

Social and Forest Values of the Community within the South East Queensland RFA Region

Prepared for

Social Assessment Unit
Forest Assessment Branch
Department of Primary Industries and Energy
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and

CRA Unit
Department of Natural Resources
Resource Science Centre
Queensland

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Prepared by
Environment & Behaviour Consultants, 62 Hooper Street, Belgian Gardens, Townsville 4810
Telephone 07 47722544 Facsimile 07 4726335 Mobile 0412 098514
Email ebcmark@ozemail.com.au

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EXECUTIVE SUMMARY

The core objective of this study was to identify the social values associated with forested land within the population of the South East Queensland RFA region. The study was based on a random sample of 2,000 respondents drawn from across 10 regional sectors within the region. The 10 regional sectors included, (i) Beaudesert, (ii) Brisbane, (iii) Builyan, (iv) Bundaberg, (v) Esk, (vi) Gladstone, (vii) Kingaroy, (viii) Maryborough, (ix) North East Coast and (x) the North Coast. The structure of the sampling frame allowed comparisons to be made across each of the 10 sectors, and through proportional weighting of the total sample, inferences could be drawn in relation to the population throughout the SEQ RFA region. Structured telephone interviews were used to assess forest values, the use of State Forests and National Parks, attitudes towards management planning in native forests and the perceived impacts of changes in the use of forests on communities.

Univariate statistical analysis of 14 belief statements, used in the assessment of environmental values, indicated that the population within the SEQ RFA region had high levels of concern about the management and use of native forests in Queensland (84%) believed that better laws were needed to regulate the use of native forests (88%), that protecting native forests would not threaten jobs (76%) and that the conservation and protection of native forests in Queensland would benefit the Queensland economy (87%). As might be expected given the high levels of intrinsic and extrinsic values associated with forests, 65% of the population also reported that sometimes their beliefs about the need for employment and the need to protect native forests were in conflict.

Multivariate statistical analyses of responses to the 14 belief statements identified three value and belief orientations predominant in the population of the SEQ RFA region. These included clusters of beliefs associated with (i) Forest management concern, (ii) Intrinsic values, (iii) Extrinsic use values and (iv) beliefs associated with the dependency of communities on the timber and logging industries.

Beliefs associated with forest management concern, which focused primarily on concern with the management and use of native forests, were highest in the North Coast sector and lowest in the Esk, Kingaroy and Builyan sectors. A significant association was also found between the age of respondents and forest management concern, with respondents between 20 and 29 years of age having the highest levels of forest management concern and with levels of forest management concern gradually reducing amongst those respondents over 30 years of age. Although forest management concern was high in households with and without employees in forest and forest related industries, those respondents who were members of households with no forest industry employees had relatively higher levels of concern than respondents from households with forest industry employees.

The intrinsic value orientation consisted of belief statements associated with the intrinsic non use value of forests, including their inherent and aesthetic values and the importance of protection and preservation. In the SEQ RFA region, high levels of intrinsic value were found within the population, with these values being relatively higher in the North Coast and North East Coast sectors when compared to other sectors. Although intrinsic values were high in households with and without household members employed in forest related industries, respondents from households with no forest industry employees had relatively higher levels of intrinsic value than respondents from households with forest industry employees.

The extrinsic value orientation consisted of beliefs associated with the value of forests for human use and consisted of beliefs associated with the importance of employment over the protection of native forests and the economic value of native forests through timber production. This value orientation was found to be highest in the Builyan and Kingaroy sectors and lowest in the North Coast, Brisbane and Beaudesert sectors. As might be expected, respondents from households with forest industry employees reported relatively higher levels of this value orientation than respondents from households with no forest industry employees.

Several belief statements focused on the perceived dependency of communities on the timber and logging industry and an analysis of dependency values indicated that the Builyan and Kingaroy sectors had higher levels of perceived dependency when compared to all other sectors.

