

Reason	Percentage of Respondents	Number of Respondents
I’m satisfied with the existing landuse balance in the Eden Regional Forest Agreement area	40.39	82
I object to the idea of contributing to the Natural Heritage Trust	21.18	43
Our forested areas should be protected from the timber industry by law, we shouldn’t have to pay to protect them	16.75	34
I need more information to answer this question	5.42	11
Other	16.26	33

**\* Note: Multiple responses/ rationales possible**

The fact that 40 percent of the survey response sample rejected the scenario on the grounds of satisfaction with RFA landuse arrangements means two things for this research. Firstly, it draws attention to the fact that there is a broad situational context within which a social values study such as this must function. It was for this reason that reference was made in section 4.2 to some of the historical changes in forest landuse in Eden since the town was gazetted in the mid 19<sup>th</sup> century as a preface to the discussion of current landuse values and respondent demographics. Secondly, it draws attention to the idea that Eden residents recognized a link between attitude to forest landuses and local receptiveness to the further development of national parks. This is significant because the conceptual aim of this project was to illustrate new ways of interpreting the complexity of the values/attitudes that underpin contingent valuations.

Section 4.5 presented a discussion of the Eden community attitudes to different parts of the industry landscape in Eden's forests. This discussion addressed the second research question. In the course of this discussion it was found that the Eden community generally approved of the broad forest industry base, which currently characterises the Bega Valley Shire area. There was little evidence of overt animosity to the development of newer service sectors amongst the sample group. There were, however, a number of issues that influenced the way that individual community members related to different forest industries. These included:

- The ability of service sectors to compliment the important, ongoing, role that timber industries play in the development of the Eden RFA area, and;
- The ability of primary industry sectors to continue to contribute to Eden's economy, whilst also developing in a manner which is ecologically sustainable

The attitude results that were presented in section 4.5 sought to outline generalised themes in landuse perception for the whole sample population. In a bid to consider ways in which the attitudes of individual community members can be better understood, the final part of this chapter (section 4.6) presented the results of repertory grid questioning. The results in this section addressed the final research question.

As per the core principles of PCT, the constructs developed by Eden residents to describe the seven landuse elements varied from individual to individual. While there were some common themes across the different interview grids such as environmental sensitivity and potential for income generation, the way interviewees interpreted these landuse characteristics varied. In spite of this, the results that are presented in this study do illustrate that PCT techniques potentially have application in the field of landuse valuation. One benefit of the technique that was identified in this chapter is that the method allows residents such as Denisse to state their views on an equal footing to the more dominant pro timber stakeholders. Thus the chief advantage of PCT is that no values position can be prioritised because the researcher does not come to a debate imposing his/her own hypotheses on a sample population. Rather, through the generation of cognitive constructs it is up to the individual respondents to define the issues that are relevant to them as they discuss sustainable landuses in the forests of Eden.

On a related methodological point it can also be observed that personal construct data which the researcher has used to understand how much weight community members give to externalities did not always come from a respondent's repertory grid. Rather data was often sourced from an analysis of the open ended responses each interviewee gave when asked to justify why they had selected a particular construct. Open ended questioning on the justification for construct selection yielded useful information because the respondent was not constrained by the requirement to phrase their response in terms of a single word or short phrase. Rather, having identified the nature of a construct they were given as much time as was needed to explain the background of why that issue was important to them. The information that can be drawn from open ended follow-up questioning was an unexpected benefit in completing repertory grids in a one-on-one interview environment. In Chapter 5 references will be made to future research opportunities for developing repertory grid toolkits that can be integrated into large scale community impact assessments. How best to retain these open ended questions in a respondent completed toolkit instrument will be an important part of this research.

Finally the results presented in this chapter have illustrated that it is possible for repertory grids to help provide a social context to WTP estimates. Drawing on ideas proposed by Welch and Fischhoff (2001) this chapter has illustrated ways in which repertory grids can tap into social context in the areas of personal experience, individuality of perception and the effect of community externalities on economic valuations.

The next chapter will further summarise and discuss the results and the conclusions that can be drawn. Reference will also be made to future research possibilities.

## **Chapter 5: Conclusions**

### **5.1 Introduction**

The purpose of this thesis has been to address the question of how best to manage the process of change within a rural community due to the emergence of nature tourism as a significant part of the community's economic base. In Chapter 1 it was noted that many governments and industry stakeholders are exploring various means by which rural economies and societies can be reinvigorated. This need for reinvigoration is often the result of the decline in primary industries.

It has been argued that nature tourism is often viewed as a potential economic replacement for traditional rural primary industries. This in part is because it is perceived to have fewer negative impacts. Whilst acknowledging this view in some rural contexts, this inquiry has proceeded to explore the idea that the connections a rural resident has with a forest industry are numerous and characterised by a variety of social contexts specific to the community concerned. The intention of this thesis has been to explore new ways that the subjective/ personal values that a community member attaches to forest land uses can be conceptualised. Subsequent research will need to consider mechanisms whereby repertory grids and other such tools can be incorporated into land use planning strategies.

The researcher has developed this approach to values assessment around the idea that empowerment of local communities in tourism development can be improved by looking beyond economic effects and [instead] focussing on the net result of the welfare of its people, comprising the sum of the desirable and undesirable effects over the full range of social conditions' (Kloke 1977 in Duffield, 1982, p. 248). In this thesis, the core argument behind this new approach for values assessment is that repertory grid methodology can help provide an explanation of the various social context issues, which influence a resident's contingent valuation WTP estimates. The results of joint economic/ psychology inquiries were outlined in Chapter 4.

The purpose of this chapter is to draw conclusions from the results of this study and to identify opportunities for future work with rural communities in localities where nature

tourism is being viewed as a strategy for community development. It is argued that the empirical findings and theoretical discussions that have been presented in this thesis provide a starting point for the development of flexible tools, which may encourage other researchers to consider the value of an economic psychology approach to SIAs conducted on rural tourism developments.

## **5.2 The Development of a Research Approach**

Chapter 1 highlighted the changing nature of land uses in rural Australia. In addition to noting the decline of primary industries in many localities, reference was also made to the fact that tourism has often been touted as an alternative for regional development throughout rural Australia (Dredge & Jenkins, 2007). It was shown that the process of developing tourism in a rural area is far from straightforward, owing in part to the different constructs that individuals use to view the industry(s) in question. The images of a rural destination held by tourists and national legislators are often framed around picturesque notions of ‘sun, sand, surf ... panoramic vistas [etc]’ (Beeton, 2004, p. 133). Such images may be divergent to the identity that has been built up in a working class rural community over successive generations. This can result in local people being dubious about the tourism industry’s development potential.

In this thesis, the pivotal theoretical assumption is that the type of tourism that is encouraged in rural areas ‘must [ultimately] be in sympathy with the lifestyle and character of the rural area’ in question (Knowd, 2001, p. 36). To understand the different aspects of rural community character, reference was made in Chapter 2 to the socially constructed nature of “place” and “community” (see section 2.2.2). In the course of this discussion, it was noted that a community member views the “place” in which they live depends in large part on their own personal experiences and community circumstances. It has been recognised that perceptions of “place” are not static but rather grow out of life’s unique and shared experiences (Tuan, 1977). For this reason the working definition of “community” in this thesis was ‘a social network of interacting individuals, usually concentrated in a defined territory’ (R. Johnston, 2000, p. 101). The defined area of study was the Eden community on the NSW far south coast and the social constructionist nature of community land use perceptions has been examined

through reference to PCT and contingent valuation economic measures (see Chapter 3 for a discussion of research instruments).

“Place” based circumstances have been identified as existing throughout rural Australia. Rural Australia is not a homogenous entity (Sidoti, 2000) and different communities have their own complex social history, which will influence their receptiveness to tourism development. The Eden case study community has been identified as being in a state of transition. Many Eden locals are coming to re-evaluate the importance of traditional primary industries to the ongoing development of their township. Industries such as hardwood timber harvesting were identified in Chapter 4 as having helped shape the blue-collar identity of Eden. Many of these industries have declined and there is an increased focus on automated woodchip/plantation forestry. Previously cited figures from the Commonwealth’s Department of Sustainability and the Environment, and State Forest NSW show that in 2004-2005 90 percent of all log harvested from Eden’s native forests were sent to the SEFE woodchip mill (Ajani, 2007). At the time of writing, groups such as SEFE are exploring ways of further developing their business models and contributing to the sustainable growth of the Eden community. On August 26<sup>th</sup> 2008 the SEFE group formally unveiled plans to develop a wood-fired electricity generation plant to process waste timber from softwood plantations. Arguments in favour of the plan relate to a need to process waste from pine chips that the company has recently started exporting to Japan. Peter Mitchell (SEFE General Manager) noted that the power generated from the proposed plant would potentially be enough to provide for 2,500 residential homes in the Eden area (Broomfield, 2008).

The notion that economic growth from the construction of an electricity generation plant will result in improvements to local human welfare is reminiscent of the economic growth work of the economist Arthur Pigou. In his seminal work *The Economics of Welfare* (1978), Pigou argued that human welfare could be measured in cash terms. When this principle is applied to forest environments it can be argued that happiness and satisfaction for a community will be directly associated with consumption of forest goods and services (Holden, 2008). This idea is contrary in many respects to the findings for this thesis. Throughout this thesis it has been argued that rural communities are not homogenous entities. While some community members will focus on the use values of forests, others will focus on non use and intrinsic values of forests (resident



landuse constructs were canvassed in section 4.6).

Debate over the environmental sensitivity of primary industries such as woodchipping has resulted in some stakeholders coming to question whether tourism industries may be able to provide a stable and environmentally sensitive future for rural areas such as Eden. An increasingly recognised position is that by placing an alternative economic value on the development of high quality operating environments, tourism theoretically offers the opportunity to protect the environment from more damaging forms of human usage (Glaspell et al., 2003; Holden, 2008). Recently groups such as Sapphire Coast Tourism have been involved in initiatives designed to raise the profile of the region's coastal environment. At the time of writing the Wilderness Coast region was featured in a week-long marketing program in Canberra, which targeted international and national travellers and locals looking for a weekend away in a pristine natural environment. In August 2008 the Eden Visitor Information Centre and water based attractions the Seahorse Inn and Cat Balou cruises were nominated for honours in the South Coast Tourism Awards. Similar awards have been won in the past by forest based operations such as the before mentioned Sapphire Coast Ecotours.

The efforts of Eden based tourism stakeholders have contributed to a situation where annual tourism expenditure in the Bega Valley Shire is estimated to be between \$150 and \$200 million per annum (Bega Valley Shire Council, 2005). Forest based tourism makes up a relatively small component of the overall economic contribution of tourism. Gillespie Economics (1997) have estimated that the total expenditure in the Eden RFA Region from tourist visits to national parks is \$12,730,858. This is in addition to the \$404,593 total expenditure in the Eden RFA Region from visits to state forests (Gillespie Economics, 1997). This is approximately eight percent of tourism's total economic contribution. Such figures have been identified as important for the continued relevance of tourism in the region, particularly given the continued existence of profitable native timber harvesting, which are often in conflict for forest resources.

The perceived need to give tourism a dollar value and assess tourism's contribution to the Eden economy stems from the argument that, 'in a world where money talks, the environment needs value to give it a voice' (Cairncross, 1991 in Holden, 2008, p. 120). The present researcher would not disagree with the fundamental notion that increasingly

the forests throughout Australia have come to be seen in anthropocentric terms (Department of Agriculture Fisheries and Forestry, 2008). That said, the researcher would also draw attention to the idea in the *Bega Valley Shire 2026 20 Year Plan* that the contribution of forest industries to the Eden community is influenced by a number of “place” based issues including: natural environment, community, economy, culture, and infrastructure (Bega Valley Shire Council, 2006a). This thesis has sought to explore new ways that these “place” circumstances can be understood through the development of a new economic psychology approach to SIA data collection/analysis. The next section will summarise and discuss the implications of the results that were obtained for each of the specific thesis research questions.

