Forest-based Tourism and Recreation in the Upper and Lower North East Regions of NSW

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NSW NATIONAL PARKS AND WILDLIFE SERVICE

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PROJECT SUMMARY

Introduction

This paper describes a project undertaken as part of the Comprehensive Regional Assessments of forests in New South Wales. The Comprehensive Regional Assessments (CRAs) provide the scientific basis on which the State and Commonwealth Governments will sign Regional Forest Agreements (RFAs) for major forest areas of New South Wales. These agreements will determine the future of these forests, balancing conservation with timber industry use to provide an ecologically sustainable use of forest resources.

Project objectives

This study aims to determine the contribution made by forest-based tourism and recreation to the regional economies of the Upper North-East (UNE) and the Lower North East (UNE) regions of New South Wales . It also attempts to identify the current and future trends in tourism and forest-based tourism in particular. The characteristics of forest-based tourist operators in the two regions are identified as are the areas which are used for tourism and recreation purposes. The sensitivity of forest-based tourism to changes which may occur in land tenure will also be assessed. Finally, the study examines the extent of indigenous use of forests for tourism and recreation purposes.

Methods

Various methods were used for gathering data for this study. A literature review was undertaken to collect information on various important aspects relevant to this study. Consultations were undertaken with various government and non-government organisations, businesses and individuals. In an attempt to gain an understanding of tourism and recreational dependency on forests in the UNE and LNE Regions, a survey was undertaken of commercial tourist operators who used forests directly, that is, those who visited forest areas with their clients. To account for other types of tourist operations, the data from a social survey of all tourist operators in the UNE Region, undertaken as part of another study in the CRA/RFA process, were to be used to supplement the results from this study. Unfortunately, at the time of writing this report the results from the social survey were not made available.

Key results and products

In 1996/97 there were over 4 million visits, resulting in 13.7 million visitor nights spent in the UNE Region. A total expenditure of $919 million was undertaken by visitors to the Region. In the LNE Region, over 8.8 million visits were made, resulting in 26.4 million visitor nights. Total expenditure by the visitors to the LNE Region amounted to $1,795 million. The growth in tourism in north east NSW varies, with some areas experiencing higher growth rates than other areas. Generally, it can be stated that tourism is growing at between two and three percent throughout the UNE and LNE Regions.

A survey of commercial forest-based tourism operators in the UNE and LNE was carried out in August 1998. The businesses that responded to the survey employed 231 people, including the owner(s). The total number of clients catered for in 1997 was 78,844, with an average 2,318 clients per company. In the two regions 26 National Parks, Nature Reserves and State Recreation Areas were visited by 54 percent of the businesses which responded to the survey. There were 29 State forests used by 68 percent of respondents to this survey.

The forest areas were very important to the businesses surveyed, with respondents rating their importance to their business at above eight out of a possible 10. According to the operators it was more difficult for businesses using State forest areas to find alternative areas for their activities than it was for businesses using National Parks. More than 78 percent of respondents who used State forests stated that there were no alternative sites in close proximity, as compared with 61 percent of respondents using National Parks.

Respondents using State forest areas were more concerned with land tenure changes than were respondents using National Parks. Land tenure changes were perceived to affect 64 percent of businesses using State forests, with a further 29 percent of businesses uncertain about the affects of land tenure change. In comparison, only 45 percent of National Park users believed a change in tenure would affect their business, and a further 31 percent were uncertain about the impact. There was a perception that the land tenure changes would have a negative impact on business with a mean rating of negative three (from a possible negative five).

Many of the recreational activities carried out in State forests would be compatible with NPWS objectives. Therefore, it is likely that most commercial tourism and recreation business operations will be unaffected by a change in tenure from State forest to National Park. However, it is possible that some commercial tourist operators providing services such as horse riding, may suffer significant negative impacts where such activities were restricted, or prohibited, following a change in tenure. (It should also be pointed out that some areas of public forests in the UNE and LNE previously managed for timber production have been temporarily reserved for as conservation purposes pending the outcomes of the CRA. Where such areas are ‘dedeclared,’ and revert to management for timber production following the completion of the CRA, it would be expected that any tourism and recreation operations that had been temporarily suspended as a result of the interim protection, would be resumed. For the purposes of this study, it has been assumed that there would be no negative impacts on tourism and recreation operators under these circumstances).

Horse riding is undertaken in six State forests which are all located in the LNE. Businesses offering horse riding cater for relatively large numbers of people. In 1997 there was a total of 25,860 horse rides undertaken in the LNE. Kiwarrak State Forest, with an estimated 15,000 commercial horse riders visiting the area in 1997, would be the most highly impacted State forest.

At the present time there are very few commercial, forest-based indigenous tourism operators in the UNE and LNE Regions. These businesses are generally smaller, in terms of business income, employment and clients serviced, than other commercial forest-based operations in the regions. The indigenous businesses are concentrating heavily on the cultural aspects of indigenous society and they usually use significant indigenous sites within National Parks or State forests.

The annual consumers' surplus for the UNE is estimated at $57.4 million and for the LNE at $44.7 million. Estimated total expenditure for the UNE ranges from $59.7 million to $214.9 million. The estimated expenditure for the LNE ranges from $46.5 million to $167.2 million. It is estimated that between 1,131 and 1,980 full-time local jobs were generated directly and indirectly in the UNE, and between 880 and 1,540 full-time local jobs generated from visitor expenditure in the LNE in 1997. (The above figures have been derived from earlier studies, and are expressed as ranges to reflect alternative interpretations of the original primary data).

Projected values of forest-based visits, consumers' surplus, expenditure and employment were calculated based on a two percent growth rate. On this basis, visitation in the UNE over the next twenty years will increase from 2,828,201 in 1997 to 4,202,558 in 2017 and consumers' surplus will increase from $57.4 million to $85.3 million. Expenditure, in the same period, will increase from between $59.7 million and $74.7 million to between $88.7 million and $111 million, and employment will increase from between 1,131 and 1,980 to between 1,680 and 2,942. In the LNE visitation will increase from 2,828,201 in 1997 to 3,268,839 in 2017 and consumers' surplus will increase from $44.7 million to $66.4 million. Expenditure, in the same period, will increase from between $46.5 million and $58.2 million to between $69.1 million and $86.5 million, and employment will increase from between 880 and 1,540 to between 1,308 and 2,288.

In 1997/98, the NPWS Districts in the UNE employed 134 staff, had recurrent expenditure of $7.4 million and capital expenditure of $2.3 million. There was an estimated $58.4 million in tourism infrastructure. In the LNE there were 94 people employed, recurrent expenditure was $6 million and capital expenditure was $474,258. There was an estimated $60 million of tourism infrastructure in the LNE.

In the UNE, SFNSW employed 111 people, and it was estimated that five staff spent all their time on tourism and recreation. The SFNSW Regional Offices in the UNE spent an estimated $365,061 in 1997/98 on tourism and recreation. They also spent an estimated $231,410 on the protection of biodiversity in non-commercial forests. These non-commercial forest areas would have important amenity values for tourism and recreation. There was an estimated $800,000 of tourism and recreation infrastructure in the UNE Region.

In the LNE, SFNSW employed 215 people, and it was estimated that 24 staff spent all their time on tourism and recreation. An estimated $1.5 million was spent in 1997/98 on tourism and recreation, and an estimated $236,856 was spent on the protection of biodiversity in non-commercial forests. There was an estimated $2.6 million of tourism and recreation infrastructure in the LNE Region

1. INTRODUCTION

1.1 CONTEXT

The NSW and Commonwealth Governments are currently undertaking a Comprehensive Regional Assessment (CRA) of forested lands in north east NSW with the aim of establishing a Regional Forest Agreement (RFA) for the area. The north east area of NSW has been divided into the Upper North East Region (UNE) and Lower North East Region (LNE) for the CRAs.

The CRA process involves the collection and analysis of data related to all aspects of forests and their use in these two regions. An important component of this process is to determine the economic values associated with the different uses of forested land.

As part of the CRA process, the aim of this study is to determine the contribution forest-based tourism and recreation[1] makes to the regional economies of the UNE and LNE regions. It will also identify the current and future trends in tourism, and forest-based tourism in particular. The characteristics of forest-based tourist operators in the two regions will be identified, as will the forested areas used for tourism and recreation purposes. The sensitivity of forest-based tourism to changes which may occur in land tenure are assessed. Finally, the study attempts to determine the extent of indigenous use of forests for tourism and recreation purposes.

1.2 THE STUDY AREA

The UNE region contains 17 Local Government Areas (LGAs) and runs from the Queensland border to Coffs Harbour and includes the northern section of the New England Tablelands. The LNE region contains 24 LGAs and runs from Coffs Harbour to Gosford and includes the southern section of the New England Tablelands and the Hunter Valley (see Appendix 1).

In the UNE total SFNSW tenure is 6,017 square kilometres, and National Parks and Wildlife Service (NPWS) tenure is 3,866 square kilometres. In the LNE

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[1] For the purposes of this study tourism relates to activities involving an overnight stay by visitors outside of the region. Recreation relates to activities undertaken by people living in, or adjacent to, the UNE and LNE regions as part of leisure time.

total SFNSW tenure is 7,898 square kilometres, and NPWS tenure is 9,264 square kilometres.

1.3 METHODS

Various methods were used for gathering data for this study. A literature review was undertaken to collect information from other sources on various important aspects relevant to this study. The focus included trends in recreation and tourism use, with an emphasis on forest areas, other studies of recreation and tourism values, and studies on the economic valuation of recreation and tourism in forest areas.

Consultations were undertaken with various government and non-government organisations, businesses and individuals. The NPWS and SFNSW were contacted to provide a range of data relevant to the study. Tourism New South Wales, peak tourism organisations, various local Tourism Information Centres and other relevant tourism organisations were contacted to collect information on tourism trends and to identify possible tourist operators who directly used forested areas. Local councils and regional development bodies were contacted in order to identify any major tourist developments occurring in the two regions. The NSW State Aboriginal Land Council, a number of Local Aboriginal Land Councils, various Aboriginal groups and individuals were also contacted in order to collect data on indigenous use of forests.

In an attempt to gain an understanding of tourism and recreational dependency on forests in the UNE and LNE Regions, a survey was undertaken of commercial tourist operators who used forests directly, that is, those who visited forest areas with their clients. To account for other types of tourist operations, the data from a social survey of all tourist operators in the UNE Region, undertaken as part of another study in the CRA/RFA process, were to be used to supplement the results from this study. Unfortunately, at the time of writing this report the results from the social survey were not made available. This has meant an important sector and its significance has not been discussed in the report.

A survey of commercial tourist operators in the two Regions was undertaken in order to determine which forest areas were used, how often they were used, for what purposes they were used and how important the particular area was for the business. The results from the survey also allow the analysis of the impact of a change in land tenure and the identification of potential project developments, within and adjacent to forest areas, which will be important determinants of the prospects for industry. The survey also included questions on employment, income and business investment, providing information that could be used in determining the economic and social significance of the industry. A copy of the questionnaire used has been included in Appendix 2.

A total of 182 questionnaires were sent out to commercial tourist operators who were identified as being possible direct users of forests. The mailing list for the survey was developed by using the names of NPWS and SFNSW commercial permit holders, names provided by Tourism New South Wales, and names gathered from brochures collected from various Tourist Information Centres in both Regions. The method used to compile the mailing list was likely to result in a number of operators being identified who would not be direct forest users. Approximately a week after the surveys were sent out, the researchers contacted the businesses by phone. The researchers went through the survey with the operators over the phone. Phone interviews were carried out in an attempt to increase the response rate and reduce the time necessary to collect the data. Of the 182 questionnaires sent out, 27 businesses had either ceased to operate or could not be contacted, a further 109 did not directly use forest areas and five (5) operators either did not wish to complete the questionnaire or were too busy. Therefore, there were 41 operators who responded and who were using forests in either the UNE or LNE.