Additional questions and analyses focused on the use of State Forests and National Parks. Within the SEQ RFA region it was estimated that 44% of the population had visited a State Forest or National Park in Queensland within the last year, with 32% visiting once every three months and 33% visiting once a year or less. Sixty percent of the population within the SEQ RFA region were found to have visited one State Forest or National Park within the last year with a further 25% having visited two State Forests or National Parks within the last year. The four most commonly visited State Forests and National Parks were Lamington National Park, Bunya Mountains National Park, the Fraser Island Section of the Great Sandy National Park and Noosa Park. Bushwalking was found to be the most common activity in State Forests and National Parks with 62% of the population within the SEQ RFA region reporting this activity in forests and parks.

In relation to forest management and use, the majority of the population within the SEQ RFA region believed that recreation (84%), tourism (65%) and beekeeping (57%) should be allowed in State native forests in Queensland, and conversely that grazing (17%), logging (17%) and mining (8%) should not be allowed. Only in the Builyan sector does a majority of the population support logging (67%) and grazing (66%) in State native forests.

An open-ended question was used to identify what respondents considered to be “the most important thing that needs to be considered in planning for the future use of forests in Queensland”. Within the SEQ RFA sample, a third of all respondents specifically identified the preservation of forests. Other planning issues identified included, forest regeneration, the cessation of logging activity and the protection of native animal species and habitats.

Through the SEQ RFA region it was found that 22% of respondents indicated that their community had been affected by a change in the use of forests within the last two years. Significant variations were however found across study sectors, with 30% of respondents from within the Builyan sector indicating their community had been affected by a change in the use of forests, while only 9% of respondents from the Bundaberg and Esk sectors indicated their communities had been affected. Interestingly, within the North Coast and Brisbane sectors the clearing of forests for urban development were identified as the major changes to forests affecting the community, while in the Builyan and Kingaroy sectors changes in logging activity and timber supply were the main forest related changes affecting communities.

1. INTRODUCTION

The Queensland and Commonwealth governments have entered into a Regional Forest Agreement (RFA), which encompasses processes and procedures leading to agreement on the use and management of forested land in South East Queensland (SEQ). The SEQ RFA provides for a comprehensive regional assessment of the environmental, heritage, social and economic values of forested land.

As part of the RFA process within Queensland, this study had two core objectives which were to (a) assess the social values held by the population within the SEQ RFA region in relation to the use of forest lands and (b) thematically map the spatial variation in attitudes and values throughout the SEQ RFA region. Survey research was used in identifying the environmental values held by the population within the RFA region and information was obtained on:

- (a) demographic characteristics of the population;
- (b) employment characteristics;
- (c) attitudes towards environmental issues, including attitudes towards the management of native forests and the identification of changes to communities and families from change in forest use;
- (d) the use of native forests, including their recreational use; and
- (e) the environmental values held by the population.

2. SAMPLING PROCEDURES

2.1 SAMPLE SIZE

The study was based on a sample size of 2,000. A sample of this size permits considerable statistical confidence when making inferences from a sample to a single population. The sample size allowed 10 regional samples to be drawn from the total population of the RFA region, with each regional sample having a maximum sample size of 200. Some indication of the ability to infer population values from sample statistics is given in an examination of sampling errors for samples of 2,000 and 200.

The calculation of sampling errors varies depending on the type of questions being asked. As an example of the sampling errors associated with this survey, when a 'yes' or 'no' response is required to a specific question and assuming 50% of respondents within a sample of 2,000 responded 'yes' and the remaining 50% responded 'no', this would yield a standard error of 0.011. In other words, if 50% of the sample responded 'yes' to a specific question, we would be 95% confident that the true value in the population from which the sample was drawn would be between 47.83% and 52.17%. Proportions which are higher or lower than 0.50 yield correspondingly lower standard errors. For instance, if 80% of respondents within a sample of 2,000 responded 'yes' to a specific question, we would be 95% confident the true value in the population from which the sample was drawn would be between 78.25% and 81.75%.