### **5.3 Summary of Research Findings**

#### 5.3.1 Research Question 1

*What is the non market economic value the Eden community ascribes to a hypothetical increase in the area allocated to national parks in their locality?*

The WTP results, response justifications and response validity materials that were collated in the course of the Eden fieldwork are summarised in this section. It is on the basis of these WTP figures and attitude questioning that this thesis has investigated a new approach for measuring human values relating to nature tourism development in rural areas. Repertory grids have been used to interpret the attitudinal underpinnings of contingent valuation WTP estimates. The results of this interpretation are summarised in section 5.3.3.

198 Eden residents took part in the contingent valuation postal survey, which represented approximately 18 percent of the total resident population of the town. Each resident was presented with the following contingent valuation scenario:

I am interested in understanding how you as a resident of Eden would value an increase in the area of national parks) in your locality. An increase in the area of conservation reserves carries with it the potential for increased nature tourism development. However it would also require some reduction in the areas of land available for integrated forestry operations under Forest NSW’s zoning plans.

Table 24 (overleaf) provides a statistical summary of some of the key features of the responses that were nominated. It shows firstly that the mean annual WTP amongst the 12.6 percent of respondents who accepted the contingent valuation scenario was \$93.54. This amount is comparable to the results of the pilot surveys and other studies that have used contingent valuation methods to examine forest preservation issues in Australia's south east (see Lockwood et al., 1993; Rogers, 1992). The strength of the contingent valuation scenario was tested in section 4.4.3 with respect to various content, criterion and construct validity measures.

The contingent valuation survey also illustrated a general reluctance in the Eden community to contribute to environmental planning initiatives, which may result in a reduction in the land available for extractive timber harvesting. Some 79 percent of respondents rejected the premise of the contingent valuation scenario outright, 13 percent accepted the scenario as was just noted, and 8 percent were unsure of their position. This response allocation was contrary to the researcher's expectations. Personal observations by the researcher and a review of the Forest and Timber Inquiry report (see Resource Assessment Commission, 1992) led the researcher to expect an even distribution of responses for a survey questioning opinions on forest land uses.

**Table 24: Contingent Valuation Survey – Statistical Summary**

<b>No. of Respondents</b>	198	
<b>Willingness to Contribute to CV Scenario*</b>	Yes	25 (12.6 percent of sampled population)
	No	157 (79.3 percent of sampled population)
	Not sure	16 (8.1 percent of sampled population)
<b>Mean WTP</b>	\$93.54 per annum (for n=25 respondents)	
		<b>Number of Respondents</b>
<b>Reasons for Accepting the CV Scenario (Multiple reasons allowed)</b>	I want to preserve our native forests and national parks and reserve areas are an appropriate means to achieving this	20
	My answers reflect my views on the need to reserve all of Australia's native forests as national parks not just those in the Eden area of southeast NSW	17
	I feel that nature tourism is the only form of commercial development which should be encouraged in our forest environments.	6
	Communities have a responsibility to preserve the environment in their immediate area. I believe that national parks are the best means of achieving this.	17
	I would receive some personal benefit from paying to increase the size of the nature tourism industry in Eden's national parks and reserve areas.	3
	Other (please specify)	4
<b>Reasons for Rejecting the CV Scenario (Multiple reasons allowed)</b>	I'm satisfied with the existing land use balance in the Eden Regional Forest Agreement area	82
	I object to the idea of contributing to the Natural Heritage Trust	43
	Our forested areas should be protected from the timber industry by law, we shouldn't have to pay to protect them	34
	I need more information to answer this question	11s
	Other	33
<b>Respondent Household Earnings</b>	\$0 – 9,999	12
	\$10,000 – 19,999	27
	\$20,000 – 29,999	21
	\$30,000 – 39,999	31
	\$40,000 – 49,999	19
	\$50,000+	70
<b>Respondent Employment History</b>	Accommodation/Cafes/Restaurants	23
	Agriculture/Farm	21
	Council/Government	16
	Fishing	25
	Forestry/Timber	33
	Health/Community Services	22
	Manufacturing	14
	Property/Business Services	11
	Retail/Trade	18
	Recreation/Tourism Operators	13
Transport/Storage	7	

\* Scenario wording available in Appendix 1

As was noted in section 4.4.1 this thesis has employed Pearson's Chi-square ( $\chi^2$ ) to assess the differences between positive and negative WTP according to the model of equal responses. The results of this analysis adhered to the expected counts rule (Pallant, 2007; Veal, 2005). The chi-square goodness of fit test yielded a significant difference in the proportion of people willing to accept an increase in the area of national parks as compared with the theoretical position of equal distribution. The results of this analysis led to the conclusion that the Eden community is far less polarised on the issue of land use zoning than was expected by the researcher prior to project commencement.

While there was a majority opinion amongst the sampled population to their disinterest in the survey scenario, there was a plethora of rationales put forward to justify negative responses (see Table 14). Developing an understanding of these contingent valuation response justifications was an important concern in this thesis, given the thesis focus on understanding the ways that resident attitudes may underpin contingent valuations. Amongst the 25 respondents who accepted the contingent valuation scenario, concerns for environmental protection were predominant. As was noted previously, 83 percent of respondents who supported the scenario noted that they wanted to preserve native forests and national parks, and felt that reserve areas are an appropriate means to achieving this. Some 70 percent of the sample population also felt that Eden residents have a responsibility to be proactive in the area of environmental preservation. Implicit in each of these justifications is an appreciation of the environmental ethic that is an intrinsic part of deep ecology and other environmental management philosophies (Holden, 2008). Amongst the residents who rejected the contingent valuation scenario, approximately 40 percent refused to provide a WTP on the grounds that they were satisfied with the existing land use balance in the Eden RFA area. This satisfaction with the existing land use arrangements in the Eden area does not assume negativity towards tourism but rather recognises the effect that higher exogenous factors such as government policy can have on tourism development.

### 5.3.2 Research Question 2

*What are the values the Eden community ascribes to the various forest based industries that exist around the Eden Township?*

In section 5.3.1 it was noted that 40 percent of respondents rejected the national park creation premise in the contingent valuation scenario on the grounds that they were satisfied with the existing land use balance in the Eden RFA area. Implicit in this response justification is that there is a direct connection in many residents' minds between their support for different land management jurisdictions and their own personal opinions on the different types of forest land uses that national parks and state forests allow.

Chapter 3 established that state forests and national parks represent the two principal public forest land management zonings in south east NSW. Different land uses are allowable in national parks and state forests depending on their legislative origins. As noted in Chapter 3 the primary objective of state forests in NSW is 'to promote activities that support the corporate objectives of multiple-use sustainable forest management' (Forests New South Wales, 2004b, p. 5). National parks managers, in contrast, have been identified as working under a more restrictive mandate, focussing on the protection and maintenance of biological diversity (Department of Environment and Water Resources, 2004). Based on an increase in the area of national parks and a decrease in the areas of state forests, this thesis considered the non market contingent valuation that the Eden population ascribes to the various forest based industries that exist in the forests around the Eden Township. The notion that attitudes regarding land uses may be a determinant of a respondent's WTP for national park creation is shown in the thesis' conceptual model (see Figure 7).

Further commentary on the conceptual model will be provided in section 5.3.3, when the researcher will offer concluding comments on the merits of using PCT repertory grid methods to interpret the social context of land use attitudes in the project contingent valuation exercise. Briefly, this thesis has extended previous research, which has used the *Theory of Planned Behaviour* to investigate the ways that personal beliefs may underpin WTP for a non market good (Ajzen & Driver, 1992b; Pouta, 2004). The rationale for using the *Theory of Planned Behaviour* to interpret contingent valuation is

that economic theory does not typically focus on the psychological processes an individual goes through to make a consumer choice (Pouta, 2003). On the basis of published research which has found that attitude towards forest regeneration can significantly predict WTP for regeneration policy abatement strategies (Pouta & Rekola, 2001); the current research has proposed that attitude to forest landuses can be a predictor of WTP for national park creation.

The purpose of this section is to summarise survey results relating to the Eden community's attitude to different landuses in their locality. The attitude questions completed for the thesis contingent valuation survey drew attention to the fact that Eden residents will form an opinion on different forest industries based on each individual community member's personal history with forest conflict and forest use debates in the area. This section will summarise some of the broad attitude themes amongst the whole contingent valuation survey response group (n= 198). In the subsequent section the merits of using repertory grid methods to understand how a psychological values theory can allow researchers to better understand the social context of individual survey respondents are discussed. This section will refer to the subsample (n=22) who completed the repertory grid PCT interview.

Throughout the discussion of community attitudes to forest landuses in Chapter 4 the author noted that there was a broad acceptance of the value in a multi dimensional industry base in the Eden region. Community acceptance for multiple forest land uses was evidenced in the ratings that the sampled members of the Eden community gave to a comprehensive listing of common land uses in question 1 of the survey (see Table 17). These results illustrate a general acceptance of the presence of tourism/recreation landuses in the forests of Eden. Some of the issues identified as influencing the level of community acceptance of the forest based nature tourism industry are identified in the following issues.

### **Issue 1: The Private Recreation/ Formal Tourism Industry Distinction**

There are two types of visitors to Eden's forests, the private recreator and the formal tourist. Private recreation has been an important facet of life in the Eden community for many years. Anecdotally many of the older residents referred to tales of camping trips and bushwalking expeditions to forest environments that are now categorized as forest reserves, e.g. the Nadgee Nature Reserve. The high level of support that the community demonstrated for activities such as bushwalking and camping (see Table 17) confirms that the Eden population views their forests in utilitarian terms. That is forests should be used for timber and/or tourism purposes. There was a perception that local experience with forest debates has equipped many local residents to act as custodians of Eden's forest estate. Acting as custodians includes the responsible use of Eden's forests for private recreation.

Eden residents predominantly demonstrated support for the continued availability of forest land for personal recreation. It was noted in Chapter 4 that the Eden community represents a significant proportion of the annual visitor load to state forests and national parks. In the contingent valuation survey 80 percent of respondents indicated that they had visited an area of State Forest or National Park around Eden for recreational purposes in the last year (see Table 22). While the results indicate that there was interest in the continued availability of Eden's forests for private recreation, considerable community scepticism was attached to the sustainability of formal tourism sectors. The distinction between informal and formal recreation forms (e.g. Sapphire Ecotours) was not an issue that the researcher originally perceived when planning the composition of field work instruments.

Thus, for researchers to comprehensively assess the merits of rural nature tourism development, they must first understand the different values that residents attach to private recreation and formal tourism in their locality. This is an area of possible future research, which could be facilitated with repertory grid toolkits of the kind described in section 5.5.



## **Issue 2: Community Perceptions of the Formal Tourism Industry**

Formal tourism industries have the potential to contribute to the economic development of the community by encouraging national and to a lesser extent international visitation. However, while there was general acceptance amongst the respondents of the value in private recreation, a number of concerns were articulated regarding the formal tourism sector. The first issue identified with the formal tourism industry related to seasonality. It was identified in section 4.5.3 that for at least a century the tourism potential of Eden has been influenced by market seasonality and operating climate. Today tourism in Eden is focused around Christmas and Easter school holiday periods, as well as around cultural festivals such as the Eden Whale Festival. The presence of such a short tourism season has resulted in many locals questioning the economic value in future tourism growth. A number of respondents specifically identified the connection between seasonality, casual and part-time employment as not offering the year round economic foundation required to maintain a family in the locality. Economic security has been identified as one of the most common arguments in favour of the woodchip industry development in Eden's forests, and as such, a weak year round economic contribution can severely limit regional tourism's ability to challenge industries like woodchipping on environmental protection grounds.

The second issue relates to the existence (or not) of a high quality natural environment for nature tourism industries to operate in. Throughout this thesis nature tourism developments have been identified as being dependent upon the maintenance of a high quality natural environment. A number of tourism marketing strategies in the Eden region have recognised this fact and have placed the natural environment of Eden's forests and bays at the heart of an idealised tourist experience. Within the Cruise the Garden of Eden advertising campaign tourists are offered the opportunity for national park based ecotours, the nature of which is shown in the following quote:

**Spectacular Ben Boyd National Park:** This exciting day of walks and views is one you'll always remember. Take in Boyd's Tower, Haycock Point and soak up the rugged coastline on your way to the iconic Davidson Whaling Station ...