1.4 STRUCTURE OF REPORT

This report contains nine sections, with Section 1.0 providing an introduction and overview. Section 2.0 examines the trend in tourism and recreation, including tourism and recreation in north east NSW. Section 3.0 describes the importance of forested areas to tourism and recreation and includes the results of the survey of commercial forest-based tourist operators in the UNE and LNE Regions of NSW. Section 4.0 examines the possible impacts on commercial forest-based tourism in the two regions arising from a change in land tenure. Section 5.0 describes the extent of indigenous use, both commercial and private, of forests for tourism and recreational purposes. The economic value of forest-based tourism and recreation in the UNE and LNE is outlined in Section 6.0. Section 7.0 describes the contribution the NPWS and SFNSW make to the regional economies. Section 8.0 is a conclusion to the study and the references are outlined in Section 9.0.

2. A TOURISM OVERVIEW

2.1 INTRODUCTION

Tourism is promoted as the world's largest industry, responsible for one in every nine jobs internationally. The tourism industry will employ 685,000 Australians by the year 2003, with many more benefiting through indirect expenditure (Tourism New South Wales, 1995; Tourism Forecasting Services, 1997). The tourism industry is also rapidly expanding worldwide. Internationally, it is expected to double in value from $3.4 trillion in 1994/95 to 7.2 trillion in 2005 (Tourism New South Wales, 1995).

Tourism is, and will continue to be, a major contributor to Australia's Gross Domestic Product (GDP) and export earnings. In 1993/94 domestic and international tourists in Australia spent $44 billion, which represented 6.6 percent of GDP. Export earnings from international tourism spending are expected to increase from $16 billion in 1996 to $34 billion by 2006 (Tourism Forecasting Services, 1997). The NSW tourism market segment attracts $14 billion a year in spending, including $10.2 billion from domestic tourism and $3.5 billion from international tourists (Tourism New South Wales, 1995).

There were 75.7 million visitor arrivals within Australia in 1995, including 72 million domestic arrivals and 3.7 million international arrivals. This figure is predicted to increase significantly into the next century.

2.2 INTERNATIONAL VISITATION

International visitation to Australia increased from 1.4 million in 1986 to 4.2 million (or 90.6 million visitor nights) in 1996. The significant growth in inbound tourism to Australia is expected to continue. International visitation is expected to double by the year 2006 to reach 8.2 million visitors, a growth rate of 7.8 percent per annum (see Figure 1) (Bureau of Tourism Research, 1996; Tourism Forecasting Services, 1997).

Figure 1: International Visitor Arrivals to Australia
(Source: Tourism Forecasting Services, 1997).

The major international markets are Japan (20 percent of visitors), NZ (16 percent), UK (nine percent), other European Countries (eight percent), and the USA (eight percent) (Bureau of Tourism Research, 1997). Asia, Europe, NZ and North America will continue to be the predominant markets into the next century (Tourism Forecasting Services, 1997).

The vast majority of international visitors are fully independent travellers (FIT). Holidays (45 percent) and visiting friends and relatives (VFR) (30 percent) are the main purposes of visits. Hotels (72 percent) and the homes of friends and relatives (35 percent) are the most common forms of accommodation used by international visitors. Domestic aircraft (41 percent) and private or rented vehicle (16 percent) are the most popular forms of transport within Australia. New South Wales is the most popular state destination for international tourists, receiving 26 million visitor nights. A substantial number of international visitors (95 percent) to NSW focus their activities on Sydney (Bureau of Tourism Research, 1996).

2.3 DOMESTIC VISITATION

In 1996/97 62.8 million trips were undertaken by domestic tourists, involving 251 million nights away from home (Bureau of Tourism Research, 1998). A steady increase in domestic visitation has been predicted (see Figure 2). NSW was the most popular destination for domestic tourists, with 34 percent of all domestic trips, or 82 million visitor nights spent in the State. Approximately 25 percent of all domestic tourism visits involve a visit to Sydney (Bureau of Tourism Research, 1997, Tourism Forecasting Services, 1997).

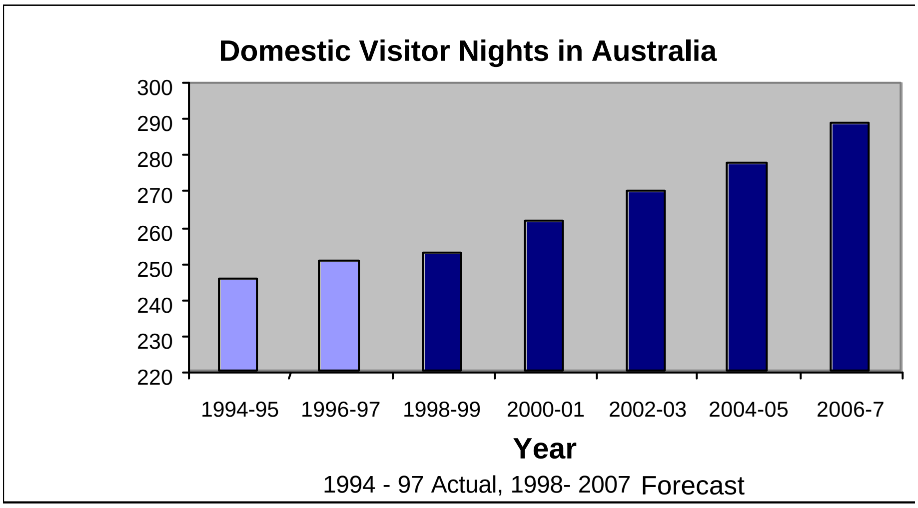

Figure 2: Domestic Visitor Nights in Australia
(Tourism Forecasting Council, 1997)

Domestic tourism is affected by seasonality with January, March/April and October the peak visitation months. The peak periods coincide with the school and public holidays.

The main purpose of domestic trips is for pleasure/holidays (35 percent), followed by visiting friends and relatives as the next main purpose (30 percent). Approximately 43 percent of all domestic tourists use the homes of friends and relatives and 78 percent use private vehicles (Bureau of Tourism Research, 1998).

The Bureau of Tourism Research figures show that the 25-39 age group makes the greatest number of domestic trips (33 percent), while the over 55s and 14-17 age groups travel the least. People with incomes under $10,000 per annum (30 percent) or over $40,000 per annum (24 percent) made the most number of domestic trips (Bureau of Tourism Research, 1998).

2.4 TOURISM IN NORTH EAST NSW

In NSW international tourists predominantly focus their visit on Sydney. Within NSW in 1993/94, 63 percent of international tourists visited Sydney, 11 percent visited the North Coast, seven percent visited the Hunter Valley/Central Coast and one percent visited the New England Region (Tourism New South Wales, 1995).

Domestic tourists to NSW destinations also favour Sydney. In 1996/97, 25 percent of domestic visitor nights were spent in Sydney, 12 percent in the Hunter Valley/Central Coast, 7 percent on the Upper North Coast, 5 percent on the Mid North Coast, 6 percent on the Lower North Coast and 5 percent in the New England area (Tourism New South Wales, 1998).

The vast majority of domestic tourists to north east NSW are fully independent travellers (FIT) using a private vehicle (87 percent). The main form of accommodation in the region is the homes of friends and relatives (44 percent) (Tourism New South Wales, 1998). Expenditure by domestic tourists in NSW is relatively high, averaging $87 per tourist per night (Tourism New South Wales, 1998).

Tables 1 and 2 include details of visits, visitor nights and expenditure by LGAs to the UNE and LNE Regions. In 1996/97 there were over four million visits, resulting in 13.7 million visitor nights spent in the UNE Region. Total expenditure of $919 million was undertaken by visitors to the region. In the LNE Region, in 1997/97, over 8.8 million visits were made, resulting in 26.4 million visitor nights. Total expenditure by the visitors to the LNE Region amounted to $1,795 million.

Table 1: Visits, Visitor Nights and Expenditure in 1996/97 by LGAs in the UNE Region

LGA	**Visits ('000)**	**Nights ('000)**	**Expenditure ($ million)**
Ballina	429	1386	95
Byron	526	1902	124
Casino	84	323	22
Coffs Harbour	990	2956	201
Copmanhurst	37	123	8
Glen Innes	104	234	17
Grafton	172	474	33
Guyra	46	150	10
Kyogle	86	357	24
Lismore	270	1089	76
Maclean	228	929	59
Nymboida	47	160	11
Richmond River	113	462	30
Severn	27	91	6
Tenterfield	105	247	17
Tweed	664	2481	165
Ullmarra	97	334	21
TOTAL	**4,025**	**13,698**	**919**

(Source: Tourism NSW, 1998)

Table 2: Visits, Visitor Nights and Expenditure in 1996/97 by LGAs in the LNE Region

LGA	Visits ('000)	Nights ('000)	Expenditure ($ million)
Armidale	231	629	45
Bellingen	142	476	32
Cessnock	314	821	58
Dumaresq	46	133	9
Dungog	82	238	16
Gloucester	69	190	13
Gosford	966	2717	188
Great Lakes	673	1956	124
Greater Taree	482	1628	111
Hastings	834	2963	199
Kempsey	406	1484	99
Lake Macquarie	941	2811	193
Maitland	267	766	54
Muswellbrook	146	400	28
Nambucca	266	771	51
Newcastle	723	2090	148
Nundle	21	67	5
Port Stephens	763	2304	151
Scone	120	311	21
Singleton	175	463	33
Uralla	55	183	13
Walcha	34	113	8
Wyong	1072	2949	196
TOTAL	**8,828**	**26,463**	**1,795**

(Source: Tourism NSW, 1998)

The growth in tourism in north east NSW varies, with some areas experiencing higher growth rates than other areas. Generally, it can be stated that tourism is growing at between two and three percent throughout the Region. It is expected that this growth rate will accelerate in the period leading to the Sydney Olympics.

3. THE IMPORTANCE OF FORESTED AREAS TO TOURISM

3.1. INTRODUCTION

The natural environment is perceived to be the one of the most important tourist attractions for Australia, and in particular of the north east NSW region. Forested areas represent a significant proportion of tourism and recreational attractions in natural environments (Commonwealth Department of Tourism, 1994; Northern Rivers Regional Development Board, 1994). Furthermore, demand for nature-based experiences is increasing significantly, with a 48 percent increase in National Park visitation in NSW and a 66 percent increase in bushwalking between 1989 and 1994 (Blamey, 1995).

While the beach is the most popular destination for tourists to natural areas, forest areas are also a significant tourism and recreation destination. National Parks, State forests, Reserves and other forested public lands provide opportunities for a wide range of recreational and tourism experiences. Sightseeing, bushwalking, camping, observing wildlife, wildflowers and bird life, four wheel driving, trail bike riding, rafting, canoeing, fishing, swimming, horse riding and guided tours are popular activities undertaken in forested areas. These activities incorporate scenic, aesthetic, experiential, cultural, spiritual, and educational needs and values.

In 1995 international visitors to Australia indicated that they particularly value the activities common in forested areas, with 42 percent visiting National Parks. Approximately 15 percent of international tourists visited Aboriginal sites and experienced Aboriginal culture, 15 percent participated in bushwalking/wildflower viewing, five percent in outback safaris/four wheel drive tours, three percent in horse riding, and two percent rock climbing (Bureau of Tourism Research, 1996). This market consists predominantly of visitors from Germany, UK, other European countries, the US, Canada, Japan and Singapore (Bureau of Tourism Research, 1996).

The contribution of these visitors to the national economy is substantial. The average expenditure of international visitors who visit National Parks/State forests/Reserves/Caves is 19 percent higher than average inbound tourist expenditure, averaging $2,132 per visitor per trip in 1993.