In the case of a sample of 200, when 50% of respondents respond 'no' to a 'yes' or 'no' question, the standard error would be 0.035 and we would be 95% confident that the true value in the population from which the sample was drawn would be between 43.14% and 56.86%. If 80% responded 'no' within a sample of 200, we would be 95% confident the true value in the population would be between 44.46% and 55.54%.

2.2 SAMPLE SELECTION

Stratified random sampling was used to identify households from within the SEQ RFA region. As a telephone interview was to be used in undertaking the research the published white pages directory for Queensland was used to randomly select household phone numbers. Two core limitations when using the white pages as the sampling frame are that not all households will necessarily have a telephone and secondly that many silent telephone numbers will not be listed. There were two alternative approaches to sampling households from within the geographic area of interest.

One alternative was to randomly select, using simple random sampling, 2,000 households from the complete published list of residential phone numbers. Using this procedure, each household listed in the white pages would have had an equal probability of selection, however, the sample would have been based predominantly on the more urban and higher population density areas of Metropolitan Brisbane. As the objective of this study was to identify environmental, land use and forest values across the population of the SEQ RFA region, and to identify regional differences in these values, it was important that the sampling methodology enabled regional differences to be identified and distinguished between the rural and more urban populations from within this geographic area.

The second alternative, which was adopted in the present study, was based on the random selection of households from within 10 regional areas. The 10 regional areas were defined on the basis of the percentage of the population within 1991 Census

Collector Districts (CCDs) that were employed within forestry and agricultural industries. Contiguous areas with similar percentages of the population employed within forestry and agriculture were then used to define the 10 regional sectors used in this study (Table 2.1 and Figure 1). Essentially this approach stratified the population on the basis of households within CCD areas with varying levels of employment in agriculture and forestry industries, but at the same time constrained the stratification to contiguous geographic areas.

Table 2.1. Geographic Stratification of the Survey Sample Within the SEQ RFA Region

Regional Sectors	Nos. of Private Dwellings (1991)	Percent in Forestry & Agric. (1991)	Nos. of Private Dwellings (1996)
Beaudesert	8,893	19.43	11,002
Brisbane	541,591	1.04	653,047
Builyan	1,223	46.35	1,490
Bundaberg	17,289	10.47	20,873
Esk	15,779	19.13	20,446
Gladstone	10,064	2.29	12,673
Kingaroy	11,895	34.02	13,897
Maryborough	23,657	13.25	33,127
North East Coast	2,786	39.40	4,044
North Coast	72,995	8.07	102,093
Total SEQ RFA Region	705,951	4.57	875,146
Total Queensland	985,943	13.70	1,221,153

Note: Includes occupied private dwellings. There are some minor variations in CCD boundaries for sample sectors between the 1991 census and 1996 census.

Source: ABS (1991, 1996).

Prepared by: EBC (1998).

As the study was to be based on 10 regional sectors defined on the basis of CCD boundaries, each town and all telephone numbers within the town, were allocated to one of the 10 geographic areas. Telephone numbers were then randomly sampled, using simple random sampling, from within each of the 10 sectors. Using this procedure, where simple random sampling occurs within each sector, the sample within each sector would be in proportion to the number of households within each town in each sector.

2.3 QUESTIONNAIRE DESIGN

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

As required in the study brief, the questionnaire focused on the assessment of forest values throughout the community in the SEQ RFA region. Specific questions and items included in the questionnaire were derived from similar studies in Tasmania, Victoria and Western Australia and modified through stakeholder involvement to the SEQ RFA context.

Following the principles of a consultative process, stakeholders represented on the SEQ RFA reference panel were invited to participate in the development of the questionnaire. An invitation to a workshop and a draft questionnaire were distributed to all stakeholders on the SEQ RFA Reference Panel for their comment on the 11th of November, 1997. The workshop to finalise the content of the questionnaire was conducted on the 20th November, 1997.