**Mimosa Rocks National Park Exploration:** an in-depth nature tour of the Mimosa Rocks National Park presents ancient plant fossils where dinosaurs

once roamed. Enjoy a gourmet picnic of local produce and wine at Picnic Point on the side. (Cruise Eden, 2007, p. 5) (Note: Bold text in original).

The economic value of these tours for the Eden region is largely dependent upon whether the tourist experiences equate with visitor expectations. Tourists have a variety of recreational opportunities and experiences available to them within a National Park environment. Over recent years groups such as the Sustainable Tourism CRC and TTF Australia have completed an assortment of studies on the visitation patterns of national park users (e.g. Archer & Griffin, 2004, 2005; Griffin & Archer, 2005; Griffin & Vacaflores, 2004). Similar studies have also been completed for national forest areas in the United States (Dawson et al., 1998; Glaspell et al., 2003; Watson & Roggenbuck, 1999; Watson et al., 1991; Watson et al., 1992) and in NSW State Forests (Chapman, 1995).

A core facet of much of the existing tourist experience research relates to the phenomenology of the tourist experience (Cohen, 1979; Mannell & Iso-Ahola, 1987) where it is proposed that tourists are not heterogeneous with respect to how they engage with host cultures and landscapes. The personalised nature of the tourist experience makes it a prime candidate for PCT researchers (e.g. Botterill & Crompton, 1996). Although it was beyond the scope of this thesis there would be opportunities for employing a PCT approach to examine the desired experiences of forest based tourists in and around Eden. To do this effectively one would ideally interview tourists at multiple stages in the course of their travel experience. Botterill and Crompton (1996) note that going through stages of travel experience are not enough to ensure experience. Rather experience is only attained when the individual reconstrues his or her perception of an event based on what they have just experienced; it is the 'successive construing and re-construing of what happens that enriches the experiences of life' (Kelly, 1955, p. 73 in Botterill & Crompton, 1996, p. 58). Such a study would need to factor in the idea that water/coastal tourism operations around Eden's Two Fold Bay offer a prime tourism operating environment, which is not replicated inland.

The coastal national park/inland national park distinction was one of the primary points of issue for Eden residents when quizzed about the existence of appropriate tourism operating environments. Whilst most locals accepted the economic value of the coastal

national parks, there was concern regarding the ability of inland forests to provide a necessary base for tourism focussed economic development. In making this observation a number of respondents drew specific attention to the lack of any natural features comparable to the operating environment of the Tahune Airwalk in Tasmania, the Sky Rail Rainforest Cable Way in northern Queensland and the Ash Mountain forests of the Dandenong Ranges. This has led to a situation where:

From Batemans Bay down to Eden there have been a number of people that have started up 4x wheel drive tours. They are very good value and every operator has still fallen flat, largely because the forests of this area are dull. There are no real focal points in the forest, or virtually no focal points to encourage people to go out and look at them

(Ian, 2007 Personal communication)

Along with a perceived lack of recognisable and attractive tourism operating environments, locals also highlighted that the legislative creation of reserves had the potential to limit the opportunities that exist, particularly for informal forest recreation. Community concerns related principally to the provision of appropriate opportunities for community access and the related issue of perceived ineptitude on the part of reserve management bodies (see section 4.5.4).

Access issues were defined both in terms of distance from Sydney and Melbourne and local access to specific forest sites that has been restricted with the declaration of more and more areas of national park reserves. Access from Sydney and Melbourne was not an issue that was confined to Eden. Nature tourism focussed areas of the Grampians were also perceived by respondents to be suffering from reductions in international tourism arrivals due to access issues. The Nadgee Nature Reserve was used to illustrate how access to popular public sites has been diminished by reserve creation. The western side of the reserve, which is located on the coastal strip about 25 minutes drive south of Eden was State Forest controlled till the mid 1970s when the area was declared a reserve. This allegedly resulted in restrictions on public access. Access was a central component of the criticisms many local people had regarding the perceived mismanagement of reserve areas. Respondents noted that their negative views on tourism's sustainability potential were often linked to the effects of NPWS sponsored

road/access reductions. Other respondents drew attention to the NPWS's perceived poor record with fire management. In contrast to these criticisms of the NPWS other respondents noted that State Forests manage their reserves better, specifically because timber is used rather than just being allowed to burn down. Where fire is used in state forest contexts, land managers are simply continuing a process that was in place for 60,000 years when the land was in the custodianship of the Ratungal Yuin traditional Aboriginal owners.

### **Issue 3: Perceived Relationship between Tourism and Primary Industries**

A third issue noted as influencing the Eden community's receptiveness to forest based nature tourism development was the way that forest based nature tourism industries are perceived to relate to traditional primary industry sectors. Within the Eden RFA area there is a finite quantity of publicly owned forest land. Due to this tourism and primary industry interactions have become more common as an array of bushwalking, 4x wheel drive, camping, plantation, and woodchipping industries have jostled for access to the natural and social resources of the area. The different ways that local people perceive these industries and their interrelationships have been shown to go a long way to determining support for the tourism/nature conservation initiatives in the contingent valuation survey.

Throughout the thesis it has been established that different views exist on the sustainability of each of the various primary industry and tourism industry sectors that operate in Eden's forests. On the basis of a number of factors including: economic dependence, conservation ethics, and time spent in the Eden region and willingness to embrace change, respondents made a determination on the sustainability potential of different industries. Contingent valuation WTP estimates that were reported in section 4.4.1 support the notion that the majority of Eden residents supported a multi use forest sector, as opposed to a focus solely on conservation and tourism. The results of attitudinal questioning, however, illustrate that resident views are typically far more complex and varied than is typically known.

For instance it was the researcher's considered view during early project development that the pro primary industry section of the community are likely to be solely focussed

on preserving the pioneering character of Eden's traditional industries. The researcher had developed this initial view on the basis of years spent researching timber issues in the Eden area. The researcher was of the opinion that the recent collapse of the Heinz Tuna Cannery and a number of local hardwood sawmills would have hardened the resolve of local timber industry stakeholders to protect Eden's Klondike like character.

However, this research showed that, contrary to expectations, there was considerable variation within the pro timber groups regarding their support for the different timber industries in the area (i.e. sawmilling, plantations and woodchipping). For instance, resident distrust of newer industries such as tourism often spilled over into similar concern regarding the relative merits of encouraging woodchip/plantation development. Across the response sample traditional sawmills received the highest mean level of support. Lower, but still positive levels of support were indicated for forest plantations and pulpwood industries, which is evidence of the contention that exists in the Eden area over the value of woodchipping and plantation forestry. Contention regarding woodchip industries is often connected to debates regarding the use of clearfelling as a forest harvesting technique<sup>30</sup>.

In the course of expanding on some of the different attitudes that existed in the Eden community regarding different industry sectors, it can also be noted that a number of linkages exist between tourism and traditional forestry industries. These linkages related to the ideas of shared infrastructure, shared operating environments and the evolution of timber operations into sustainable tourism operations (see section 4.5.1 for a detailed discussion). It was the consensus amongst the managers canvassed in this thesis that tourism - primary industry linkages are at the present time in an embryonic state. That said there is a strong push to consider the benefits of future joint timber/tourism operations.

One of the reasons why joint tourism timber initiatives have been considered is public recognition of the common operating environments for each sector. It was noted in

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<sup>30</sup> The use of clear felling as a forest harvesting approach is hotly debated in the Eden community, so much so that it is difficult for an outsider to establish whether the method has recently been used. Official policy from State Forests is that the technique is not currently used in NSW (Department of Agriculture Fisheries and Forestry, 2002).

section 4.5.1 that there are a significant number of tourism localities in areas controlled by State Forests NSW. Reflective of the fact that different industries use state forest areas; State Forest NSW has historically employed a multi use conceptualisation of ecologically sustainable forest management (ESFM). In addition to optimising the supply of timber products within current ecological constraints, State Forests NSW supports the use of state forest areas by accredited tourism operators, community groups and individuals (Forests New South Wales, 2004a). An appreciation of the fact that many locals support the development of a multi faceted forest industry helps explain their caution regarding a scenario advocating an abandonment of timber harvesting in favour of a solely tourism focussed regional future. In 1997 it was established that up to 16,000 visitors per annum visit state forests in the areas each year and coexist with a variety of different timber operations (Gillespie Economics, 1997).

Over recent years there have been moves to formalise these tourism/state forest linkages by promoting tours of logging sites, which some locals believe may have the effect of limiting the influence of greenies ‘‘who don’t think for themselves and are guided by what they read [to tell untruths about the true nature of local forest operations]’ (Chris, 2007 Personal Communication). The long standing practice of running tours at the SEFE mill site on TwoFold Bay was often cited by survey and interview respondents as evidence that a market does exist, as is the existence of similar industry interaction in Vancouver Canada<sup>31</sup>. The ability to educate the public on sustainable forestry practices is one of the principal attractions from this type of tourism. Other potential benefits include the opportunity to retrain timber workers. Occupational health and safety concerns with tourists visiting logging sites were identified by locals as being one of the principal barriers to this type of industry growing. Groups such as Chip Stop have also categorised the recent decision of Sapphire Coast Tourism to continue to work with the SEFE woodchip group as being just another example of the woodchip mill’s propaganda machine (Chipstop, 2006, personal communication).

A number of issues were therefore identified in this thesis as having the potential to influence community member attitudes to nature tourism industries in Eden’s forested areas. The next section will summarise the results of work to test the ability of PCT

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<sup>31</sup> See Bowe and Marcouiller (2007) for a Canadian based study into forest tourism interaction and the development of joint forest resource outputs.

repertory grids to aid our understanding of the attitudes that individuals bring to forest management debates.

### 5.3.3 Research Question 3

***How may Personal Construct Repertory Grids aid our understanding of the attitudinal underpinnings of contingent valuation willingness to pay estimates?***

The results presented in Chapter 4 justified the researcher's belief that PCT repertory grids can help provide data whereby it becomes possible to interpret the various social context issues, which may influence a resident's contingent valuation WTP estimate. Building on the work of previous contingent valuation theorists, this thesis has proceeded to argue that 'evaluative judgements [such as willingness to pay] should be sensitive to features of proposed transactions that the respondents consider to be relevant' (Welch & Fischhoff, 2001, p. 209). This thesis has shown that accurately conceptualising the personal connections that Eden people have with the environment is important if researchers are to avoid interpreting WTP responses on the basis of their own personal opinion and prejudice.

Personal opinion/researcher bias is often viewed to be an inevitable aspect of social research. Becker (1967, p. 245) argued that sociological analysis is 'always from someone's point of view, and is therefore [by implication] partisan'. The contingent valuation survey that was completed for this thesis was affected by allegations of bias from respondents. In the earlier discussion of contingent valuation results it was noted that only 12 percent of respondents accepted the need for more national park creation in the Eden area (see section 5.3.1). The effect of this is that it could be claimed that non market forest preservation values are, on the basis of the evidence presented, less important to the Eden population than market values associated with timber harvesting. It could then be hypothetically extrapolated to use the contingent valuation results to question the environmental consciousness of the Eden population. From this, the opinion could be formed that that the environmental ethics of the Eden population are suspect and thus perpetuate an argument that rural populations are rednecks (Gibson & Davidson, 2004; Lockie, 2000).