Domestic visitation to National Parks and State forests is also highly popular, with 27 percent of Australians indicating they visited a National Park in 1995. Furthermore, in a Newspoll survey in 1997, 53 percent of Australians said they would visit a National Park or natural attraction on their next holiday. This suggests the potential for growth in nature based tourism in forested areas is very high (Blamey, 1995).
Overall, nature based tourism in forested areas is increasing, with the NPWS forecasting a 2.25 percent per annum growth in visitation levels (ESD Working Groups, 1991; Worboys 1997).

The profile of visitors to State forests and National Parks indicate that they are more educated and have higher incomes than the average Australian (Blamey, 1995). Families and 'empty nesters' are the biggest market for National Park visitors in NSW. The key features influencing a National Parks visit include "easy to get to" and "lots to do there" (Tourism New South Wales, 1994).

The majority of visitors to National Parks and State forests seek passive experiences, enjoying the scenic beauty, tranquillity, solitude, smells and sounds of nature in undisturbed natural areas with family groups (Worboys, 1997; Chapman, 1995). The trips are predominantly two - four hours in duration (Chapman, 1995). A majority of visitors (89 percent) engage in rest and relaxation, 82 percent in landscape appreciation, 76 percent in wildlife appreciation, 73 percent in swimming, 71 percent in short walks and 66 percent in barbeques (Chapman, 1995). Off-road driving and trail bike riding account for 11 percent and 4.8 percent of activities, respectively.

In the UNE and LNE Regions, the majority of forest-based recreation sites are managed by either the NPWS or State Forests of NSW (SFNSW). Generally, the recreational opportunities offered across the different land tenures are the same, for example, bushwalking, swimming, and camping. However, there are some activities, for example, horse riding, hunting and four wheel driving, which are permissible in State forests but may be restricted in certain National Parks.

Another difference between National Parks and State forests, in regard to the marketing of tourism and recreation, is that National Parks are an international concept and this recognition has the potential to attract both domestic and international tourists (Worboys in Gillespie, 1997b).

3.2 TOURISM INDUSTRY OPERATORS IN FORESTED AREAS

A number of tourism industry operators utilise forested public lands. Tour operators offer a wide range of products in forested areas. Furthermore, many accommodation and other service providers within close proximity to forest areas actively promote forested areas and the activities and opportunities they provide as a part of their product.

A 1995-96 survey of Tourism Council Australia (TCA) members revealed that 43 percent of operators utilised National Parks. The survey respondents ranked scenic attractions, a clean environment, wildlife, outdoor activities and National Parks as the most important attributes of the Australian tourism product, along with service, price and climate (Huyers and Bennett, 1997).

These same operators rated natural resource management, wilderness protection, conservation/heritage and wildlife protection as the four main environmental issues facing the Australian tourism industry. Their concern for environmental management in Australia was further highlighted by their reported problems with complex and uncertain regulations and delays in decision making by authorities, resulting in short term horizons for industry operators using public lands (Huyers and Bennett, 1997).

Ecotourism and nature-based businesses are typically small with an average of nine staff. Most of the staff are employed on a part-time, casual or sub-contract basis (Econsult in Blamey, 1995). Another study by the Australian Conservation Foundation (ACF) showed 42 percent of operators had difficulty finding appropriately skilled staff, especially multi-skilled tour guides (Blamey, 1995).

3.3 FOREST-BASED TOURIST OPERATORS IN THE UNE AND LNE REGIONS

A study of commercial operators who directly used forests was undertaken in both regions. As stated previously, there are a number of different types of businesses that are dependent, to a greater or lesser degree, on forests. For example, a cafe on a major tourist route into a National Park or State forest will, to some extent, be dependent on forests for their business. The degree of non-direct tourism and recreation dependency on forests is likely to be considerable; however, due to the resource and time constraints for this study, it was not possible to survey all tourism and recreation businesses dependent on forests.

3.3.1 Business Location

The businesses who responded to the survey had been operational, on average, for nine years and had been under the control of the present owner for an average of six and half years. The majority of businesses (71 percent) were located in the LNE, while 24 percent were located in the UNE and 5 percent were located in Queensland (see Table 3).

Table 3: Business Location

Towns	Region	Frequency	Percent
Ballina	UNE	1	2.4
Casino	UNE	1	2.4
Byron	UNE	1	2.4
Tweed	UNE	1	2.4
Queensland	NA	2	4.9
Gosford/Lake Macquarie	LNE	3	7.3
Kempsey/Wauchope/Pt.Macquarie	LNE	4	9.8

Armidale	LNE	4	9.8
Taree/Laurieton	LNE	5	12.2
Newcastle/Cessnock/Pt.Stephens	LNE	6	14.6
Coffs Harbour	UNE	6	14.6
Bulahdelah/Dungog/Forster	LNE	7	17.1
Total		**41**	**100.0**

3.3.2 Employment

The businesses employed 231 people, including the owner(s). Full-time employment accounted for 32 percent of total employment, part-time employment accounted for 35 percent and casual employment accounted for 33 percent. Part-time and casual employees worked, on average, 17 hours per week. The age of the workers ranged from 17 to 65, while the average age of workers was 38. Male workers constituted 63 percent of the total workforce and females constituted 37 percent.

As expected, the workers generally lived close to where the businesses were located (see Table 4). Apart from Coffs Harbour, the towns with a relatively large number of workers were all located in the LNE.

Table 4: Residence of Employees

Towns	Region	Frequency	Percent
Ballina	UNE	2	1.3
Casino	UNE	2	1.3
Tweed	UNE	2	1.3
Sydney	NA	2	1.3
Queensland	NA	4	2.5
Byron	UNE	6	3.8
Armidale	LNE	6	3.8
Kempsey/Wauchope/Pt.Macquarie	LNE	8	5.1
Gosford/Lake Macquarie	LNE	13	8.2
Bulahdelah/Dungog/Forster	LNE	21	13.3
Newcastle/Cessnock/Pt.Stephens	LNE	28	17.7
Taree/Laurieton	LNE	28	17.7
Coffs Harbour	UNE	36	22.8
Total		**158**	**100.0**

3.3.3 Clientele

The total number of clients catered for in 1997 was 78,844, with an average 2,318 clients per company. The most clients catered for by an individual firm were 15,000 while the lowest number of clients for a firm was 14. The rate of growth in clients, over the previous years, could not be meaningfully determined because most businesses only gave client figures for 1997.

The largest businesses, in terms of employment and clients, were those that provided accommodation as well as other forest-based activities. These accommodation businesses usually offered the forest-based activities as a part of their accommodation package or for a small extra fee. Some of the accommodation businesses contracted out the forest-based activities.

The activities undertaken by the operators were those normally associated with forest-based recreation. The most popular activities were walking, horse riding, four wheel driving and touring. The duration of activities in forests was, on average, five hours. There were some activities, usually tours, which lasted for several days. The cost of activities ranged from $10 to $2,800, with an average charge of $157.19. However, these figures include the cost of accommodation for some of the activities.

The majority of businesses (68 percent) stated that their employment was dependent upon seasonal factors, with winter being a low demand period for most of the businesses which were affected.

3.3.4 The Use of Forested Areas

In the two regions, 26 National Parks, Nature Reserves and State Recreation Areas were visited by 54 percent of the businesses that responded to the survey. The list of these areas is shown in Table 5. The most popular National Parks and protected areas were Nymboi-Binderay National Park, which accommodated five businesses, Barrington Tops National Park (four) and the Border Ranges and Dorrigo National Parks which each accommodated three businesses.

Table 5: Protected Areas Used By Respondents to the Survey

Upper North East Areas	No. of Businesses Visiting	Lower North East Areas	No. of Businesses Visiting
Bald Rock NP	1	Barrington Tops NP	4
Border Ranges NP	3	Boorganna NR	1
Bundjalung NP	1	Crowdy Bay NP	3
Dorrigo NP	3	Hat Head NP	1
Guy Fawkes NP	1	Kattang NR	2
Mt Warning NP	1	Lake Innes NR	1
Nightcap NP	1	Mobons NR	1
Nymboi-Binderay NP	5	Mount Soavion NR	1
Torrington SRA	1	Myall Lakes NP	1
Walshpool NP	1	New England NP	1
Yuraygir NP	1	Oxley Wild Rivers NP	2
		Weelah NR	1
		Werrikimbe NP	2
		Yengo NP	1

(Key: NP = National Park, NR = Nature Reserve, SRA = State Recreation Area)

There were 29 State forests used by the respondents to this survey. Of these State forests, 12 were in the UNE and 17 were in the LNE. The areas that accommodated the largest number of businesses were Chichester and Watagan with four businesses using each site, and Kiwarrak, Wallingat and Wild Cattle Creek with three businesses each.

Table 6: State Forests Used by Respondents to the Survey

Upper North East Areas	No. of Businesses Visiting	Lower North East Areas	No. of Businesses Visiting
Clouds Creek	1	Awaba	1
Dorrigo	1	Bago	1
Gerard	1	Barrington Tops	1
Gladstone	1	Bellangry	1
Moonpa	1	Bulahdelah	2
Newry	1	Bulga	1
Pine Creek	1	Chichester	4
Orara East	1	Coopernook	1
Scotchman	1	Cowarra	1
Whian Whian	1	Doyles River	1
Wild Cattle Creek	3	Kendal	1
Wollumbin	1	Kiwarrak	3
		Middle Brother	1
		Onley	1
		Queenslake	1
		Wallingat	3
		Watagan	4

National Parks, other protected areas and State forests were very important to the businesses surveyed, with respondents rating their importance at above eight out of a possible 10. According to the operators it was more difficult for businesses using State forest areas to find alternative areas for their activities than it was for businesses using National Parks. More than 78 percent of respondents who used State forests stated that there were no alternative sites in close proximity, as compared with 61 percent of respondents using National Parks.

Respondents using State forest areas were more concerned with land tenure changes than were respondents using National Parks. Land tenure changes were perceived to affect 64 percent of businesses using State forests, with a further 29 percent of businesses uncertain about the affects of land tenure change. In comparison, 45 percent of National Park users believed a change in tenure would affect their business, and a further 31 percent were uncertain about the impact. There was a perception that the land tenure changes would have a negative impact on business, with a mean rating of negative three (from a possible negative five). In cases where the business in question would be restricted as the result of a change of tenure, this concern may have been warranted, however, in other cases respondents views may be perhaps be overly pessimistic considering the extent of the likely impact that would occur in practice.

3.3.5 Business Prospects and Income

The businesses that responded to the questionnaire were positive about prospects for developments in the future. More than 92 percent of businesses indicated there were potential opportunities for expansion of their business. The mean rating of this potential for growth was 7.8 out of a possible rating of 10. The majority of businesses that perceived potential opportunities for expansion were not undertaking increased investment; rather they were expecting their businesses to grow from increases in tourist numbers and, therefore, increased demand.

Gross business income for the businesses that responded was relatively low, with 61 percent having income less than $100,000. Only 11 percent of businesses had an income above $500,000. Nearly 78 percent of businesses had debts of less than $100,000, and 86 percent undertook less than $100,000 capital investment in the 1997/98 financial year. Total capital investment was also relatively low, with 47 percent of businesses having total investment of less than $100,000.

Combined household incomes of the owners of businesses involved in forest-based tourism varied considerably. A number of owners were dependent on income earned either by themselves or their spouses outside of the tourism businesses. Nearly 38 percent of owners had a combined household income of less than $25,000, 48 percent had a combined income of between $25,000 and $60,000, and 13 percent had a combined income greater than $60,000.