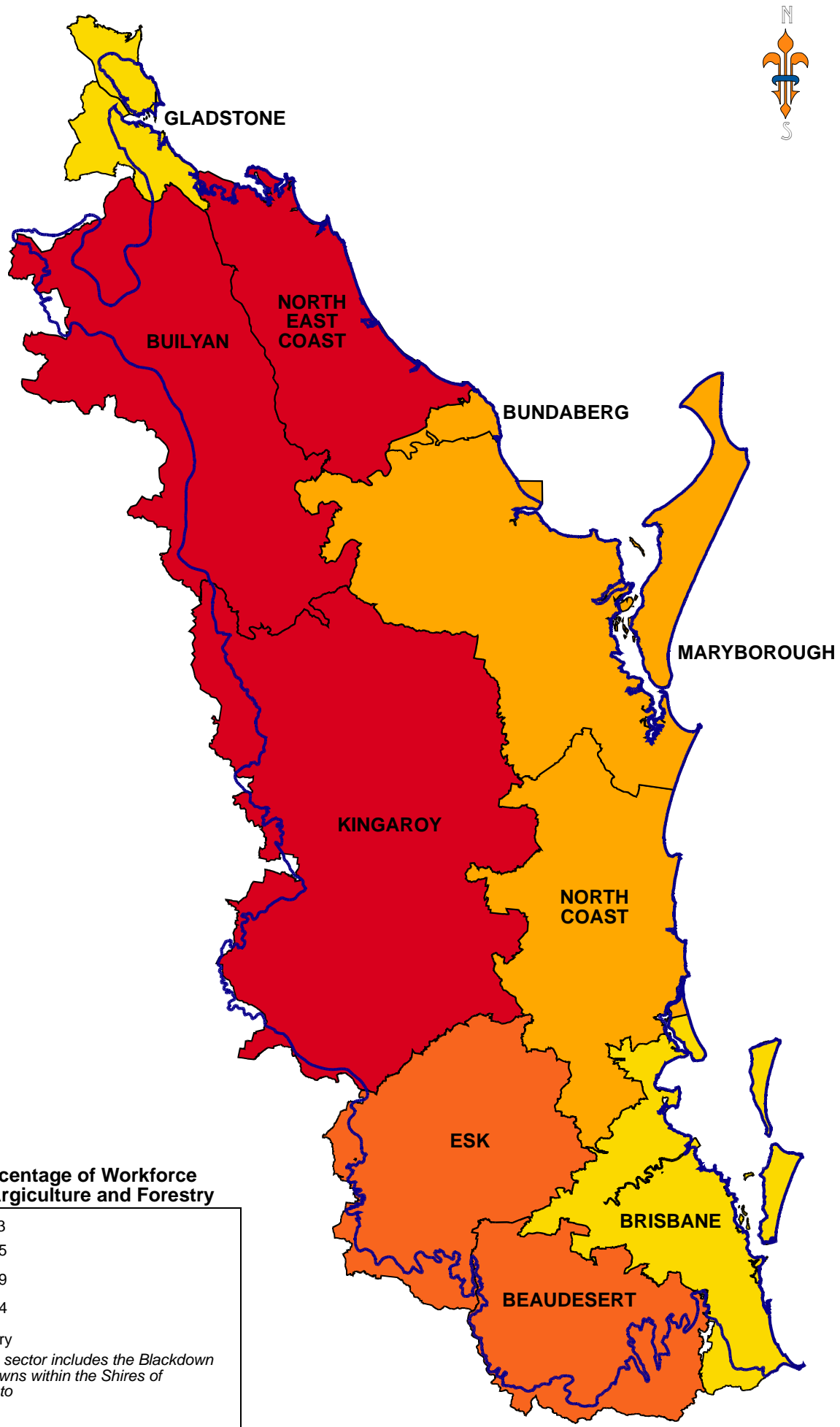


FIGURE 1. Percentage of Workforce Employed in Agriculture and Forestry

	46.35 - 19.43
	19.43 - 13.25
	13.25 - 2.29
	2.29 - 1.04

RFA Boundary

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

EBC (1998)

2.4 INTERVIEW PROCEDURES

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

The list of telephone numbers supplied to each interviewer was randomly sorted and randomly selected from the total list of randomly selected telephone numbers from throughout the SEQ RFA region. This procedure minimized bias which may have occurred if interviewers used lists of telephone numbers from specific regional areas.