Interpreting contingent valuation results in such a manner, without due consideration of the personal context of WTP estimates has the potential to cause significant angst for local people in a rural locality. The negative way that some respondents viewed the central premise of the contingent valuation scenario demonstrates that some people were sceptical about the motives of this research:

The timber industry is by far the most important forestry industry in the Eden area. Tourism is all well and good as are national parks but national parks creates more bills [; it does] not pay them. Tourism may be eco friendly but tourism in the Eden area only lasts a few months over summer, so if you want to close down all our other industries you can be the ones to stand up and pay our bills and provide our incomes. I think it's totally sick and disgusting that someone like you can do your utmost to destroy our livelihoods and then demand that we pay for the privilege. We don't complain about your drug filled blugging good for nothing lifestyle so please don't try and ruin ours. The timber and fishing industries are by far the most vital in Eden; tourism comes a very distant third.

(Contingent Valuation Survey – Respondent 92)

The quote demonstrates how emotive an issue this is for people in the area. It also shows the need for the development of methods whereby the passionate, personal and often spiritual connection that many local people have to forest environments can be factored into development decisions. As was noted in the previous discussion of land use attitudes many local people who were interviewed for this thesis saw themselves as custodians of the forest, custodians that are responsible for using forests in a sustainable manner and protecting it for future generations. The question that this thesis has considered is how these subjective values can be better conceptualised. It has been discovered that repertory grids may assist with attitude comprehension in three ways.

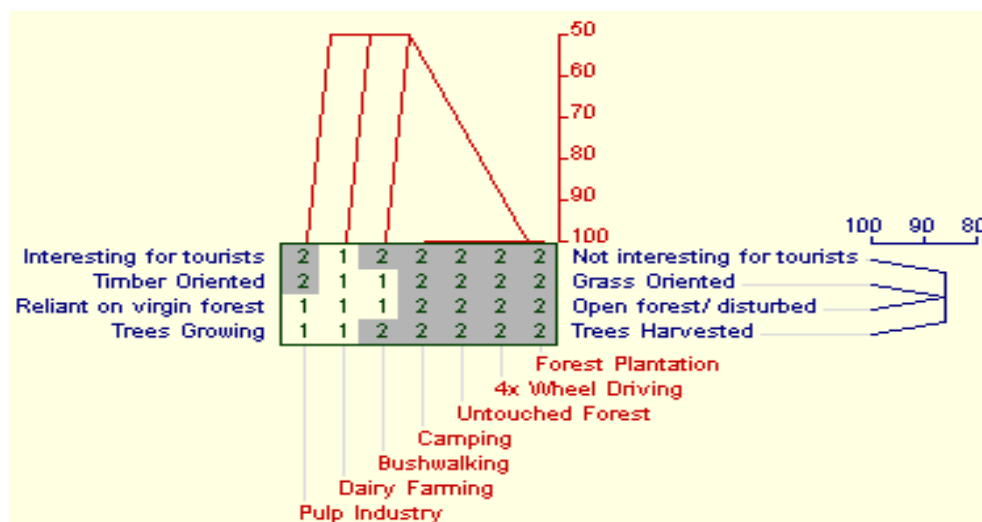
Firstly, repertory grids have been identified as providing an opportunity for researchers to observe how land use attitudes develop over time as residents gain more experience and knowledge of environmental debates. This is significant given that it has been illustrated that the opinion a community member attaches to forest usage is not static. Rather resident opinion will change over time based on the constantly evolving makeup



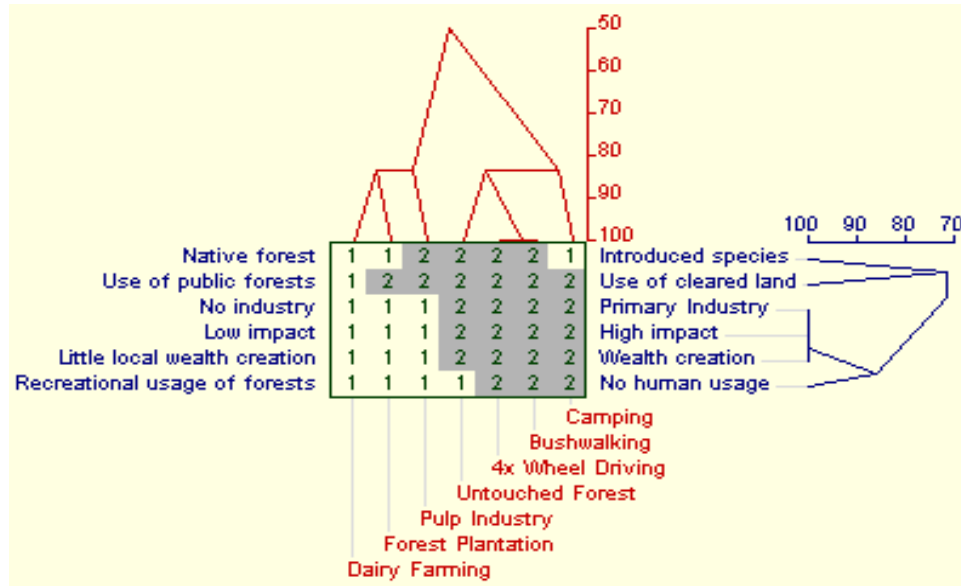
of a community's social base. Repertory grids are similarly based on PCT principles where constructs serve 'not only as an interpretation of past events, but also a hypothesis about events yet to be encountered' (Botterill & Crompton, 1996, p. 58). The experience corollary states that 'a person's construction system varies as he (sic) successively construes the replications of events' (Kelly, 1963, p. 72). Three examples highlighting the effect of personal experience on construct formulation are provided in section 4.6.2.

It has also been shown that the generation of repertory grids around a set of resident formatted constructs has the potential to allow for the values of different residents to be given equal weight in land use discussions. PCT repertory grids conventions state that interview participants, rather than investigators, are commonly responsible for defining the scope of the inquiry through construct development. In each of the 22 repertory grid interviews that were completed for this project, respondents interpreted a series of landuses based on their own way of seeing the world. This is illustrated in the two repertory grids in Figure 23 (see overleaf).

**Figure 23: Selected Repertory Grids**  
Chris



Emma



As with all the interviews completed for this project, Chris and Emma were responding to the same seven land use elements whilst generating their land use repertory grids. The freedom that was afforded to respondents resulted in a marked variation in both the composition of constructs, as well as in the nature of the bipolar construct relationships. The ability of repertory grids to accept the individuality of land use perception is connected to the PCT individuality corollary, which states that ‘people differ from each other in their constructions of events’ (Kelly, 2003, p. 9). The inherent flexibility of the approach therefore allowed the researcher to systematically contrast pro industry residents with those advocating a conservation future for the Eden region. Finally, repertory grids have also been demonstrated as allowing researchers to see the extent to which the views of others in the community are likely to influence or be influenced by a contingent valuation decision. This is achieved through reference to the PCT sociality corollary, which was discussed in section 4.6.2. The sociality corollary states that ‘to the extent that one person construes the construction processes of another; he (sic) may play a role in a social process involving another person (Kelly, 2003, p. 14). Understanding the power relationship between community members and other stakeholders in the Eden “community” has implications for the involvement of local residents in tourism development decisions. This will be discussed further in the next section with respect to research implications.

## 5.4 Research Implications

The central premise behind the new approach to contingent valuation social context analysis is a supposition that PCT repertory grids can allow respondent's personal stories, attitudes and values to be factored into social impact assessment decisions. The author recognised that impact analysis require rigorous measurable data, which can be supplemented with input from those affected by the development proposal (Buchan, 2003). This thesis has sought to investigate new ways that the subjective indicators such as community attitudes can be related to economic measures in a manner that allows the experiences and personal accounts of local people to be appreciated.. The intended benefit of this new approach was that it may help address a concern in the literature that 'inadequate participation of stakeholders in policy decisions, lack of knowledge of stakeholders' values, attitudes and preferences and difficulties in quantifying economic, environmental and recreational values of forests have been at the centre of most forest conflicts' (Musselwhite & Herath, 2007, p. 947).

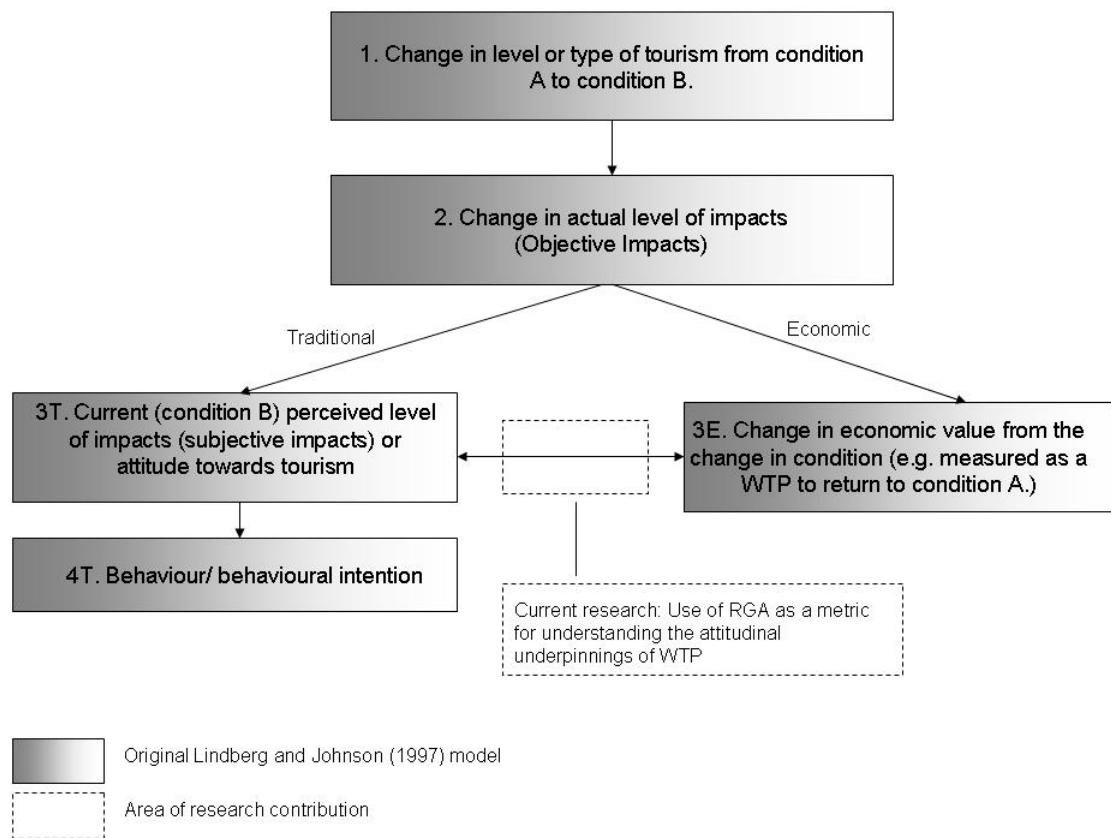
Integrating repertory grid methods with economic contingent valuations has the effect of providing important information about what the sampled community members viewed as the significant dimensions of forest land use. The systematic inclusion of resident opinions in land use discussions has the effect of empowering communities. Empowerment of local populations is deemed particularly relevant in rural communities such as Eden, where land use deliberations are influenced by top down Commonwealth/State policy decisions such as RFAs. Authors such as Wynhausen (2001) have drawn attention to the need for renewal within Eden's traditional primary rural based economy. Political maneuvering over infrastructure projects such as the Eden multi-purpose wharf and government legislation such as RFAs have been identified as being divorced from the real concerns of Eden residents, which include everything from the 'closing of banks and government offices to the lack of amenities. The town of 3000 people doesn't have a hospital or a cinema' (Wynhausen, 2001, p. 37). Power relations between contingent valuation buyer and seller are similarly a central part of Welch and Fischhoff's (2001) social context model, which has formed the basis of this research. Welch and Fischhoff note that 'respondents might provide candid valuation if they believed that the provision of the good depended on their response. If they doubted that policy makers would take their answers literally, they

might choose to exaggerate their WTP or refuse to provide one' (Welch & Fischhoff, 2001, p. 211). This concern parallels discussions in the contingent valuation literature where issues such as embedding and strategic bias can be seen as often affecting WTP (Bennett & Carter, 1993; Carson et al., 2001)

The results of this research also have significance for tourism impact researchers. Over recent years a body of literature has developed looking at the economic and social impacts of tourism in range of contexts (Asafu-Adjaye & Tapsuwan, In Press, Corrected Proof; Briassoulis, 1991; Croes, 2006; Gu & Ryan, 2008; King, Pizam, & Milman, 1993). Reflecting on the historical development of such tourism impact research, Lindberg and Johnson (1997) have noted that traditional tourism impact research has tended to focus on how tourism development spawns perceived subjective impacts such as preservation/pride in local culture. Citing a lack of an appropriate/adaptable metric for the measurement of these subjective social impacts, Lindberg and Johnson (1997) investigated how economic contingent valuations can provide a compliment to traditional impact assessment techniques (see Figure 24 overleaf).