4. POSSIBLE IMPACTS OF CHANGES IN LAND TENURE ON COMMERCIAL OPERATORS

The determination of the impact of a change in land tenure on commercial use requires examination of the types of activity taking place, the number of clients being catered for and the continuation or otherwise of the activities, after the land tenure changes have been made. The assessment does not take into account commercial tourist operations that are indirectly reliant on the forests for their business, for example, farmstays or restaurants located near popular forest areas. There is also no account taken of the non-commercial tourism and recreation forest use in these regions. There are also some areas that may not be included in the analysis because the commercial operator may not have been identified or may not have completed the survey. Finally, only areas which had annual commercial visitations exceeding 400 clients in the previous year are considered. There were a number of areas visited by around 100 clients but very few between 100 and 400. It has been assumed that areas which had visitation rates of less than 400 would suffer negligible impacts from any change in tenure.

Only State forests have been considered in the analysis of a change in tenure due to the fact that tourism and recreational activity in National Parks will not be affected by such a change .

As stated previously, a number of recreational activities carried out in State forests are also acceptable in National Parks. Therefore, it is likely that most commercial tourism and recreation business operations will be unaffected by a change in tenure. However, there are some activities which may not be acceptable or may have extra restrictions placed upon them (e.g. horse riding, and 4- wheel drive access, in some situations). Commercial tourist operators providing such activities may suffer a strong negative impact from a change from State forest to National Park. In Table 7 the areas where these types of businesses operate have been shown as receiving a rating of 1.

Horse riding is undertaken in six State forests which are located in the LNE. Businesses offering horse riding cater for relatively large numbers of people. In 1997 there was a total of 25,860 horse rides undertaken in the LNE. Kiwarrak State Forest, with an estimated 15,000 commercial horse riders visiting the area in 1997, would be the most highly impacted State forest.

Operators providing other services in State forests areas may also be affected by a change in tenure. In these areas it is likely that the commercial tourist activities being undertaken will be allowed to continue. However, increased restrictions or conditions are likely to be placed upon the tourist operator and the activity. The restrictions are likely to have minimal impacts. The activities undertaken in these areas include four wheel driving, abseiling, rock climbing and whitewater rafting. For example, whitewater rafting companies operating on the Nymboida River in the UNE will be required to implement a waste management plan for their operations as a result of a land tenure change. In Table 7 these areas are shown as having received a rating of 2.

Finally, many operators currently operating in State forests areas will be unaffected by a change in tenure since the activities being undertaken, such as bushwalking, will be compatible within National Parks. In Table 7 these areas are shown as having received a rating 3.

Table 7: Commercial Tourism in Forests

Location	**Types of activity and numbers**	**Total Nos.**	*Impact Rating*
Watagan (LNE)	Abseiling/Rock climbing (65); 4WD (59); Horse Riding (4,000)	4,124	1
Onley (LNE)	Horse Riding (4,000)	4,000	1
Chichester (LNE)	4WD (127); Bushwalking (1,298); Horse Riding (1,492)	2,917	1
Bulahdelah (LNE)	4WD (19); Horse riding (1,360)	1,379	1
Wallingat (LNE)	Camel riding (200); Bushwalking (642)	842	2
Kiwarrak (LNE)	Mountain bike riding (60); Bushwalking (28); Horse riding (15,000)	15,088	1

Middle Brother (LNE)	Hang gliding (450)	450	2
Kendall (LNE)	4WD (2,197)	2,197	2
Doyles River (LNE)	4WD (4,395)	4,395	2
Cowarra (LNE)	Horse Riding (1500)	1,500	1
Wild Cattle Creek (UNE)	Whitewater rafting (12,400)	12,400	2
Whian Whian (UNE)	Bush walking (1,000)	1,000	3
Wollumbin (UNE)	4WD (400)	400	2

5. INDIGENOUS TOURISM AND RECREATION BASED FOREST USE

At the present time there are very few commercial forest-based indigenous tourism operators in the UNE and LNE Regions. These businesses are generally smaller, in terms of business income, employment and clients serviced, than other commercial forest-based operations in the regions. Some of the indigenous enterprises do not operate on a regular basis but, rather, respond to a demand for their service. The indigenous businesses are concentrating heavily on the cultural aspects of indigenous society and they usually use significant indigenous sites within National Parks or State forests.

A number of Local Aboriginal Land Councils indicated a desire to begin operating a commercial tourist business and some had made considerable progress towards the establishment of such ventures. Again, these developments concentrated on cultural tourism.

Two important issues raised by members of the indigenous community in relation to recreation and tourism were concerns about the management of important sites, and the control of traditional knowledge. There was a strong feeling that indigenous people needed to manage the important sites within National Parks and State forests. It was also felt that only appropriate members of the indigenous community should be disseminating information about cultural aspects of the local indigenous community.

While commercial use of forests by the indigenous people for recreation and tourism purposes is limited, there is a high level of non-commercial use of forests by local indigenous communities. Camping and the collection of bush foods are regular activities undertaken in many indigenous communities. For example, a Baryulgil community member, in Far Northern NSW, estimated that her community of 200 people gathered up to 85 percent of their food needs from the local forests.

A number of indigenous communities also use the forests as sites for initiation and for passing on traditional knowledge to younger members of their community. One indigenous person suggested that some forest areas should be set aside for these purposes.

The type of land tenure was not a major issue for indigenous people because land seen as belonging to the community was seen as their land, regardless of the land tenure.

Bearing in mind the points raised above, Table 8 provides some indicative information on indigenous forest-based, tourism/recreation operations.

Table 8: Indigenous Forest- based Commercial Operators

Company	**Areas Used**
Wollool Wollool – Tenterfield	Bald Rock NP, Boonoo Boonoo NP
Giringai Tours – Singleton	Use private lands
Tobwabba Tours – Forster	Kiwarrak SF, Wallingat SF, Bulahdelah SF, Barrington Tops NP, Myall Lakes NP, Booti Booti NP,
Worimi Land Council (Planning to start operating soon – depending on funding)	Medowie SF, Wallaroo SF, Tomaree NP
Karuah Land Council (Planning to start operating in Dec 1998)	Hawke’s Nest, Bulahdelah SF
Gambari Tours – Belligen	Bongle Bongle NP once a year
Dreamtime Tours – Byron Bay	Mt Warning NP, Natural Arch (Queensland)

6.0 THE ECONOMIC VALUE OF FOREST-BASED TOURISM

6.1 INTRODUCTION

Calculating the economic value of forest-based tourism is a difficult task because of the lack of up-to-date and comprehensive data available on both the level of use of forested areas and the expenditure undertaken by visitors to these areas.

This study uses two approaches in an attempt to value tourism and recreation in forested areas in the UNE and LNE. The first approach is to calculate the consumers' surpluses for forest areas by using consumer surplus figures determined in other studies. The second approach, undertaken to provide data for the input-output study also being undertaken as part of the RFA process, is to determine the level of expenditure undertaken by visitors to forested areas. The second approaches also uses estimates of expenditure determined by other studies.

6.2 CONSUMER AND PRODUCER SURPLUS

In economics, the net benefit or value of a good or service is measured by totaling the consumer and producer surpluses associated with the good or service. The consumer surplus generated reflects the satisfaction a consumer receives over and above the price paid. The demand curve can be used to illustrate the price people are willing to pay for more of a good or service. The demand curve is normally downward sloping since the more of a good or service a person consumes, the less they are willing to pay for additional units of that good or service. The area that lies between a demand curve and the price (area ACP in Figure 3) is a measure of the consumer surplus.

The producer surplus is defined as the difference between what a producer must pay as costs of producing additional output and the price at which that output can be sold (area PCB in Figure 3). The costs of extra production are depicted by the supply curve. The curve is upward sloping because as price increases producers are willing to produce more goods and services.

The net economic benefit associated with the good or service depicted in Figure 3 is the area ABC.

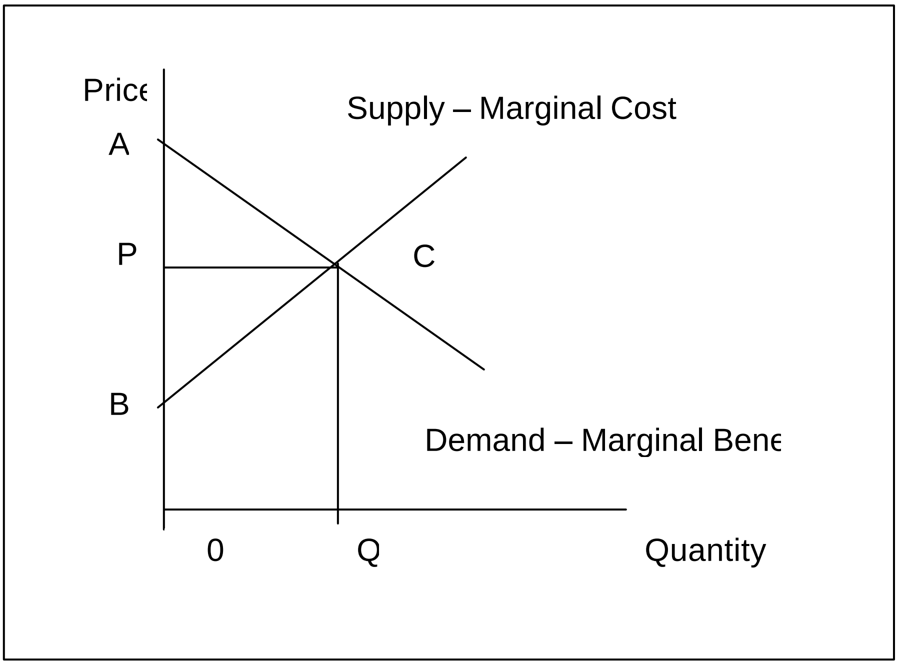

Figure 3: Consumer and Producer Surplus

In considering non-market goods, such as tourism and recreation in forests, the demand curve is not readily identifiable from market transactions. Therefore, the demand curve needs to be derived from the revealed preferences of consumers. One method used to derive the revealed preferences is to undertake a travel cost study of recreation users.

The travel cost method uses the relationship between the rate of visitation to a recreational site and the costs associated with the visit to develop a demand curve for the recreational use of the site. The consumers' surplus is the area under the demand curve, that is, the willingness of consumers to pay for the site, less what they pay for entry into the site.

The government agencies, the NPWS and SFNSW, are acting essentially as a supplier of a resource. The supply of infrastructure and management of tourism and recreation in forested areas has certain production costs associated with it. However, usually there is no charge or only a nominal entry fee is imposed on visitors which means only some of the marginal costs may be offset and, therefore, no producers' surplus appropriated by the NPWS or SFNSW. Commercial operators who use these areas are likely to appropriate some producer surplus, although the level of that surplus will be influenced by competition and other factors that might serve to reduce profitability.

While the travel cost methodology is useful in determining the consumer surplus associated with a recreational site, there are some problems associated with its application. “(T)here are a number of issues that arise out of the basic travel cost methodology which can result in variations in the application of the technique and consequent variations in the consumers’ surplus estimated” (Gillespie, 1997b:21). The problems relate to the following issues:

- the use of a zonal model or an individual model;
- the valuation of the visitor’s time;
- the consideration of congestion impacts;
- the method of dealing with multiple purpose trips; and
- the selection of the functional form of the demand function.

6.2.1 Consumers’ Surpluses in the UNE and LNE Regions

The most accurate method of determining consumer surplus for individual forest areas is to undertake a travel cost study for each area. However, given the time and budgetary constraints for this study it was not possible to undertake travel cost studies for each of the sites in the study area. In this study consumer surpluses determined from travel cost studies undertaken of certain forested sites were used. For example, Bennett (1995) determined that, in 1995, the consumers’ surplus for Dorrigo National Park was $34.35 per visit and for Gibraltar Range National Park was $19.30 per visit. The consumers’ surpluses for the UNE and LNE Regions have been determined by multiplying the consumer surplus figure calculated for Gibraltar Range National Park, adjusted for CPI increase, by the total number of visits. This method - known as Benefits Transfer - is commonly used for determining non-market values (Scott et al., 1998).