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

Interviews were completed between the 6th and 14th of December, 1997 between 6.00pm and 8.00pm during the week and 10.00am and 8.00pm during the weekend. The final sample sizes for each of the 10 regional sectors is shown in Table 2.2.

Table 2.2. Final Sample Sizes for Each Regional Sector

Sector sample	Size	Percentage
Beaudesert	200	10.0
Brisbane	200	10.0
Builyan	200	10.0
Bundaberg	200	10.0
Esk	200	10.0
Gladstone	200	10.0
Kingaroy	200	10.0
Maryborough	200	10.0
NE Coast	200	10.0
North Coast	200	10.0
Total Sample	2,000	100.0

Source: EBC (1998).

The sample sizes for each of the 10 sectors allowed for meaningful inferences to be made to the population within each sector. However, the total sample could not be used in generalising to the total population of residents within the SEQ RFA region, as each sector was not represented in proportion to the total population size. In order to infer sample statistics to population parameters the sample was proportionally adjusted to reflect the total population within each of the 10 sectors. As telephone numbers were used as the primary sampling unit, the proportional adjustment was based on the number of occupied private dwellings within each sector, as each private dwelling could reasonably be assumed to have one telephone number. The sample was proportionally adjusted by taking the total sample for the Brisbane Metropolitan sector, which had the highest number of occupied private dwellings, and proportionally adjusting the remaining nine sectors relative to the sample size for this sector. Table 2.3 shows the sample proportions required for each sector relative to the Brisbane Metropolitan sector. On the basis of the derived proportions, the total sample for the Brisbane Metropolitan sector was used and proportionate random samples from each sector used to obtain the required number of respondents from each of the remaining nine sectors. Table 2.3 shows the final sample size for the SEQ RFA region to be 266, which consisted of sub samples from each sector in proportion to the number of occupied private dwellings

within each sector.

As the Brisbane Metropolitan sector accounted for 53% of all occupied private dwellings in the SEQ RFA region, the effect as shown in Table 2.3 on the proportional adjustment of the remaining nine sectors, was to minimise their sample contributions relative to the Brisbane Metropolitan sector. In order to accommodate this effect, and as shown in Table 2.3, a separate sample was also defined which excluded the Brisbane Metropolitan sector and which adjusted the remaining sectors to the number of households in the North Coast sector. The sample of 431 respondents is referred to as the SEQ RFA Rural sample.

Table headings in this report identify whether the table is based on the *SEQ RFA Sample* or the *SEQ RFA RURAL Sample*, as previously defined, or whether the table compares the 10 sectors and therefore makes use of the *Total Sample*.

Table 2.3. Sub Sampling Procedures for the SEQ RFA Population Sample

Sector	Private Dwellings	Proportion	Sub Sample Size
SEQ RFA			
Brisbane Metropolitan	653,047	1.0000	200
North Coast	102,093	0.1563	31
Maryborough	33,127	0.0507	10
Bundaberg	20,873	0.0319	6
Esk	20,446	0.0313	6
Kingaroy	13,897	0.0212	4
Gladstone	12,673	0.0194	4
Beaudesert	11,002	0.0168	3
North East Coast	4,044	0.0061	1
Builyan	1,490	0.0022	1
Total SEQ RFA	1,221,153		266
SEQ RFA RURAL			
North Coast	102,093	1.0000	200
Maryborough	33,127	0.3244	65
Bundaberg	20,873	0.2044	41
Esk	20,446	0.2002	40
Kingaroy	13,897	0.1361	27
Gladstone	12,673	0.1241	25
Beaudesert	11,002	0.1077	22
North East Coast	4,044	0.0396	8
Builyan	1,490	0.0145	3
Total SEQ RFA RURAL	219,645		431