Figure 24 shows how the results from this research can provide a link between the economic and attitudinal measures of tourism's social impacts. Literature on the business of tourism draws attention to the need to consider both the subjective (attitudinal) and monetary impacts of tourism development on the local population (Beeton, 2000; Holloway, 1998). It has been shown that repertory grids may provide a metric, whereby the subjective impacts of tourism development (i.e. attitude to tourism development) can be used to better understand change in an economic value. Repertory grids have been identified as being particularly suitable for such analysis, given their jointly qualitative/quantitative nature (Caputi, 2008, personal communication). While the core principles of PCT such as constructive alternativism are relatively abstract (see section 2.3); there exist a number of easy ways to administer these (see Walker & Winter, 2007 for a summary).

**Figure 24: Traditional and Economic Evaluation of Tourism’s Social Impacts**



Source: Adapted from Lindberg and Johnson (1997)

The final part of this thesis will consider future research opportunities related to the development of abatable repertory grid research tools, which may be initiated by the tourism industry to gauge community receptiveness to new developments in rural localities. It is surmised that such research may have practical implications for tourism stakeholders working on the further development of initiatives such as the *Natural Tourism Partnerships Action Plan* (see TTF Australia: Tourism and Transport Forum, 2007a) and the *National Ecotourism Accreditation Program*. The latter of these two initiatives for instance aims to work with local communities and ensure that the ecotourism sector is respectful of the cultural sensitivities of host communities (Ecotourism Australia, 2008). Repertory grid questioning that was completed for this thesis has revealed the ability to present rich cultural data, which can be factored into tourism development decisions.

## ***5.5 Opportunity for Future Research***

This research has demonstrated the ability for PCT repertory grid methods to shed light on the social context of economic measures. The work in this thesis provides a basis for subsequent research to develop these theoretical linkages into adaptable repertory grid research tools, which could be employed by tourism industry stakeholders and other land use planners to gauge attitudes in a rural community to future tourism development. To the researcher's knowledge no such generic repertory grid toolkits have ever been developed. Work in this area would build on an established history of academic interest in using repertory grid methods in tourism focussed studies (Coshall, 1991, 2000; Embacher & Buttle, 1989; Hankinson, 2004b; Lawton, 2005; McNicol, 1996; Pearce, 1982). This section will briefly outline some of the issues that future researchers will have to contend with in this area.

Employing an adaptable repertory grid toolkit to help gauge community receptability to future rural tourism developments requires that such tools be integrated with other tourism impact assessment valuation methods. Coakes et al. (1999, p. 201) canvassed the importance of linking repertory grids with other valuation methods, noting that 'it is only through the triangulation of different data sources and methods that a comprehensive picture of a community can be developed'. In this exploratory thesis on contingent valuation/repertory grid links the researcher has argued that it is difficult for any contingent valuation scenario or other individual economic measure to tap into the complexity of human motivations behind WTP for an issue like tourism development (Lockwood et al., 1994). Instead what is needed is a method which allows different sustainability ideologies equal weight. As was noted previously, the repertory grids that were completed for this project were useful in this regard because PCT philosophies allow for land use interpretation to be framed according to an individual's personal definition of sustainable forest land use.

Ultimately whatever the combination of research instruments that are chosen, tourism development impact assessments must aim to 'provide the necessary technical data and advice to inform these regional and national decision making processes' (Coakes et al., 1999, p. 194). In Australian forestry applications this data is usually collected in the form of census data, meetings with individuals and social groups, and feedback from

formal community committees (Lugg, 1996). The focus on community level data gathering in RFA social assessments (e.g. McGregor, Gibson, Miller, & Sharma, 1998; Social Assessment Unit DPIE, 1998b) means that it is appropriate to consider the merits of group versus individual approaches to data gathering in repertory grid toolkit development. A variety of studies have taken a group approach to repertory grid distribution (Coakes et al., 1999; Pike, 2007; Scherl, 1988). Group approaches have taken the form of forum discussions and surveys. Some of the pros and cons of these approaches are outlined by Pike (2007, p. 388) (see Table 25).

**Table 25: (Dis) advantages of Group Surveys and Individual Interviews**

	<b>Individual Interviews</b>	<b>Group Settings</b>
<b>Advantages</b>	Increased number of statements elicited Opportunity for laddering Opportunity for clarification by researcher No distractions from other participants Smaller sample	Efficiency in data collection time Potential use as a structured focus group Increased participant anonymity
<b>Disadvantages</b>	Less data collection time Less participant anonymity	Lower number of statements elicited Limited ability to clarify statements Lack of ability for laddering Potential distractions from other participants resulting in less data Larger sample required

The key advantage of group work for Pike (2007) was efficiency in data collection. For fiscal reasons data collection was conducted solely by the researcher for this thesis. On average 4 x 1-1.5 hour interviews were completed per day over a 7 day period. While this approach yielded 22 usable repertory grids; the time taken to collect data individually would be impractical in the context of a larger representative sample of the Eden community. The key disadvantage Pike (2007) identifies with group approaches to repertory grids is a reduction in the quality of repertory grid data in a group setting. It was hypothesised that this may be due to the lack of an interviewer who can press for clarification from the respondent when required (Pike, 2007).

The clarification issue alludes to the idea that in order for group repertory grid exercises to work in tourism focussed SIA exercises; attention needs to be given to resident understanding of the research instrument. Two issues need to be considered with respect to comprehension:

1. Resident concern over the value of the repertory grid exercise itself.
2. The choice of elements.

The researcher is of the view that there is little that can be done to address the issue of respondent concern over the fundamental worth of the qualitative repertory grid exercise. However, as demonstrated in this thesis the method has provided a way of not only deepening the understanding of the phenomenon but also provided a way to measure the personal constructs that may satisfy those concerned with objective validity and reliability of qualitative research. Qualitative and quantitative methods have the potential to divide any sampled population. Some commentators have gone as far to suggest that a series of dualisms can be seen between qualitative and quantitative methods (see Table 26 overleaf). Repertory grids are a structured form of qualitative data. Authors such as Kraus and Allen (1998, p. 36 in Veal, 2006, p. 194) have argued for the use of qualitative methods on the basis that 'in such an individualistic and diversified field as recreation and leisure, there ought to be a place for research of a more deeply probing, intuitive, or philosophical nature'. Repertory grids give researchers an opportunity to order this deep/subjective data without losing any of its complexities. In spite of this, some respondents may object to a procedure, which bases land use discussions around a series of bipolar element constructs out of concern that it will limit their ability to engage with the issues. It is possible that community members may be more agreeable to the use of repertory grid techniques if they could see that the method was being systematically integrated with other data collection techniques to form a comprehensive picture of community concerns. Further researchers will need to develop ways of incorporating repertory grid questioning into SIA data gathering and reporting tools.



**Table 26: Qualitative/ Quantitative Research Dualisms**

Qualitative Methods	Quantitative Methods
Qualitative data	Quantitative Data
Natural setting	Experimental setting
Search for meaning	Identification of behaviour
Reflection of natural science	Adoption of a natural resource
Inductive approaches	Deductive approaches
Identification of cultural patterns	Pursuance of scientific laws
Idealist perspective	Realist perspective

Source: (Winchester, 2000)

A second issue that will need to be canvassed with respect to developing adaptable repertory grid tools relates to element selection. Elements in this thesis's repertory grid interviews were photographs of seven land uses that the researcher identified as existing in the Eden area (section 3.7.1). Before interviews were completed for this thesis the composition of the element list was canvassed with a number of local forest stakeholders. This group expressed concerns over the emotive nature of some of the images, which were summarised in Chapter 3.

The idea that emotive connotations could be attached to different land uses raises the issue of the image a community member has of a forested landscapes, which could be used for tourism or primary industry uses. Photographs are a common method in destination image studies (Jenkins, 2003; MacKay & Couldwell, 2004). Repertory grid studies that have focussed on destination images have often used photography as a means of understanding how visitors perceive particular destination features (Botterill & Crompton, 1987; Hankinson, 2004b; Naoia et al., 2006; Pike, 2007).

Destination images are essentially social constructs (Echtner, 1991). Detailed examinations of tourist destination image characteristics and research directions can be found in other sources (Chon, 1992; Crompton, 1978; Cunningham, 2005; Echtner, 1991; C Echtner & Ritchie, 1993; C. Echtner & Ritchie, 2003; Fairweather & Swaffield, 2002; Hankinson, 2004b; Jenkins, 1999; MacKay & Couldwell, 2004; Pike, 2002, 2007; Tuohino, 2001). The key issue that this thesis is taking from this literature is that destination images have

both cognitive and affective components (Naoia et al., 2006). Cognitive components relate to the basic physical features of an image e.g. a picture of a woodchip pile at a mill. In contrast affective components refer to the emotive quality attached to a feature e.g. the destructive power of a timber harvester.

The idea that people can perceive an image of a land use in both cognitive and affective terms has implications for the range of convenience of repertory grid elements. Reference was made to range of convenience earlier in Chapter 4 where it was noted that some respondents had difficulty seeing elements as “convenient” because they weren’t seen as occurring geographically within the case study area. Geographic inconvenience was most commonly seen as affecting the elements of dairy farming and forest plantations, which were seen by interviewees as being located around Bega and Bombala respectively. The idea of affective components of a destination image complicates the range of convenience idea further. It raises the idea that elements may be outside of the range of convenience for a discussion of forest land uses around Eden, even if they represent a land use which is physically present in the area.

One way of addressing concerns over affective range of convenience in a SIA context would be to allow community members to select the photographs for use in the study. Conceivably photographs could be chosen by members of community forest forums. Chosen elements could then be included in a generic repertory grid interview instrument that can be used on the broader population. Visitor Employed Photography is one means by which this could be achieved. Essentially this approach involves issuing cameras to research participants, who are then instructed to photograph scenes/items that reflect the research objectives (MacKay & Couldwell, 2004). Participants could be instructed to take photos of forest land uses that they deem to be sustainable and/or unsustainable. Visitor Employed Photography has been employed in a number of park management contexts (Dorwart, Moore, & Yu-Fai, 2007; Taylor, Sexton, & Czarnowski, 1995).

The idea that respondents can determine their own elements in a SIA repertory grid exercise does, however, cause issues with respect to data analysis. The generation of consensus grids essentially would allow for SIA researchers to make group observations on the issues likely to govern resident perceptions on the growth of forest based nature tourism. This would be important in the Eden RFA process in that it would have

allowed for social values that the Eden community attaches to forest recreation to be compared to other communities in the Eden RFA area. This analysis could have been included in social case studies that formed part of the report *Social Values of Forests Eden CRA Region* (Social Assessment Unit DPIE, 1998b).

Limiting the ability of consensus grids to be employed in this manner is, however, the proviso that all elements and constructs must be the same for composite grids to be developed (Mansfield & Ginosar, 1994; Potter & Coshall, 1988). The chief problem with this approach is that it imposes meaning on the respondent. It suggests that the half dozen or so bi polar constructs that are provided are the only way of interpreting a phenomenon like nature based tourism development. Some authors have gotten around this problem by employing a multi stage repertory grid process. Lawton (2005, p. 191) for instance employed a three stage methodology in a study of resident perceptions of tourist attractions on the Gold Coast, wherein '1) the elements were elicited, 2) the constructs were elicited, and then 3) the results of these initial stages were used to design and implement the repertory grid'.