The consumer surplus for Gibraltar Range National Park, adjusted for inflation (taking the consumer surplus to $20.30 per visit), was chosen for this study since the figure is considered to be robust and the Park is located in the UNE region. Gibraltar Range National Park would appear to be similar in a number of important aspects to many of the other forested areas in both the UNE and LNE Regions. Dorrigo National Park is different to most forested areas since it has relatively highly developed facilities, including the Rainforest Centre. It is also only four kilometres from the Dorrigo township.

The visitation figures used in the calculation of consumers’ surplus were provided by the NPWS and SFNSW. The accuracy of the visitation data for National Parks and State forests can vary considerably since they are only estimates based on traffic counters, permit numbers and estimates by relevant staff. The other factor associated with the visitation figures is that they do not discriminate between forest-based tourism and recreational use and water-based activity. However, even with water-based use, it is highly likely that these activities are enhanced by the existence of forests.

It is estimated that, in 1997, there were 2.4 million visitors to National Parks and other protected areas in the UNE Region, and 1.3 million visitors in the LNE Region. Visitation to State forests in 1997 was estimated to be 550,000 in the UNE Region and 850,000 in the LNE Region. The visitation figures for the National Parks and State forests in the UNE and LNE Regions are shown in Tables 9 and 10. There are no data available on whether these visitors are tourists or recreationists.

Table 9: Visitation levels for the NPWS Districts in the Upper and Lower North East Regions of NSW

Upper North East Region		**Lower North East Region**	
NPWS District	Visitor Numbers[1]	NPWS District	Visitor Numbers[1]
Lismore	1,209,750	Dorrigo[2]	70,050
Grafton	674,570	Armidale[2]	87,040
Glen Innes	110,679	Port Macquarie	391,125
Armidale[2]	54,230	Hunter	801,620
Dorrigo[2]	398,972		
Total Visitors	**2,448,201**	**Total Visitors**	**1,349,835**

(Source: NPWS)
[1] These visitation numbers, provided by NPWS, are estimates only and their accuracy may vary considerably between the UNE and LNE regions.
[2] Parts of the NPWS Dorrigo and Armidale Districts fall into both the LNE and UNE regions.

Table 10: Visitation levels for SFNSW and NPWS Regions in the Upper and Lower North East Regions of NSW

Upper North East Region		**Lower North East Region**	
SFNSW Region	Visitor Numbers[1]	NPWS District	Visitor Numbers[1]
Northern Rivers Region	230,000	Mid North Coast[2]	100,000
Mid North Coast[2]	150,000	Macleay/Hastings	250,000
		Manning	100,000
		Hunter	400,000
Total Visitors	**380,000**	**Total Visitors**	**850,000**

(Source: SFNSW)
[1] These visitation numbers, provided by SFNSW, are estimates only and their accuracy may vary considerably between the different regions.
[2] Parts of the SFNSW Mid North Coast Region fall into both the UNE and LNE regions.

Based on the above data, the consumers' surpluses are $57.4 million in the UNE and $44.7 million in the LNE (Table 11). The importance of tourism and recreation to the UNE and LNE Regions is illustrated by these values. As shown in Table 11, in the UNE the consumers' surplus from visits to National Parks ($49.7 million) is considerably more than the consumers' surplus from State forests ($7.7 million). In comparison, in the LNE the differences are not as great, with the consumers' surplus from visits to National Parks amounting to $27.4 million and from State forests $17.3 million.

Table 11: Estimates of Consumers' Surplus Associated with Visits to National Parks and State Forests

Upper North East			
	Visit Numbers	Consumers' Surplus/Visit	Total Consumers' Surplus
National Parks	2,448,201	$20.30	$49,698,480
State Forests	380,000	$20.30	$7,714,000
Total	**2,828,201**		**$57,412,480**
Lower North East			
	Visit Numbers	Consumers' Surplus/Visit	Total Consumes' Surplus
National Parks	1,349,835	$20.30	$27,401,651
State Forests	850,000	$20.30	$17,255,000
Total	**2,119,835**		**$44,656,651**

6.3 EXPENDITURE IN THE UNE AND LNE REGIONS

A requirement of this consultancy was to provide figures for use in an input-output study that was also being undertaken as part of the RFA process. In order to provide these data it was necessary to determine the expenditure and revenue resulting from visits to forest areas. This approach is different to the consumers' surplus approach outlined earlier in Section 6.2, and is based on the value of output, not consumer and producer surplus.

In Figure 3 expenditure/revenue is indicated by the area 0PCQ. However, in regard to tourism and recreation, expenditure by visitors to forested areas is more akin to the production costs of the supplier of the visit, rather than the output concept (Gillespie, 1997b). In Figure 3 production costs are shown by the area 0BCQ. The area 0PCQ includes producer surplus but the supply of tourism and recreation in forest areas does not usually result in producers' surplus.

Producers' surplus does not accrue for two reasons. First, NPWS and SFNSW offset only some of their marginal costs through entry fees and, therefore, they do not appropriate producers' surplus. Second, in most situations the visitor experience involves a combination of many factors such as the site, travel, time, accommodation, meals, etc. In organising the experience (or product) the visitor acts like a producer but the visitor also consumes the experience. Therefore, no producers' surplus is appropriated (Gillespie, 1997b).

The lack of producers' surplus must be considered when comparing tourism and recreation expenditures with other forest use expenditures.

Expenditure/revenues from other forest uses - for example, grazing and apiary - will include producers’ surplus.

6.3.1 Expenditure in the UNE and LNE Regions: Method 1

The expenditure data presented in this section of the study were determined by extrapolating the data from studies undertaken of Dorrigo and Gibraltar Range National Parks (Powell and Chalmers, 1995). The studies undertaken of Dorrigo and Gibraltar Range National Park examined the expenditure patterns of visitors to these parks to determine how much these visitors spent on various items and in which regions the expenditure took place. It needs to be noted that the level of expenditure in a local region depends on the delineation of the region's boundaries. Usually, the larger the region that is defined the greater will the level of expenditure by visitors to the region (Gillespie, 1997b). The level of expenditure will also depend on the characteristics of the forest area.

Powell and Chalmers (1995) reported the disaggregated expenditure of visitors to Gibraltar National Park and Dorrigo National Park (see Table 12 for disaggregated expenditure, adjusted for inflation). To determine the disaggregated expenditure of visitors to the Upper and Lower North East regions, the figures determined for Dorrigo National Park, adjusted for inflation, were used as the lower estimate and the figures for Gibraltar Range National Park, adjusted for inflation, were used as the upper estimate. Both figures have been adjusted for CPI increases.

Table 12: Disaggregated Expenditure Data for Visitors to Dorrigo National Park and Gibraltar Range National Park

Expenditure per visit	**Dorrigo National Park**	**Gibraltar Range National Park**
Accommodation	$6.35	$5.92
Meals	$5.37	$4.68
Shopping	$3.20	$6.94
Fares	$1.24	$0.73
Car	$4.91	$7.73
Other	$0.07	$0.44
Total	**$21.14**	$**26.44**

(Source: Powell and Chalmers, 1995)

The total visitor expenditure for the two regions can be calculated by combining the expenditure figures for Dorrigo National Park and Gibraltar Range National Park with the visitor data for the National Parks and State forests in the UNE and LNE. Total expenditure for the UNE ranges from $59.7 million to $74.7 million (Table 13). The expenditure for the LNE ranges from $46.5 million to $58.2 million. The higher visitation to the UNE has, as expected, resulted in higher expenditure.

Table 13: Visitor Expenditure for the Lower and Upper North East Regions of NSW

Upper North East					
	Visit Numbers	Expenditure per visit		Total Expenditure	
National Parks	2,448,201	$21.14	$26.44	$ 51,754,969.14	$ 64,730,434.44
State Forests	380,000	$21.14	$26.44	$ 8,033,200.00	$ 10,047,200.00
Total Upper North East				**$ 59,788,169.14**	**$ 74,777,634.44**
Lower North East					
	Visit Numbers	Expenditure per visit		Total Expenditure	
National Parks	1,349,835	$21.14	$26.44	$ 28,535,511.90	$ 35,689,637.40
State Forests	850,000	$21.14	$26.44	$ 17,969,000.00	$ 22,474,000.00
Total Lower North East				**$ 46,504,511.90**	**$ 58,163,637.40**

The total expenditures for the UNE and LNE Regions, disaggregated according to the Dorrigo and Gibraltar studies, are shown in Table 14. Accommodation, meals and car travel are the items which have the highest expenditure in both regions. The low estimate has higher expenditure for accommodation and meals, and lower expenditure for car travel. For example, the low estimate for accommodation expenditure in the UNE was $18 million and car travel was $13.99 million, while the high estimate expenditure for accommodation was $16.7 million and for car travel was $21.9 million.

Table 14: Disaggregated Expenditure Data for Visitors to the Lower and Upper North East Regions of NSW

Category	**Upper North East**		**Lower North East**	
	Low Expd. Estimate ($21.14)	High Expd. Estimate ($26.44)	High Expd. Estimate ($21.14)	High Expd. Estimate ($26.44)
Accommodation	$17,959,076.35	$16,742,949.92	$13,968,952.25	$13,023,023.20
Meals	$15,187,439.37	$13,235,980.68	$11,813,113.95	$10,295,227.80
Shopping	$9,050,243.20	$19,627,714.94	$7,039,472.00	$15,266,854.90
Fares	$3,506,969.24	$2,064,586.73	$2,727,795.40	$1,605,879.55

Car	$13,886,466.91	$21,861,993.73	$10,801,189.85	$17,004,724.55
Other	$197,974.07	$1,244,408.44	$153,988.5	$967,937.40
TOTAL	**$59,788,169.14**	**$74,777,634.44**	**$46,504,511.90**	**$58,163,637.40**

6.3.2 Expenditure for UNE and LNE: Method 2

The expenditure data for the UNE and LNE in this section of the report are determined by applying expenditure figures provided by Tourism New South Wales and the Bureau of Tourism Research.

The daily expenditures by a domestic tourist and international tourist in 1996 were $87.00 and a $163.00, respectively (Ruth Morris, Tourism New South Wales, pers. comms.). Daily expenditure by recreationists or day trippers in 1993 was $41 (BTR in NRAC, 1995). These figures, adjusted for CPI increases, were applied to visitors to forested areas in the UNE and LNE.
It was not possible to determine what proportion of visitors to the individual forest areas in the UNE and LNE were tourists and what proportion were recreationists. There is very little information available on the type of visitors to forest areas in general. One recent study was that of Ward (1998), who found that 50 percent of visitors to a group of National Parks[2] were from an area which had the same postcode as the area in which the Park is situated. It was estimated, using Ward's findings, that approximately 56 percent of visitors to these National Parks were on holiday and 44 percent were recreationists. Ward also found that 61 percent of visitors had travelled two hours or less to reach the particular forested area. Approximately 76 percent of visitors to these National Parks spent one day or less on-site during their visit to these National Parks.

It is also likely that the proportion of tourists and recreationists visiting a forest site will vary depending on the characteristics of the site. For example, the level of tourism visitation to established tourist 'icons', such as the Dorrigo Rainforest Centre, may be higher than for other less well known or less accessible areas.

The expenditure data in this section are calculated for three different scenarios in order to present a range of possible expenditures. The first scenario assumes that 33 percent of visitors are recreationists; the second scenario assumes that 60 percent are recreationists; and the third scenario assumes that all visitors are recreationists.

The first analysis is based on the figures previously used in the NRAC study (1995). In that study it was assumed that 33 percent of visitors to forests were recreationists and 67 percent were tourists.