Note: The number of occupied private dwellings is based on ABS (1996) census data for each of the 10 sectors. In the SEQ RFA sample, the proportions are given relative to the Brisbane Metropolitan sector, which has the highest number of private dwellings, with sample sizes for each sector defined relative to the total sample size for the Brisbane Metropolitan sector. In the SEQ RFA Rural sample, the proportions are given relative to the North Coast sector, which has the highest number of private dwellings, with sample sizes for each sector defined relative to the total sample size for the North Coast sector.

Source: EBC (1998).

2.5 STATISTICAL ANALYSIS AND MAPPING

As random sampling was used, inferential statistics are used where appropriate to test for significant differences. For the most part chi-square tests of significance are used to identify differences in percentages and analysis of variance is used to test differences in mean scores.

In several instances multiple response and multiple dichotomy analysis is used in developing single frequency tables where several responses have been permitted to a specific question. As one respondent may provide several responses to one question, each of the responses are identified in the table and the respondent counted against each response. As such the columns in multiple response and dichotomy tables cannot be summed as the rows are not independent. Summing column percentages in multiple response and dichotomy tables will often yield percentage totals in excess of 100%, indicating that the same respondent has been included in multiple rows of the table. Where a multiple response or dichotomy analysis has been used it is indicated in the footnote to the table.

A series of thematic maps are provided to illustrate additional regional variations in many of the responses. These maps should be read in relation to the tables which display the thematic map values in order to understand where significant regional differences occur.

3. RESPONDENT CHARACTERISTICS

3.1 GENDER

Table 3.1 shows the percentage of male and female respondents for the total sample and a comparison with the percentage of males and females identified in the 1996 population census for census collector districts within the SEQ RFA region. In comparison to census values the sample counts for males and females are within 6% of population counts.

Table 3.1. Comparison of Sample and Census Gender Percentages (Total sample)

Gender	Sample		Census (1996)	
	Frequency	Percent	Count	Percent
Male	847	42.6	908,971	48.6
Female	1,143	57.4	960,676	51.4
Total	1,990	100.0	1,869,647	100.0

Note: Gender was not recorded for 10 respondents in the sample.

Source: EBC (1998).

While Table 3.1 is based on the total sample, Table 3.2 shows the same information in relation to gender percentages, but is based only on the derived SEQ RFA sample. This sub sample, which is a more accurate reflection of population values as regional differences in the sample size have been adjusted, again shows reliable estimates of gender within the population of the SEQ RFA region, with sub sample counts being within 6% of population counts.

Table 3.2. Comparison of Sample and Census Gender Percentages (SEQ RFA sample)

Gender	Sample		Census (1996)	
	Frequency	Percent	Count	Percent
Male	114	43.0	908,971	48.6
Female	151	57.0	960,676	51.4
Total	265	100.0	1,869,647	100.0

Note: Gender was not recorded for one respondents in the sample.

Source: EBC (1998).

A comparison of the percentage of males and females across the five regional sectors indicated no statistically significant differences across sectors in relation to gender.

3.2 AGE OF RESPONDENTS

Table 3.3 shows the age of respondents within the SEQ RFA sample and compares percentages within age ranges between the 1996 census and the sample. This Table indicates that the sample ages are within five percent of census percentages for the same age ranges. In the case of the 15-24 year old age group, the current sample undercounts this group by 5.3%.