Ultimately, the planning and development of a survey based repertory grid toolkit involves researchers being concerned with the nature of the possible sample(s); the mode of questioning and the composition of the questions (Read, 2008). As there is no comparable repertory grid toolkit to the one being proposed in existence, the process of toolkit development must ultimately start with the canvassing of PCT and tourism professionals. The involvement of both these groups is necessary in order to ensure the development of a survey which is respectful of PCT principles, whilst also being relevant to the tourism industry. After this it will be necessary to pilot test the survey in a multitude of tourism contexts in order to ascertain whether it is possible to develop adaptable research instruments in light of the various conventions regarding element and construct development in the PCT literature.

## **5.6 Final Comment**

Tourism is an increasingly important component of many Australian rural economies. Developing in localities perceived to be of interest to tourists, tourism industries provide local economies with an alternative source of income with which they can look to

wether the effects of downturns in local primary industry sectors. The nature of the tourism industry is one of the most profitable and environmentally conscious of these new rural tourism sectors. Figures from the 2004 National Visitor Survey indicated that in 2004 25.9 million people participated in nature based tourism activities (Tourism Australia, 2005b). The expenditure of this section of the tourism market was approximately \$19.1 billion in 2004 (Tourism Australia, 2005b).

The purpose of this inquiry has been to assess the role of nature tourism industries as agents of sustainable change in rural Australia. This thesis has proceeded from the understanding that rural tourism industries possess a variety of cultural, political, economic, social and environmental linkages to their host region. Ensuring the sustainability of these industries is dependent upon an appreciation of local complexities, as well as a broad commitment from the all tourism stakeholders to develop a nature tourism industry, which is accepting of integrative triple bottom line approaches to sustainable development. This thesis has engaged with one aspect of this tourism industry destination region interaction through a detailed analysis of the relationship between nature tourism industries and local rural communities.

This thesis has focussed on developing ways of accounting for the myriad of values rural community members may attach to the possibility of future tourism growth in their locality. It has been recognised that rural communities throughout Australia are not homogenous with respect to their perceptions of local nature tourism industries. Complex landuse histories, combined with a diverse range of environmental ethics amongst residents mean that community members can variously accept or reject economic arguments made in favour of nature tourism development. Just some of the tourism development issues that this thesis identified in the Eden case study community include: the contribution of traditional primary industries to the maintenance of Eden's character; the potential for tourism to work in tandem with the natural and manmade environment; the potential for tourism to work with forestry operations for the betterment of local economies and cultures; and tourism's local employment potential. While governments and other regional tourism stakeholders often position nature tourism as a more environmentally, economically and socially sustainable use of rural Australia's unique natural environments, the fact remains that nature tourism development often necessitates a fundamental re-organisation of a community's

economic and social structure. As such, this thesis has argued that the appropriateness of tourism development in individual rural centres is not guaranteed and that new ways must be found to incorporate the values of individual residents into development decisions.

Nature tourism can provide a sustainable future for rural communities struggling with the effects of declines in primary industries if it is properly managed. This thesis has argued that the consequence of ignoring tourism's development potential and instead pursuing a blinkered approach to economic management that seeks to prop-up ailing primary industries with short term palliatives – subsidies and compensation is that communities may miss out on the positive economic and other benefits from tourism industries. The development of a sustainable rural tourism industry is, however, still dependent on a number of factors including:

- Whether tourism industries are acceptable to the community and contribute to its overall sense of well being
- If tourism industries help to maintain the community's sense of itself and its attachment to place
- Whether tourism develops in a manner that allows the community to maintain its sense of pride in its culture and traditions, even if the way of life substantially changes, and,
- Whether tourism provides appropriate employment and business opportunities for a wide range of people within the community.

The intangible nature of ideas such as “place”, community and culture was the impetus for this thesis considering new ways of assessing the values, which underpin a rural community member's response to a tourism development scenario in their area. The basis of the study has been the economic psychology literature and the idea that psychological values theories can be used to interpret the attitudinal underpinnings of economic valuations. The foundations of the economic psychology approach to values assessment which has been considered in this thesis are the contingent valuation method

and the PCT repertory grid. Contingent valuations are an economic survey based technique for eliciting preferences for non-market goods. Along with cost benefit analyses they provide tourism assessors with a means of determining the total economic value of a development proposal. Recently a number of authors have been identified as having considered that a personal and diverse range of human values may underpin a WTP estimate in a contingent valuation survey. Various authors have made the connection between attitude and contingent valuation on the grounds that contingent valuation surveys are a form of economic consumerism where individuals make choices that are dependent upon their attitudes and beliefs.

The links that this thesis has made between contingent valuations and PCT repertory grids are built on this established body of contingent valuation attitude behaviour literature. The specific theorists of interest are Ajzen and Driver (1992a) who proposed a *Theory of Planned Behaviour*/contingent valuation model where beliefs about the consequences of an action were seen as directly influencing contingent valuation WTP. This thesis has adapted the principles of this model to its own far south coast national park based nature tourism context. It then seeks to extend Ajzen and Driver's (1992a) model to include reference to existing landuse attitudes and their social context. Social context is one of the three principal components of contingent valuations, along with the good in question and payment vehicle. Repertory grids, which have their basis in PCT principles, are used to provide a tool whereby social context can be interpreted.

The central argument to emerge from this thesis with respect to the attitude behaviour relationship between contingent valuations and PCT repertory grids is that repertory grids can help provide explanation of the various social context issues, which influence a resident's contingent valuation WTP estimate. Building on the work of previous contingent valuation theorists, the thesis has proceeded on the belief that 'evaluative judgements [such as WTP] should be sensitive to features of proposed transactions that the respondents consider to be relevant' (Welch & Fischhoff, 2001, p. 209). With this in mind repertory grids, with their foundation in individually constructed interpretations of reality have been proposed as a structured methodological tool, which may, if properly implemented, allow researchers to avoid interpreting WTP responses on the basis of their own personal opinion and prejudice. Opportunities for future research in this area will focus on the development of adaptable repertory grid research tools, as well as a

broader consideration of how repertory grids may actively inform policy decisions in specific tourism destination environments.

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## ***Personal Communications***

Interviews were conducted with a number of Eden residents whose views are quoted directly in this thesis. Details of these personal communications are as follows:

- Alan (2007) Personal Communication (26 April)
- Angela (2007) Personal Communication (5 April)
- Bruce (2007), Personal Communication (2 April)
- Daniel (2007), Personal Communication (4 April)
- Denisse (2007) Personal Communication (3 April)
- Emma (2007) Personal Communication (4 April)
- Ethan (2007), Personal Communication (1 April)
- Ian (2007), Personal Communication (29 March)
- Jenny (2007) Personal Communication (27 March)
- Lisa (2007), Personal Communication (2 April)
- Lloyd (2007), Personal Communication (1 April)
- Natalie (2007), Personal Communication (28 March)
- Robert (2007), Personal Communication (27 March)

Interviews were also conducted with a number of other stakeholders who have an interest in the forest usage issues being considered in this thesis. A number of these interviews are quoted in the thesis. Details of these personal communications are as follows:

- Bega Valley Shire Council (2006) Personal Communication (13 November)
- Chip stop (2006) Personal Communication (9 November)
- Eden Chamber of Commerce (2007) Personal Communication (13 May)
- Eden Magnet (2006) Personal Communication (9 November)
- Sapphire Coast Tourism (2006 and 2007) Personal Communication (10 November and 3 March)
- Timber Communities Australia (2006) Personal Communication (9 June)

### Other Personal Communications

Caputi, P. (2008) Personal Communication, University of Wollongong

# Appendix 1: Final Contingent Valuation Survey

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## Eden Community Survey

Dear Eden Resident

Thank you for agreeing to participate in an anonymous survey of Eden residents as part of Stephen Schweinsberg's PhD research in the School of Leisure, Sport and Tourism at the University of Technology Sydney.

The aim of this survey is to discover how Eden residents perceive different uses of forests in their area.

It is expected that this survey should take approximately 15mins to complete.

Participation in this research is entirely voluntary. Please feel free to answer all questions or only those you are most comfortable with. Results will be treated in the strictest of confidence. To ensure anonymity please do not append your name or contact details to any part of this survey.

Participation in this research will make you eligible to go into the draw for a \$500 travel voucher kindly provided by the Australian Tourism Transport Forum. Please fill in your details on the last page if you wish to be considered for this prize.

If you have any questions regarding this research please feel free to contact Stephen directly at [stephen.c.schweinsberg@student.uts.edu.au](mailto:stephen.c.schweinsberg@student.uts.edu.au).

Thank you for your cooperation and valuable contribution to this research. We look forward to your participation.

Yours Sincerely  
Stephen Schweinsberg

NOTE: If you would prefer to complete this survey online please proceed to <http://www.surveymonkey.com/s.asp?u=709782818109>

NOTE: Only people over the age of 18 should complete this survey.

NOTE: If you have any further questions about any aspect of this research please feel free to contact the Research Ethics Manager (Human Ethics Office at the University of Technology) on (02) 9514 1279. Alternatively you may wish to contact Stephen's staff supervisor Associate Professor Stephen Wearing on (02) 9514 4242.

NOTE: This survey is part of an independent Doctoral Thesis. Ethics approval for this survey has been granted by the Human Research Ethics Committee (UTS). The researcher Stephen Schweinsberg has no connection, financial or otherwise to any organisation involved in the management or use of Eden's forested areas. The results of this study will not contribute to any work being undertaken by any local stakeholder group. There is also, to the researcher's knowledge, no current Commonwealth or NSW State Government intention to change the nature of the Regional Forest Agreement legislation. The landuse change scenarios being proposed in this survey are hypothetical with respect to reference to the Regional Forest Agreement.

**Q 1. People value forests in different ways and thus have different views about ways in which forests may be used. The following is a list of some of the uses of forests in the Eden area. Please indicate your level of support or opposition for each use by placing a tick in the appropriate box.**

	Strongly Agree <sup>(5)</sup>	Agree <sup>(4)</sup>	Neutral <sup>(3)</sup>	Disagree <sup>(2)</sup>	Strongly Disagree <sup>(1)</sup>
A source of material for local sawmills					
A location for forest plantations					
A place for bushwalking					
The location of local heritage sites					
Source of material for local pulpwood industries					
A location for horse riding					
A location for agricultural development					
A location for commercial hunting					
A location for cattle grazing (private land only)					
A location for indigenous Aboriginal communities to undertake traditional cultural activities					
A location for firewood collection					
A location for camping					
A location for local flora and fauna which should not have to co-exist with any of the human activities listed above					

\_\_\_\_\_ Sawmill  
 \_\_\_\_\_ Plant  
 \_\_\_\_\_ Bush  
 \_\_\_\_\_ Heritage  
 \_\_\_\_\_ Pulp  
 \_\_\_\_\_ Horse  
 \_\_\_\_\_ Agricult  
 \_\_\_\_\_ Hunting  
 \_\_\_\_\_ Grazing  
 \_\_\_\_\_ Aborig  
 \_\_\_\_\_ Fire  
 \_\_\_\_\_ Camp  
 \_\_\_\_\_ Flora

**Q 2. The following are a series of statements regarding forests in the Eden area. Please read the statement and identify your position by ticking the appropriate box**

	Strongly Agree <sup>(5)</sup>	Agree <sup>(4)</sup>	Neutral <sup>(3)</sup>	Disagree <sup>(2)</sup>	Strongly Disagree <sup>(1)</sup>
Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources					
Local economic security is the most important issue to consider when deciding how best to manage Eden's forests					
Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests					

\_\_\_\_\_ Sust  
 \_\_\_\_\_ Econ  
 \_\_\_\_\_ Natural

**Q 1. People value forests in different ways and thus have different views about ways in which forests may be used. The following is a list of some of the uses of forests in the Eden area. Please indicate your level of support or opposition for each use by placing a tick in the appropriate box.**