In the second analysis, it is assumed that the 60 percent of visitors to forest areas are recreationists. Discussion with relevant people involved in tourism and recreation use of forest areas, including managers of forest areas, suggested that the number of recreational visits to forest areas is considerably higher than that used in the NRAC study. A figure of 60 percent for recreational

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[2] The National Parks were Bald Rock, Border Ranges, Mt.Warning, Nightcap, Toonumbar and Walshpool.

visits does not seem unreasonable, and this figure is used in the second analysis.

The final analysis assumes all visitors to forests are recreationists. The daily expenditure figures for tourists and recreationists, as noted earlier, are very different. The authors of the present study believe only a very small proportion of tourists visit the UNE and LNE Regions specifically for the purpose of visiting a forested area. It is more likely that the majority of visitors to forests are undertaking the visit as part of their general visit to the area. The visitors to the forest areas either use their own vehicle, a hire vehicle or arrive as part of a tour. The expenditures based on this assumption are the minimum possible tourism values for expenditure in the two regions.

In the analyses where expenditure for domestic and international visitors are used it is assumed that tourism visitors to forest areas in the UNE and LNE are in the same proportion as in NSW in general. That is, 95 percent are domestic tourists and 5 per cent are international tourists. It is also assumed in all analyses that a visit to a forest involves a full day's expenditure.

Tables 15 and 16 indicate that total expenditure by visitors to the UNE and LNE forest areas, assuming 33 percent of visitors are recreational visitors, is estimated to be $214.9 million and $167.1 million, respectively. The disaggregated expenditure for both regions is included in Appendix 3.

Table 15: UNE Expenditure Assuming 33 Percent Recreational Visitation

	Visitor Numbers	Daily Expenditure[1]	Total expenditure
Domestic Tourists	1,800,150	$88.13	$158,647,219.50
International Tourists	94,745	$165.10[2]	$15,642,399.50
Recreational Visitors	933,306	$43.53	$40,626,810.18
Total	2,828,201		$214,916,429.20

[1] The values have been adjusted for CPI increases
[2] Value includes package tours paid for overseas and excludes air fares paid overseas

Table 16: LNE Expenditure Assuming 33 Percent Recreational Visitation

	Visitor Numbers	Daily Expenditure[1]	Total expenditure
Domestic Tourists	1,400,195	$88.13	$123,399,185.40
International Tourists	73,694	$165.10[2]	$12,166,879.40
Recreational Visitors	725,946	$43.53	$31,600,429.38
Total	2,199,835		$167,166,494.28

[1] The values have been adjusted for CPI increases
[2] Value includes package tours paid for overseas and excludes air fares paid overseas

The estimated expenditures of visitors, based on an assumption that 60 percent of visitors are recreational visitors, are shown in Tables 17 and 18. The estimated expenditure in the UNE is $177.9 million and in the LNE is $133.4 million. These expenditure figures are lower than those estimated for the 33 percent recreational visitors’ case, however they are still substantial. The disaggregated expenditure for both regions is included in Appendix 3.

Table 17: UNE Expenditure Assuming 60 Percent Recreational Visitation

	Visitor Numbers	Daily Expenditure	Total expenditure
Domestic Tourists	1,074,716	$88.13	$94,714,721.08
International Tourists	56,564	$165.10	$9,338,716.40
Recreational Visitors	1,696,921	$43.53	$73,866,971.13
Total	2,828,201		$177,920,408.61

Table 18: LNE Expenditure Assuming 60 Percent Recreational Visitation

	Visitor Numbers	Daily Expenditure	Total expenditure
Domestic Tourists	835,937	$88.13	$73,671,127.81
International Tourists	43,997	$165.10	$7,263,904.70
Recreational Visitors	1,319901	$43.53	$57,455,290.53
Total	2,199,835		$138,390,323.04

The lowest estimated expenditure data are calculated when assuming all visitors to forested areas are recreationists. Table 19 includes data for these calculations and shows that expenditure in the UNE is $123.1 million and for the UNE is $95.7 million.

Table 19: LNE Expenditure Assuming 100 Percent Recreational Visitation

	Visitor Numbers	Daily Expenditure	Total expenditure

UNE	2,828,201	$43.53	$123,111,589.56
LNE	2,199,835	$43.53	$95,758,818.55

In summary, the estimated upper limits for expenditure in the UNE and LNE are $214.9 million and $167.1 million, respectively. The estimated lower limits for expenditure in the UNE and LNE are $123.1 million and $95.8 million, respectively.

6.4 EMPLOYMENT FROM FOREST-BASED TOURISM AND RECREATION

The estimated visitor expenditure can also be used to determine the number of people employed, directly and indirectly, in the UNE and LNE Regions, as a result of tourism and recreation. Studies by Powell and Chalmers (1995) and Gillespie (1997a) estimated that the total (direct and indirect) employment impact per 10,000 visitors ranged from four to seven jobs.

Using these estimates it is possible to estimate the number of jobs created in the two regions. There were 2,828,201 visitors to forests in the UNE Region resulting in the creation of between 1,131 and 1,980 local jobs (direct and indirect) generated from visitor expenditure. In the LNE there were 2,199,835 visitors to forests resulting in the creation of between 880 and 1,540 local jobs (direct and indirect) generated from visitor expenditure.

6.5 FUTURE TRENDS

It is likely that visitation to forested areas in the UNE and LNE will increase in the future. As stated previously, tourism in the two regions is growing at between two and three percent. A number of towns situated in the UNE and LNE are also experiencing population growth. There has also been considerable population growth in the south east corner of Queensland. This area provides a number of visitors to forested areas in the UNE.

Nature based tourism has been growing at a much faster rate than general tourism and, if this trend continues, it is likely that forested areas will continue to attract growing numbers of visitors. Finally, the Olympic Games are also expected provide a boost in tourism, and there may be some spins offs for the forested areas in the UNE and LNE Regions.

Given the above-mentioned factors, it would not be unreasonable to expect an increase of two percent in visitation to forested areas in the UNE and LNE, assuming that the environmental and social carrying capacities of the areas are not exceeded by this growth.

The projected values of forest-based visits, consumers' surplus, expenditure and employment based on a two percent growth rate are presented in Tables 20 and 21. On this basis, visitation in the UNE over the next twenty years will increase from 2,828,201 in 1997 to 4,202,558 in 2017 and consumers' surplus will increase from $57.4 million to $85.3 million. Expenditure, in the same period, will increase from between $59.7 million and $74.7 million to between $88.7 million and $111 million, and employment will increase from between 1,131 and 1,980 to between 1,680 and 2,942. In the LNE visitation will increase from 2,199,835 in 1987 to 3,268,839 in 2017 and consumers' surplus will increase from $44.7 million to $66.4 million. Expenditure, in the same period, will increase from between $46.5 million and $58.2 million to between $69.1 million and $86.5 million, and employment will increase from between 880 and 1,540 to between 1,308 and 2,288.

Table 20: Projected Values of Forest-based Visits, Consumers' Surplus, Expenditure and Employment in the UNE

Year	**Visits**	**CS ($m)**	**Expenditure ($m)**[1]		**Employment**	
1997	2,828,201	57.4	59.7	74.7	1,131	1,980
2002	3,122,562	63.3	65.9	82.5	1,249	2,186
2007	3,516,512	71.4	72.8	91.1	1,379	2,413
2012	3,806,386	77.3	80.3	100.5	1,522	2,665
2017	4,202,558	85.3	88.7	111.0	1,680	2,942

[1] These figures are based on expenditure determined using Powell and Chalmers (1995) expenditure data.

Table 21: Projected Values of Forest-based Visits, Consumers' Surplus, Expenditure and Employment in the LNE

Year	**Visits**	**CS ($m)**	**Expenditure ($m)**[1]		**Employment**	
1997	2,199,835	44.7	46.5	58.2	880	1,540
2002	2,428,795	49.3	51.3	64.3	972	1,700
2007	2,681,586	54.4	56.7	70.9	1,073	1,877
2012	2,960,688	60.1	62.6	78.3	1,184	2,073
2017	3,268,839	66.4	69.1	86.5	1,308	2,288

[1] These figures are based on expenditure determined using Powell and Chalmers (1995) expenditure data.

6.6 FUTURE DEVELOPMENTS

The expansion of forest-based tourism and recreation in the UNE and LNE will, to a significant extent, be dependent upon the development of new facilities. The development of facilities located in most forested areas will be the responsibility of the NPWS or SFNSW. Both organisations, as indicated by their expenditure (see Section 7), will be undertaking considerable upgrading of existing facilities and the provision of new facilities. In a majority of cases these developments will be low key and in keeping with the sensitivity of their environments.

The expansion of private sector tourism and recreation facilities will also be an important determinant of the number of people visiting forest areas. The increased provision of accommodation nearby to forests will result in increased forest use. Many accommodation operators either offer recreational opportunities for their guests in forest areas or are considering doing so.

It is apparent that there is a great deal of tourism development taking place in many of the LGAs in the UNE and LNE. For example, in the Dungog Shire, since 1994, there have been 87 new development applications associated with tourism and recreation, in the Singleton Shire there have been 27 and in the Armidale Shire there have been six. Not all developments are located near forests although, as stated previously, a high percentage of tourists visit forested areas during their holidays.

Another important determinant of the number of recreational visitors to forest areas is the existence of tourist operators providing services in the forests. Increasingly, people are wishing to learn about the environment through the use of guides providing interpretation.

The survey of forest-based tourist operators indicated there was a great deal of scope for the development of various commercial tourist operations. Many of the current operators indicated that they expected their businesses to grow in the future. They also believed there were many other regional opportunities for the development of tourist ventures. One area where there appears to be abundant opportunity for development is indigenous tourism.

The UNE and LNE Regions are too large to specify all future developments but it can be expected that development will continue to proceed in order to meet demand arising from the increasing tourism and recreation being experienced in the two regions. Some examples of possible developments which may take place in the two regions include the following.

1. The Mount Rivers Resort, which will consist of 29 cabins, located near the Loch Stock Dam, in the LNE.

2. The Fosterton Station Resort located in the LNE. This development also consists of building 30 cabins.

3. The $1.5 million Myall Shores Resort at Bombah Point in the LNE.
4. The Scotts Head Ecotourist Resort which will consist of 40 cabins in the LNE.
5. The construction of the Caldera Rim Walking Track. When completed this track will run from Sydney to Brisbane and, along the way, will pass through many forested areas. At the present time a feasibility study of the track is being undertaken.

6. The building of Stages Two and Three of the World Heritage Rainforest Centre in Murwillumbah. This Centre is situated at the gateway to the World Heritage Rainforests in the UNE.

7. The development of Mt Warning, with the provision of facilities similar to those at Dorrigo National Park.

6.7 THE POSSIBLE IMPACTS FROM A CHANGE IN LAND TENURE ON TOURIST DEVELOPMENTS

It is unlikely that a change in land tenure will have an impact on the private tourist developments taking place in the two regions at the present time or in the future. Most developments will continue to take place regardless of land tenure change. The only businesses which may be significantly restricted by a change in tenure would be those providing horse riding services, however, in practice, the extent of this restriction would vary with the area concerned, and the type of conservation management being applied. Nevertheless, existing operators may be unwilling to proceed with any expansion to their business and new operators may be unlikely to set up in areas where the forests come under NPWS tenure.

The number of public sector tourism developments may increase with a change in tenure. It can be expected that the declaration of new parks will result in increased tourism expenditure by the NPWS. However, this increase could be offset by a reduction in tourist and recreation spending by SFNSW through the loss of recreational areas under their control.

7. GOVERNMENT AGENCIES - THE NPWS AND SFNSW

7.1 EMPLOYMENT AND EXPENDITURE

The two government agencies with the prime responsibility for managing forested areas for tourism and recreation purposes are the NPWS and SFNSW. Both these agencies have substantial expenditures associated with tourism and recreation which contribute to the regional economies.

As the visitation figures indicate, National Parks attract many more visitors than State forests in both regions. However, a number of National Parks are coastal and a number of visitors to these sites would be visiting for water-based recreational purposes. An attempt was made to establish what proportion of National Park visitors were visiting forested areas and what proportion were visiting coastal areas. However, it was not possible to do this. In any event, this distinction may be artificial. Many of the coastal parks have substantial forested areas within their boundaries and a number of visitors would be visiting the coastal areas because they provide a coastal setting within a forest environment. On this basis, forests can be seen as an important feature of the coastal tourism and recreational experience.

The NPWS provides a number of different types of recreational opportunities throughout the two regions. While the core business of the NPWS is the protection of environmental and cultural values of protected areas, the provision of recreation opportunities has always been an important activity for the Service. The undertaking of an access strategy and the publication of a draft nature tourism and recreation strategy (Worboys, 1997) in 1997 would suggest that the management of tourism and recreation are viewed as increasingly important functions of the Service.

There are three NPWS Districts in the UNE, another two Districts have areas in both regions, and there are two Districts in the LNE. In 1997/98 the NPWS Districts in the UNE employed 134 staff, had recurrent expenditure of $7.4 million and capital expenditure of $2.3 million. It is estimated that there are $58.4 million worth of tourism assets in the UNE. This represents a 60.2 percent increase since 1993.

In the LNE there were 94 people employed in 1997/98, recurrent expenditure was $6 million and capital expenditure[3] was $474,258. There is an estimated $60 million worth of tourism assets in the LNE. There has been a 107 percent increase in tourism assets since 1993.

The Districts were asked to specify the proportion of their employment and expenditure attributable to tourism and recreation, however, this was thought to be an impossible task. For example, one staff member stated that nearly everything the Service did was related in some way to tourism and recreation. Another District Manager suggested 85 percent of activity could be associated with tourism and recreation. Worboys, author of the *NSW NPWS Draft Nature Tourism Strategy,* believes that at least 52 percent of expenditure can be associated with tourism and recreation (in Gillepsie, 1997b). Based on a 52 percent estimate, the total spending in the UNE on tourism and recreation amounted to $5 million in 1997/98. For the LNE the amount was estimated to be $3.4 million.

State forests also provide recreational opportunities that attract a number of visitors. However, as pointed out previously, some of these types of recreational activities may not be available in National Parks, for example horse riding in some locations. State forests also maintain an extensive road and fire trail network that can be used by the public.

There is one SFNSW Regional Office in the UNE, one Regional Office with land in both the UNE and LNE and three Regional Offices in the LNE. In the UNE, SFNSW employed 111 people, and it was estimated that five staff spent all their time on tourism and recreation. The SFNSW Regional Offices spent an estimated $365,061 in 1997/98 on tourism and recreation. They also spent an estimated $231,410 on the protection of biodiversity on non-commercial forests. These non-commercial forest areas would have important amenity values for tourism and recreation. There was an estimated $800,000 worth of tourism and recreation infrastructure in the UNE Region.

In the LNE, SFNSW employed 215 people, and it was estimated that 24 staff spent all their time on tourism and recreation. The SFNSW Offices spent an estimated $1.5 million in 1997/98 on tourism and recreation. They also spent an estimated $236,856 on the protection of biodiversity in non-commercial forests. There was an estimated $2.6 million worth of tourism and recreation infrastructure in the LNE Region.

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[3] LNE capital expenditure does not include spending by the Hunter and Port

7.2 THE POSSIBLE IMPACTS ON THE NPWS AND SFNSW FROM A CHANGE IN LAND TENURE

A change in land tenure will have impacts on the expenditure and employment for the two organisations. However, it is very difficult to estimate the total net effect. If the area under SFNSW management is reduced, then SFNSW will have fewer expenses related to the management of forest areas. The organisation is also likely to require fewer staff. However, the total savings here are unlikely to be significant in terms of the overall SFNSW budget. On the other hand, the NPWS will have an increase in expenses related to the management of forests. The Service will also require more staff to manage the newly acquired areas. As discussed previously, it is also likely there will be increased spending, by the Service, on the provision of visitor facilities in most of the new National Parks.

8. CONCLUSION

The UNE and LNE Regions of NSW attract a large number of tourists. In 1996/97 there were over 4 million visits, resulting in 13.7 million visitor nights spent in the UNE Region. A total expenditure of $919 million was undertaken by visitors to the region. In the LNE Region, over 8.8 million visits were made, resulting in 26.4 million visitor nights. Total expenditure by the visitors to the LNE Region amounted to $1,795 million.

Many of the tourists to the regions visit forested areas, as do many of the local residents. Therefore, visitation to forest areas is considerable. It is estimated that in 1997 there were 2.4 million visitors to National Parks and other protected areas in the UNE Region and 1.3 million visitors in the LNE Region. Visitation to State forests was estimated to be 550,000 in the UNE Region and 850,000 in the LNE Region.

The consumers' surplus, regional expenditure and direct and indirect employment arising from visits to forest areas in the UNE and LNE are also considerable. The consumers' surplus for the UNE is estimated to be $57.4 million and for the LNE is estimated to be $44.7 million. Total expenditure for the UNE ranges from $59.7 million to $214.9 million. The expenditure for the LNE ranges from $46.5 million to $166.2 million. There were between 1,131 and 1,980 local jobs generated directly and indirectly from visitor expenditure in the UNE. In the LNE there were between 880 and 1,540 local jobs (direct and indirect) generated from visitor expenditure

In 1997/98 the NPWS District Offices in the UNE employed 134 staff, had recurrent expenditure of $7.4 million and capital expenditure of $2.3 million. In the LNE there were 94 people employed, recurrent expenditure was $6 million and capital expenditure[4] was $474,258. There was an estimated $60 million of tourism assets in the LNE.

State Forests, in the UNE, employed 111 people, and it was estimated that five staff spent all their time on tourism and recreation. The SFNSW Offices spent an estimated $365,061 in 1997/98 on tourism and recreation. They also spent an estimated $231,410 on the protection of biodiversity in non-commercial forests. There was an estimated $800,000 of tourism and recreation

[4] LNE capital expenditure does not include spending by the Hunter and Port Macquarie Districts

infrastructure in the UNE Region.

In the LNE, SFNSW employed 215 people, and it was estimated that 24 staff spent all their time on tourism and recreation. The SFNSW Offices spent an estimated $1.5 million in 1997/98 on tourism and recreation. They also spent an estimated $236,856 on the protection of biodiversity in non-commercial forests. There was an estimated $2.6 million worth of tourism and recreation infrastructure in the LNE Region.

Pubic forests in the UNE and LNE are used by a number of businesses for commercial tourism activities. A survey of 34 such businesses in the UNE and LNE identified that they employed 231 people, including the owner(s), and in 1997 catered for 78,844 visitors, with an average of 2,318 clients per company. In the two regions, 26 National Parks, Nature Reserves and State Recreation Areas were visited by 54 percent of these businesses and 29 State forests were used by 68 percent of these businesses.

As many of the activities provided by commercial tourism operators using State forests would be generally compatible with NPWS objectives, it is likely that most commercial tourism and recreation businesses would be unaffected by a change in tenure from State forest to National Park as a result of UNE and LNE RFAs. However, in some cases commercial tourist operators providing services such as horse riding, may suffer negative impacts if such activities were restricted, or prohibited, following a change in tenure. It is not possible to identify the precise nature of such impacts at this stage, as the actual areas used by tour operators within the public forests in question are not known. In some cases the areas used by operators may not be included within the boundaries of the parcels being transferred from SFNSW to NPWS management. In other cases, there may be opportunities for those operators whose activities were incompatible with conservation management (e.g. in areas proposed for wilderness declaration), to relocate their activities to a different part of the forest area where more flexible management regimes may be in place. An accurate evaluation of these impacts will depend on information on the final boundaries of the areas to be transferred to NPWS management under an RFA, and a case-by-case assessment of the activities in question.

The figures for forest-based tourism and recreation indicate clearly the importance of this sector for the economies of the UNE and LNE Regions. It is also clear there is a great deal of potential for this sector to expand and develop so providing increased economic well-being in the two regions.

9. REFERENCES

Blamey, R. K. (1995), *The Nature of Ecotourism: Occasional Paper No.21,* Bureau of Tourism Research (BTR), Canberra.

Bennett, J. (1995), The *Economic Value of Recreation Use of Gibraltar Range and Dorrigo National Parks*, NPWS, Sydney.

Bureau of Tourism Research (1996), *International Visitor Survey 1996*, BTR, Canberra.

Bureau of Tourism Research (1998), *Domestic Tourism Monitor 1996/97*, BTR, Canberra.

Commonwealth Department of Tourism (1994), *National Ecotourism Strategy,* AGPS, Canberra.

Chapman, D. M. (1995), *Ecotourism in State Forests of New South Wales: Who Visits and Why?*, SFNSW and University of Sydney, Sydney.

Ecologically Sustainable Development (ESD) Working Groups Final Report (1991), Tourism, AGPS, Canberra.

Gillepsie, R. (1997a), *The Economic Value of Regional Economic Impact of Minnamurra Rainforest Centre, Budderoo National Park*, NPWS, Sydney.

Gillepsie, R. (1997b), *Economic Value of Recreation and Tourism in Forests of the Eden RFA*, NSW CRA/RFA Steering Committee, Sydney.

Huyers, T. and Bennett, J. (1997), "The Significance of the Environment and its Regulation to Australia's Tourism Industry" in *Australian Journal of Environmental Management*, Vol. 4, March, PP 40-57.

New South Wales Resource Secretariat (1995) *The Tourism and recreation Values of the Upper North East Region of NSW : Final Report*, Centre for Tourism and Faculty of Resource Science and Management, Southern Cross University, Lismore.

Northern Rivers Regional Development Board (NRRDB) (1994), *Northern Rivers Tourism Masterplan*, NRRDB, Lismore.

Powell, R. and Chalmers, L. (1995), The *Regional Economic Impact of Gibraltar Range and Dorrigo National Parks*, NPWS, Sydney.

Scott, M., Bilyard, G., Link, S., Ulibarri, C. Westerdahl, H., Ricci, P. and Seely, H. (1998), “Valuation of Ecological Resources and Functions”, *Environmental Management*, 22, PP 49-68.

Tourism Forecasting Council (TFC) (1997), Forecast: The Sixth Report of the Tourism Forecasting Council, 3(2), June.

Tourism New South Wales (1998) *Domestic Tourism Trends in New south Wales 1995/96 - 1996/97*, Tourism New South Wales, Sydney.

Ward, J. (1998). *Recreation Values in Forest Areas*, Unpublished Ph.D. Thesis, Griffith University, Gold Coast.

Worboys, G. (1997), *NSW NPWS Draft Nature Tourism and Recreation Strategy*, NPWS, Sydney.

APPENDIX 1:

THE UNE AND LNE REGIONS

APPENDIX 2:

THE SURVEY OF FOREST BASED COMMERCIAL OPERATORS

TOURIST OPERATORS SURVEY

North East NSW

In Confidence

Under clauses 41, 43 and 45 of the Freedom of Information Act, an individual's information cannot be released to another party if it has be marked "IN CONFIDENCE"

1. Do you use forests areas in your business operations?

   ☐ Yes

   ☐ No

If **yes**, please **continue** with the survey. If **no**, please **do not** proceed with the survey.