	Strongly Agree <sup>(5)</sup>	Agree <sup>(4)</sup>	Neutral <sup>(3)</sup>	Disagree <sup>(2)</sup>	Strongly Disagree <sup>(1)</sup>
A source of material for local sawmills					
A location for forest plantations					
A place for bushwalking					
The location of local heritage sites					
Source of material for local pulpwood industries					
A location for horse riding					
A location for agricultural development					
A location for commercial hunting					
A location for cattle grazing (private land only)					
A location for indigenous Aboriginal communities to undertake traditional cultural activities					
A location for firewood collection					
A location for camping					
A location for local flora and fauna which should not have to co-exist with any of the human activities listed above					

- \_\_\_\_\_ Sawmill
- \_\_\_\_\_ Plant
- \_\_\_\_\_ Bush
- \_\_\_\_\_ Heritage
- \_\_\_\_\_ Pulp
- \_\_\_\_\_ Horse
- \_\_\_\_\_ Agricult
- \_\_\_\_\_ Hunting
- \_\_\_\_\_ Grazing
- \_\_\_\_\_ Aborig
- \_\_\_\_\_ Fire
- \_\_\_\_\_ Camp
- \_\_\_\_\_ Flora

**Q 2. The following are a series of statements regarding forests in the Eden area. Please read the statement and identify your position by ticking the appropriate box**

	Strongly Agree <sup>(5)</sup>	Agree <sup>(4)</sup>	Neutral <sup>(3)</sup>	Disagree <sup>(2)</sup>	Strongly Disagree <sup>(1)</sup>
Sustainable forest management is best facilitated by accepting the diversity of forest users and the different values these groups ascribe to forest resources					
Local economic security is the most important issue to consider when deciding how best to manage Eden's forests					
Protection of natural biodiversity is the most important issue to consider when deciding how best to manage Eden's forests					

- \_\_\_\_\_ Sust
- \_\_\_\_\_ Econ
- \_\_\_\_\_ Natural

**Q3. Are some forest industries more appropriate in Eden's forested areas? Please discuss with reference to different forest industries as is appropriate.**

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**Q4. What do you regard as the factors that have shaped attitudes in Eden to state forests and national parks?**

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**Q5. What role can forest based nature tourism/recreation play in the future of the Eden community?**

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**I am interested in understanding how you as an Eden resident would value an increase in the area of forested conservation reserves (National Parks, Nature Reserves, and Flora Reserves etc) in your locality.**

**An increase in the area of conservation reserves carries with it the potential for increased nature tourism development. However it would also require some reduction in the areas of land available for integrated forestry operations under Forest NSW's zoning plans**

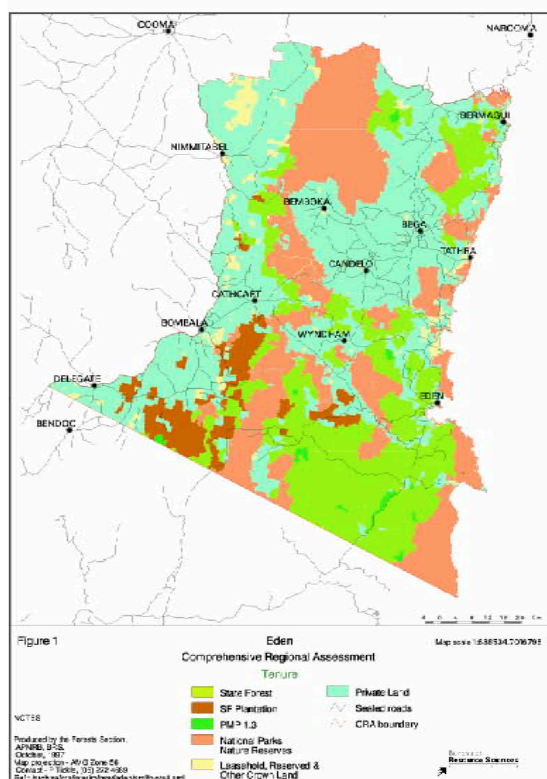
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The map below illustrates forest land use zoning around Eden in 1999 at the time of the Regional Forest Agreement's Comprehensive Regional Assessment



In considering your level of support for an increase in the area of conservation reserves please take the time to read the following information.

#### STATE FORESTS

Forests NSW has as its focus the ecologically sustainable management of the state's forest resources. This necessitates the maintenance of ecological processes and biodiversity, whilst optimising the benefits for local communities from an array of forest industries including tourism/recreation, hardwood sawmilling, and softwood plantations near Bombala and associated pulp wood production. In managing the 163,000 hectares of State Forest in the Eden RFA region, Forests NSW directly employs 48 people. A further 300 people are employed in State Forest based industries e.g. harvesting and recreation ventures. In the Eden Regional Forest Agreement area, Forest NSW's recreation objectives have seen approximately 16,000 people visit the area each year. Under State Forest management strategies up to 50% of land is set aside to conserve forest values as part of the Comprehensive, Adequate and Representative (CAR) reserve system connected to the national Regional Forest Agreement legislation. In 2002/2003 approximately 2% of native State Forests in NSW were harvested. This harvesting allocation supports a variety of industry groups in the Eden RFA area including the Blue Ridge Hardwood Saw Mill, North Eden Timbers Sawmill and the South East Fibre Exports Pty Ltd chip mill.

#### NPWS CONSERVATION RESERVES

Timber harvesting is not an allowable activity in national parks and other conservation reserves. National parks do however bring a variety of 'non extractive' benefits for surrounding regions including: the maintenance of cultural and natural heritage (e.g. Eden's Davidson Whaling Station), the protection of native flora and fauna and the provision of land for various tourism industry enterprises. The National Park based tourism industry is currently worth approximately \$12.7 million per annum to the local economy. Approximately 506,600 people visit Eden's reserve areas on an annual basis. The NSW National Parks and Wildlife Service (NPWS) employ 32 full time local staff in the Eden area, with a local annual expenditure of approximately \$2.3 million. The NSW NPWS contributes to the development of local tourism industries in a variety of ways. One example is the provision of concessions to commercial tourism operations (e.g. historic homesteads, caravan parks, restaurants). The NPWS also contributes to infrastructure developments e.g. walking tracks which can be used by interstate/ intrastate park visitors and locals alike. In 1997 the NPWS contributed \$111,500 to this sort of tourism infrastructure development.

Map Source: Department of Agriculture Fisheries and Forestry (2001, 19th April 2006) Eden Comprehensive Regional Assessment (Map). Retrieved 19th April, 2006, <http://www.afia.gov.au/%5Cimage3/%5Cforestry/%5Cnsw/%5Cecosoc/%5Cne05es/tem/rea4.gif>

**Q6. Considering the information you have just read would you be prepared to make a financial contribution to the acquisition of further land in the Eden area for nature reserve uses? (Please tick the appropriate box)**

Yes <sup>(1)</sup>	<input type="checkbox"/>	Not sure <sup>(0)</sup>	<input type="checkbox"/>
No <sup>(2)</sup>	<input type="checkbox"/>		

If no or not sure please proceed to Q9.

**Q7. You have indicated that you are prepared to make an in principle contribution to the growth of conservation reserves in the Eden area.**

**Please now consider whether you are willing to make an annual contribution (over 13 years) to a trust fund administered by the Natural Heritage Trust that would use the money collected to ensure an increase in the area of conservation reserves in the Eden area? (Please tick the appropriate box)**

Yes <sup>(1)</sup>	<input type="checkbox"/>	Not sure <sup>(0)</sup>	<input type="checkbox"/>
No <sup>(2)</sup>	<input type="checkbox"/>		

If no or not sure please proceed to Q9.

**Q8. You have indicated that you would be willing to make an annual contribution (over 13 years) to a trust fund administered by the Natural Heritage Trust that would use the money collected to ensure an increase in the area of conservation reserves in the Eden area?**

Please examine the following list of amounts ranging from \$0 to more than \$200. Please indicate with a tick the maximum amount you would be prepared to pay. Payment is per annum over 13 years.

\$0 <sup>(1)</sup>	<input type="checkbox"/>	\$125 <sup>(6)</sup>	<input type="checkbox"/>
\$10 <sup>(2)</sup>	<input type="checkbox"/>	\$150 <sup>(7)</sup>	<input type="checkbox"/>
\$25 <sup>(3)</sup>	<input type="checkbox"/>	\$200 <sup>(8)</sup>	<input type="checkbox"/>
\$50 <sup>(4)</sup>	<input type="checkbox"/>	\$200+ <sup>(9)</sup>	<input type="checkbox"/>
\$100 <sup>(5)</sup>	<input type="checkbox"/>		

Please proceed to Q10.

\_\_\_\_\_ Cont

\_\_\_\_\_ Annual

\_\_\_\_\_ Amount



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<b>Q9. What is the main reason or reasons why you would not wish to make such a contribution?</b> (Indicate by ticking the appropriate box or boxes)	
I cannot afford to pay. (1)	
Forestry operations undertaken on State Forest land make important contributions to local community economic and social development. (1)	
Our forested areas should be protected from the timber industry by law, we shouldn't have to pay to protect them. (1)	
I'm satisfied with the existing land use balance in the Eden Regional Forest Agreement area. (1)	
I object to the idea of contributing to the Natural Heritage Trust (1)	
I need more information to answer this question. (1)	
Other (please specify) (1)	

Please proceed to Q11.

<b>Q10. What is the main reason or reasons why you would wish to make such a contribution?</b> (Indicate by ticking the appropriate box or boxes)	
I want to preserve our native forests and national parks and reserve areas are an appropriate means to achieving this. (1)	
My answers reflect my views on the need to reserve all of Australia's native forests as national parks not just those in the Eden area of southeast NSW. (1)	
I feel that nature tourism is the only form of commercial development which should be encouraged in our forest environments. (1)	
Communities have a responsibility to preserve the environment in their immediate area. (1)	
I would receive some personal benefit from paying to increase the size of the nature tourism industry in Eden's national parks and reserve areas. (1)	
Other (please specify) (1)	

Q11. What is your gender? (Please Tick)

Male (1)	
Female (0)	

\_\_\_\_\_ **Afford**  
 \_\_\_\_\_ **Comm**  
 \_\_\_\_\_ **Law**  
 \_\_\_\_\_ **Balance**  
 \_\_\_\_\_ **NHT**  
 \_\_\_\_\_ **Info**  
 \_\_\_\_\_ **Other1**

\_\_\_\_\_ **Preserve**  
 \_\_\_\_\_ **AusNat**  
 \_\_\_\_\_ **Comm**  
 \_\_\_\_\_ **CommResp**  
 \_\_\_\_\_ **Benefit**  
 \_\_\_\_\_ **Other2**  
 \_\_\_\_\_ **Gender**

Q12. What was your age as at June 30 2006? \_\_\_\_\_

Q13. How many years have you lived in the Eden area? \_\_\_\_\_

Q14. Which of the following best describes your current lifestyle situation?  
(Please tick appropriate response)

Full-time home duties (1)	<input type="checkbox"/>	Part-time paid work (5)	<input type="checkbox"/>
Looking for work/Unemployed (2)	<input type="checkbox"/>	Full-time paid work (30 + hrs/wk) (6)	<input type="checkbox"/>
Retired (3)	<input type="checkbox"/>	Other (please specify) (7)	<input type="checkbox"/>
Full-time education (4)	<input type="checkbox"/>		

Q15. Are you currently employed in any of the following industry sectors? If you are retired or unemployed please indicate any industry sector or sectors you have formally been employed in. (Please tick appropriate response(s))

Accommodation/ Cafes/ Restaurants (1)	<input type="checkbox"/>	Property/ Business Services (1)	<input type="checkbox"/>
Agriculture/Farming (1)	<input type="checkbox"/>	Retail Trade (1)	<input type="checkbox"/>
Council/ Government (1)	<input type="checkbox"/>	Tourism/ Recreation Operators (1)	<input type="checkbox"/>
Fishing (1)	<input type="checkbox"/>	Transport/ Storage (1)	<input type="checkbox"/>
Forestry/ Timber (1)	<input type="checkbox"/>	Other (please specify) (1)	<input type="checkbox"/>
Health/ Community Services (1)	<input type="checkbox"/>		
Manufacturing (1)	<input type="checkbox"/>		

Q16. Have you visited any areas of State Forest or National Park around Eden for recreational purposes over the last year?