2. In which town(s) is your business located?

____

3. How long have you owned and operated this business? ______ yrs ______ mths

4. How long has the business been operating for in total? ______ yrs ______ mths

5. How many people do you employ, including yourself ?

   Full-time ______

Part-time _______

Casual _______

5. Please provide the following information for all employees, including yourself.

Employe e	Age	Gende r	Employee status 1= full time 2= part time 3= casual	If part-time or casual, how many hours do employees work per week (on average)	Number of years and months employed	Township of residence (closest)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

7. Does employment depend on seasonal factors?

☐ Yes

☐ No

If yes, please specify

____

____

8. How many individual clients did you cater for in:

1997 _______________
1996 _______________
1995 _______________
1994 _______________
1993 _______________

9. What price do you charge for your activity?

Type of Activity	Duration	Adult Rate ($)

10. Please provide information on the forests used in your business.

NATIONAL PARK OR NATURE RESERVE					
Name of area used?	**How often is area used?**	**What types of activities are undertaken?**	**What are the important features of the area?**	**Are there other areas nearby which offer similar features and that you could use instead of this area?**	**Please rate the importance of this area to the operation of your business. (Not important 0; Very important 10)**
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10

Name of area used?	**How often is area used?**	**What types of activities are undertaken?**	**What are the important features of the area?**	**Are there other areas nearby which offer similar features and that you could use instead of this area?**	**Please rate the importance of this area to the operation of your business. (Not important 0; Very important 10)**
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10

STATE FOREST

Name of area used?	How often is area used?	What types of activities are undertaken?	What are the important features of the area?	Are there other areas nearby which offer similar features and that you could use instead of this area?	Please rate the importance of this area to the operation of your business. (Not important 0; Very important 10)
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10

Name of area used?	How often is area used?	What types of activities are undertaken?	What are the important features of the area?	Are there other areas nearby which offer similar features and that you could use instead of this area?	Please rate the importance of this area to the operation of your business. (Not important 0; Very important 10)
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10
				Yes No If Yes please specify	0 1 2 3 4 5 6 7 8 9 10

11. Considering the types of activities you undertake in forest areas, will a change in land tenure (from a State forest to a National Park or vice-a-versa) affect your

- ☐ Yes
- ☐ No
- ☐ Don't know

Please specify

____

Please rate the importance of the change (A strong negative impact –5; a strong positive impact 5). –5 -4 -3 -2 -1 0 1 2 3 4 5

12. Are there any potential opportunities for the expansion of your business?

- ☐ Yes
- ☐ No
- ☐ Don't know

Please specify

____

Please rate the potential of the opportunity (Low potential 0; Very good potential 10).

0 1 2 3 4 5 6 7 8 9 10

13. Are there any existing or potential threats to your business?

- ☐ Yes
- ☐ No
- ☐ Don’t know

Please specify

Please rate the potential threat (A low threat 0; a strong threat 10).

0 1 2 3 4 5 6 7 8 9 10

14. Can you identify any potential development prospects for tourism activities dependant on public forest sites?

- ☐ Yes
- ☐ No

Please specify

Please rate the potential of the development (Low potential 0; Very good potential 10).

0 1 2 3 4 5 6 7 8 9 10

15. What were your annual operating costs for 1997-98 (i.e., repairs, maintenance, fuel, labour, administration etc.)?

- ☐ Less than $100,000
- ☐ $101,001 - $250,000
- ☐ $250,001 - $500,000
- ☐ $500,001 - $750,000
- ☐ $750,001 - $1 M
- ☐ Over $1 M - $1.25 M
- ☐ Over $1.25 M

16. What was the gross business income for the last financial year?

- ☐ Less than $100,000
- ☐ $101,001 - $250,000
- ☐ $250,001 - $500,000
- ☐ $500,001 - $750,000
- ☐ $750,001 - $1 M
- ☐ Over $1 M - $1.25 M
- ☐ Over $1.25 M

17. How much does the business owe (1997-98)?

- ☐ Less than $100,000
- ☐ $101,001 - $250,000
- ☐ $250,001 - $500,000
- ☐ $500,001 - $750,000
- ☐ $750,001 - $1 M
- ☐ Over $1 M - $1.25 M
- ☐ Over $1.25 M

18. How much did the business spend on fixed assets over the last financial year?

- ☐ Less than $100,000
- ☐ $101,001 - $250,000
- ☐ $250,001 - $500,000
- ☐ $500,001 - $750,000
- ☐ $750,001 - $1 M
- ☐ Over $1 M - $1.25 M
- ☐ Over $1.25 M

19. How much is total capital investment (i.e., market value)?

- ☐ Less than $100,000
- ☐ $101,001 - $250,000
- ☐ $250,001 - $500,000
- ☐ $500,001 - $750,000
- ☐ $750,001 - $1 M
- ☐ Over $1 M - $1.25 M
- ☐ Over $1.25 M

20. What was your combined household income in 1997-98?

- ☐ Less than $12,000
- ☐ $12,001 - $25,000
- ☐ $25,001 - $40,000
- ☐ $40,001 - $60,000
- ☐ $60,001 - $80,000
- ☐ Over $80,000

Thank you, once again for taking the time to complete this survey.

APPENDIX 3:

DISAGGREGATED DATA FOR UNE AND LNE

Table 1: Disaggregated UNE Expenditure for Domestic Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation	19.2	16.93	30,476,539.50
Meals	15.4	13.57	24,428,035.50
Petrol/oil	12.8	11.28	20,305,692.00
Plane Fares	7.7	6.79	12,223,018.50
Shopping	9.0	7.93	14,275,189.50
Packaged Tours	12.8	11.28	20,305,692.00
Other	23.1	20.35	36,633,052.50
TOTAL	100.0	88.13	158,647,219.50

[1] Extrapolated from Tourism NSW 1997 in Gillespie, 1997b

Table 2: Disaggregated UNE Expenditure for International Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation/ Meals	34.2	56.46	5,349,302.70
Car hire	2.5	4.13	391,296.85
Petrol/oil	1.5	2.48	234,967.60
Plane Fares	2.9	4.79	453,828.55
Other Travel	2.7	4.46	422,562.70
Shopping/ Entertainment	32.0	52.83	5,005,378.35
Packaged Tours	4.1	6.77	641,423.65
Other	20.1	33.18	3,143,639.10
TOTAL	100.0	165.10	15,642,399.50

[1] Extrapolated from Tourism NSW 1997

Table 3: Disaggregated UNE Expenditure for Recreational Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	9,911,709.72
Meals	22.0	9.58	8,941,071.48
Souvenirs	19.5	8.49	7,923,767.94
Other	34.1	14.84	13,850,261.04
Total	100.0	43.53	40,626,810.18

[1] NRAC p41

Table 4: Disaggregated LNE Expenditure for Domestic Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation	19.2	16.93	23,705,301.35
Meals	15.4	13.57	19,000,646.15
Petrol/oil	12.8	11.28	15,794,199.60
Plane Fares	7.7	6.79	9,507,324.05
Shopping	9.0	7.93	11,103,546.35
Packaged Tours	12.8	11.28	15,794,199.60
Other	23.1	20.35	28,493,968.25
TOTAL	100.0	88.13	123,399,185.40

[1] Extrapolated from Tourism NSW 1997 in Gillespie, 1997b

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Table 5: Disaggregated LNE Expenditure for International Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation/ Meals	34.2	56.46	4,160,763.24
Car hire	2.5	4.13	304,356.22
Petrol/oil	1.5	2.48	182,761.12
Plane Fares	2.9	4.79	352,994.26
Other Travel	2.7	4.46	328,675.24
Shopping/ Entertainment	32.0	52.83	3,893,254.02
Packaged Tours	4.1	6.77	498,908.38
Other	20.1	33.18	2,445,166.92
TOTAL	100.0	165.10	12,166,879.40

[1] Extrapolated from Tourism NSW 1997

Table 6: Disaggregated LNE Expenditure for Recreational Visitors (33 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	7,709,546.52
Meals	22.0	9.58	6,954,562.68
Souvenirs	19.5	8.49	6,163,281,54
Other	34.1	14.84	10,773,038.64
Total	100.0	43.53	31,600,429.38

[1] NRAC p41

Expenditure for UNE and LNE assuming 60 percent of visitors are recreational visitors

Table 7: Disaggregated UNE Expenditure for Domestic Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation	19.2	16.93	18, 194,941.88
Meals	15.4	13.57	14, 583,896.12
Petrol/oil	12.8	11.28	12, 122,796.48
Plane Fares	7.7	6.79	7,2 97,321.64
Shopping	9.0	7.93	8,5 22,497.88
Packaged Tours	12.8	11.28	12, 122,,796.48
Other	23.1	20.35	21, 870,470.60
TOTAL	100.0	88.13	94, 714,721.08

[1] Extrapolated from Tourism NSW 1997 in Gillespie, 1997b

Table 8: Disaggregated UNE Expenditure for International Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation/ Meals	34.2	56.46	3,193,603.44
Car hire	2.5	4.13	233,609.32
Petrol/oil	1.5	2.48	140,278.72
Plane Fares	2.9	4.79	270,941.56
Other Travel	2.7	4.46	252,275.44
Shopping/ entertainment	32.0	52.83	2,988,276.12
Packaged Tours	4.1	6.77	382,938.28
Other	20.1	33.18	1,876,793.52
TOTAL	100.0	165.10	9,338,716.40

[1] Extrapolated from Tourism NSW 1997

Table 9: Disaggregated UNE Expenditure for Recreational Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	18,021,301.02
Meals	22.0	9.58	16,256,503.18
Souvenirs	19.5	8.49	14,406,859.29
Other	34.1	14.84	25,182,307.64
Total	100.0	43.53	73,866,971.13

[1] NRAC p41

Table 10: Disaggregated LNE Expenditure for Domestic Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation	19.2	16.93	14,152,413.41
Meals	15.4	13.57	11,343,665.09
Petrol/oil	12.8	11.28	9,429,369.36
Plane Fares	7.7	6.79	5,676,012.23
Shopping	9.0	7.93	6,628,980.41
Packaged Tours	12.8	11.28	9,429,369.36
Other	23.1	20.35	17,011,317.95
TOTAL	100.0	88.13	73,671,127.81

[1] Extrapolated from Tourism NSW 1997 in Gillespie, 1997b

Table 11: Disaggregated LNE Expenditure for International Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Accommodation/ Meals	34.2	56.46	2,484,070.62
Car hire	2.5	4.13	181,707.61
Petrol/oil	1.5	2.48	109,112.56
Plane Fares	2.9	4.79	210,745.63
Other Travel	2.7	4.46	196,226.62
Shopping/ entertainment	32.0	52.83	2,324,261.51
Packaged Tours	4.1	6.77	297,859.69
Other	20.1	33.18	1,459,820.46
TOTAL	100.0	165.10	7,263,904.70

[1] Extrapolated from Tourism NSW 1997

Table 12: Disaggregated LNE Expenditure for Recreational Visitors (60 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	14,017,348.62
Meals	22.0	9.58	12,644,651.58
Souvenirs	19.5	8.49	11,205,959.49
Other	34.1	14.84	19,587,330.84
Total	100.0	43.53	57,455,290.53

[1] NRAC p41

Expenditure for UNE and LNE assuming 100 percent of visitors are recreational visitors

Table 13: Disaggregated UNE Expenditure for Recreational Visitors (100 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	30,035, 494.62
Meals	22.0	9.58	27,094, 165.58
Souvenirs	19.5	8.49	24,011, 426.49
Other	34.1	14.84	41,970, 502.84
Total	100.0	43.53	123,111 ,589.56

[1] NRAC p41

Table 14: Disaggregated LNE Expenditure for Recreational Visitors (100 Percent Recreational Visitation)

Type	Percentage of total Expenditure[1]	Daily Expenditure ($)	Total Expenditure ($)
Own Vehicle	24.4	10.62	23,362, 247.77
Meals	22.0	9.58	21,074, 419.30
Souvenirs	19.5	8.49	18,676, 599.55
Other	34.1	14.84	32,645, 551.93
Total	100.0	43.53	95,75 8,818.55

[1] NRAC p41