Yes (1)	<input type="checkbox"/>
No (2)	<input type="checkbox"/>
Not sure (0)	<input type="checkbox"/>

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\_\_\_\_\_ Age

\_\_\_\_\_ Years

\_\_\_\_\_ Lifestyle

\_\_\_\_\_ Accom

\_\_\_\_\_ Farming

\_\_\_\_\_ Council

\_\_\_\_\_ Fishing

\_\_\_\_\_ Forest

\_\_\_\_\_ Health

\_\_\_\_\_ Manu

\_\_\_\_\_ Property

\_\_\_\_\_ Retail

\_\_\_\_\_ Tourism

\_\_\_\_\_ Trans

\_\_\_\_\_ Other3

\_\_\_\_\_ Visit



**PLEASE SEPARATE PAGE 11 FROM THE REST OF THE SURVEY IF YOU WISH TO PARTICIPATE IN THE PRIZE DRAW AND/OR FOLLOWUP INTERVIEW.**

**THEN RETURN BOTH COMPONENTS IN THE REPLY PAID ENVELOPE.**

**PERSONAL DETAILS ON P. 11 WILL NOT BE STORED WITH OTHER SURVEY DATA OR USED FOR ANY PURPOSE OTHER THAN FACILITATING PRIZE DRAW AND INTERVIEW.**

### PRIZE DRAW

All people who have participated in this Eden community survey are eligible to enter the draw for a \$500 travel voucher kindly provided by the Australian Tourism Transport Forum.

If you wish to enter the draw please fill in the personal information requested below and return this page with your survey. You also need to answer one simple question about Eden.

The prize draw will take place at the University of Technology Sydney on Monday 19th February 2007. The winner will then be contacted by either phone or email on Tuesday 20th February 2007. The winners name will also be announced in the Eden Magnet.

Eden is located in which Australian state? (Fill in the letter gaps)

NEW S\_\_UTH W\_\_LES

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Note: The personal details provided will not be made public or used for any purpose other than for the announcement of the prize winner in the Eden Magnet.

### FOLLOW-UP INTERVIEW

You may feel as though you have more to say on the issue of forest land use change in Eden. If so I would be interested in speaking to you in an informal one on one interview.

An interview would require no more than 1 hour of your time and would occur at a time and place of your choosing.

Participation will put you into the running to receive a \$100.00 Coles Myer gift voucher that can be redeemed at the Eden Bi Lo store. This prize is kindly provided by the Australian Tourism Transport Forum. The prize draw will take place at the University of Technology Sydney on Monday 24th March. The winner will then be contacted by either phone or email on Tuesday 25th March and their name published in the Eden Magnet.

If you are interested in participating please complete your details below. I will then contact you to arrange a meeting time.

Name: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

I can be contacted at [stephen.c.schweinsberg@student.uts.edu.au](mailto:stephen.c.schweinsberg@student.uts.edu.au) or by phone on (02) 9514 5368 if you have any questions.

You are under no obligation to participate in this research and any correspondence and information collected will remain non attributable and anonymous.

Again if you have any complaint about any aspect of this research; please feel free to contact the Research Ethics Manager (Human Ethics Office at the University of Technology) on (02) 9514 1279.

## **Appendix 2: Repertory Grid Interview Materials**

### **COMMUNITY INTERVIEW MATERIAL**

**Eden NSW (24<sup>th</sup> February to 3<sup>rd</sup> March)**

**Stephen Schweinsberg  
(School of Leisure Sport and Tourism)**

**Landuse photos, Instructions, Response Sheet and Consent  
Form**

- This interview is designed to understand your perceptions of different forest uses in the Eden area.
- The information collected will be viewed together with information you provided in your postal survey. You will not be personally identified in any research output.
- I have brought with me 7 photographs of forest landuses that can be found around Eden. I recognise that there are many others, which are not represented.
- I am interested in understanding whether you see any, or all, of these landuses as being appropriate in the Eden area, as well as the reasons you hold these views.
- You might for instance view a landuse as appropriate because of its contribution to the local Eden economy or perhaps because of its connection to Eden's community character.
- In the end how you view a landuse is a personal choice. There are no wrong answers in this exercise.
- Please feel free to think out loud in this exercise

Interview Procedure (Stephen will take you through this section as you complete the exercise)

- **I will present the 7 landuse photographs in groups of three. There will be 9 combinations presented.**
- **For each combination of 3 landuses; can you identify a way in which two of the landuses are similar, but yet different from the third?**
  - Write down the thing two of the landuses have in common in the column marked *identification of similarity*.
  - Then write down the converse of this similarity description i.e. the reason the third landuse is different in the column marked *identification of difference*.
  - Always remember that when you are deciding on points of similarity and difference I am not after factually correct answers.
  - How you perceive the relationship between different forest landuses around will depend on your personal feelings about each landuse. I'd always like you, however, to consider the relationship in terms of whether you think a landuse is appropriate in the Eden area.
  - An identification of similarity and difference between landuses can be used only once in the whole exercise. I.e. it cannot be applied to subsequent image combinations.
  - It's perfectly okay if you can't see any point of similarity/difference in a particular image combination. If you get stuck we'll just move onto the next combination.
- **Once you have identified a point of similarity I will ask you why this issue is important to you.**
- **Once you have identified a point of similarity and difference for a landuse combination, you will then be presented with the other 4 landuse photographs. I'd like you to consider whether the identification of similarity you have identified can also be applied to these other landuses.**
  - If yes please put a tick in the appropriate column(s).
  - Note: Ticks will also be put in the columns relating to the 2 landuses already considered the same in the particular image combination.

## Hypothetical Examples

Image 1: Camping

Image 2: Pine Plantation

Image 3: Bushwalking

Image 4: MBR

Image 5: Untouched Forest

Image 6: Dairy

Image 7: Pulp Industry



Images	Identification of Similarity	Identification of Difference	Camping	Pine Plantation	Bushwalking	Mountain Bike Riding	Untouched Forest	Dairy	Pulp Industry
2,4,6	Pays the bills	Does not pay the bills		✓				✓	✓
1,3,5	Environmentally Sensitive	Environmentally destructive.			✓		✓		
2,3,7	Growing industry	Stagnant industry		✓					✓
2,6,7	Modern industry	Traditional industry	✓	✓	✓	✓			✓
1,5,7	Important to Eden's Community	Important to Visitors		✓			✓	✓	✓



## Survey Images

**Image 1: Untouched Forest (No Human Usage)**



Source: Sapphire Coast Tourists (2007)

**Image 2: 4x Wheel Driving**



Source: Sapphire Coast Tourists (2007)

**Image 3: Camping**



Source: Sapphire Coast Tourists (2007)

**Image 4: Bushwalking**



**Image 5: Dairy Farming**



Source: Sapphire Coast Tourism (2007)

**Image 6: Pulp Industry**



Source: [http://commons.wikimedia.org/wiki/Image:Woodchip\\_piles\\_at\\_Eden\\_NSW.jpg](http://commons.wikimedia.org/wiki/Image:Woodchip_piles_at_Eden_NSW.jpg)

**Image 7: Forest Plantation**



Source: <http://images.google.com/imgres?imgurl=http://www.joanneum.at/iea-bioenergy-task38/workshops/canberra01/canpic23.jpg&imgrefurl=http://www.joanneum.at/iea-bioenergy-task38/workshops/canberra01/canberraphoto.htm&h=708&w=1024&z=252&hl=en&start=1&tbnid=TNiBpQQG3ZkVt4L1&tbnh=113&tbnw=150&prev=images%3Fq%3Dplantation%2Ban%2Baustralia%26img%3Dool%26svnum%3D10%26hl%3Den%26r%3D%26ia%3DG>

## Response Sheet

Response Sheet

Landuses	Identification of Similarity	Identification of Difference	Untouched Forest	4x Wheel Driving	Camping	Bushwalking	Dairy Farming	Pulp Industry	Forest Plantation
1,2,4									
5,2,3									
1,6,7									
2,5,7									
1,3,5									
7,2,4									
4,5,6									
6,3,4									
3,6,7									

Response Number .....

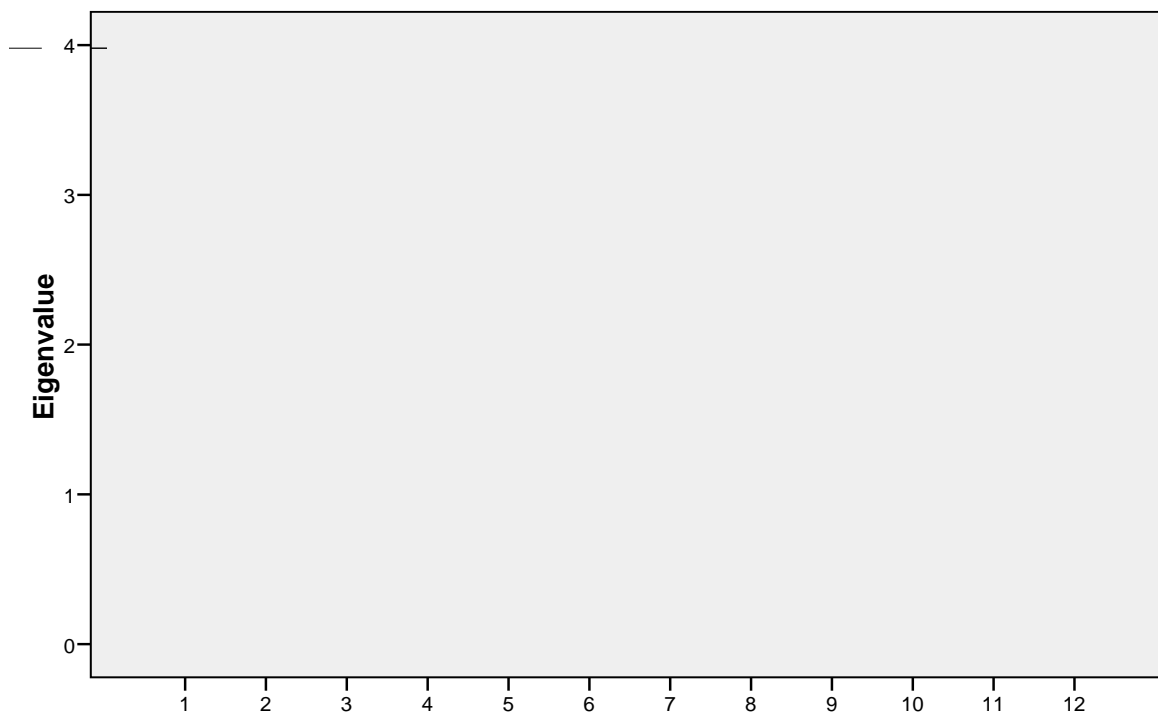
Date Completed .....

## Appendix 3: Factor Analysis Data

### Unrotated Component Matrix (a)

	Component		
	1	2	3
A location for agricultural development	.698	-.113	-.387
Source of material for local pulpwood industries	.678	-.324	.306
A location for commercial hunting	.677	-.121	-.107
A location for cattle grazing (private land only)	.662	.098	-.458
A source of material for local sawmills	.608	-.306	.500
A location for forest plantations	.600	-.230	-.331
A location for firewood collection	.571	.101	.524
A place for bushwalking	.164	.812	-.045
The location of local heritage sites	-.025	.750	.112
A location for indigenous Aboriginal communities to undertake traditional cultural activities	-.011	.707	.033
A location for horse riding	.515	.519	.134
A location for camping	.423	.492	-.059

Extraction Method: Principal Component Analysis.  
a 3 components extracted.



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