Table 3.3. A Comparison of Percentages Within Defined Age Ranges Between Census (1996) and Sample (SEQ RFA Sample)

Age Range	Census (1996) Count	Census Percent	Sample Count	Sample Percent	Sample-Census Discrepancy
15-19	171,075	9.15	10	3.80	5.35
20-24	181,442	9.70	17	6.46	3.24
25-29	176,918	9.46	13	4.94	4.52
30-34	178,514	9.55	27	10.27	0.72
35-39	182,263	9.75	36	13.69	3.94
40-44	173,443	9.28	31	11.79	2.51
45-49	171,120	9.15	28	10.65	1.50
50-54	135,090	7.23	24	9.12	1.89
55-59	107,960	5.77	15	5.70	0.07
60-64	91,557	4.90	19	7.22	2.32
65-69	93,332	4.99	13	4.94	0.05
70-74	83,245	4.45	17	6.46	2.01
75-79	60,030	3.21	7	2.66	0.55
80-84	37,504	2.01	4	1.52	0.49
85-89	18,179	0.97	2	0.76	0.21
90+	7,991	0.43	0	0.00	0.43
Total	1,869,647	100.00	263	100.00	

Note: This table shows 1996 census data for the population aged 15 years and over as the minimum age for respondents in the sample was 15 years. The mean age for the sample was 45.93 years, with a standard deviation of 16.51 years.

Three respondents did not report their age

Source: EBC (1998).

A comparison of the mean age of respondents across the 10 sectors indicated no significant differences in mean age across sectors.

3.3 OCCUPATION

Table 3.4 shows the occupational classification of the total sample using the Australian Standard Classification of Occupations (ASCO). Using the ASCO classifications, 64% of the total sample were identified as having labour force related occupations.

Table 3.4. Occupation (Total Sample)

Occupation	Frequency	Percent
Managers and administrators	280	14.1
Professionals	184	9.3
Tradespersons	160	8.1
Salespersons and personal service workers	152	7.7
Labourers and related workers	127	6.4
Clerks	125	6.3
Para-professionals	83	4.2
Plant and machine operators, and drivers	81	4.1
Self employed	22	1.1
Total Labour Force Occupations	1,214	64.3
Non-Labour Force Occupations	770	38.8
Total Respondents	1,984	100.0

Note: Non - labour force occupations include housewives, students, pensioners, the unemployed and volunteer workers.

16 respondents did not provide their occupation.

Source: EBC (1998).

Table 3.5 shows the occupational classification of the SEQ RFA sample. Forty-one percent of this sample reported occupations which were not workforce related. Of those who reported workforce related occupations, 24% were either professionals or managers and administrators.

Table 3.5. Occupation (SEQ RFA sample)

Occupation	Frequency	Percent
Professionals	35	13.3
Managers and administrators	27	10.3
Tradespersons	20	7.6
Clerks	20	7.6
Para-professionals	16	6.1
Salespersons and personal service workers	15	5.7
Labourers and related workers	11	4.2
Plant and machine operators, and drivers	10	3.8
Self employed	2	0.8
Total Labour Force Occupations	156	59.3
Non-Labour Force Occupations	107	40.7
Total Respondents	263	100.0

Note: Non - labour force occupations include housewives, students, pensioners, the unemployed and volunteer workers.

Three respondents did not provide their occupation.

Source: EBC (1998).

3.4 EMPLOYMENT IN FOREST AND FOREST RELATED INDUSTRIES

All respondents were asked to indicate if they were employed, or any members of their household were employed, in the timber, tourism, mining, beekeeping, seed or wildflower collection or grazing industries. Table 3.6 shows that in relation to the SEQ RFA sample 86% of respondents were not employed, or had no family members employed in these industries. Where respondents or household members were employed in these industries, the majority were employed in the grazing industries (10%).

An examination of Table 3.6 also shows differences across the 10 sectors in relation to household employment in each industry. Employment in the grazing industries is highest in the Builyan, Beaudesert, Kingaroy, Esk and North East Coast sectors, while employment in timber industries is highest in the Builyan sector.

Table 3.6. Household Employment in Forest and Forest Related Industries

Forest Related Industries	Beaudesert	Brisbane	Builyan	Bundaberg	Esk	Gladstone
None	135 67.8	178 89.4	84 42.0	171 85.5	138 67.8	151 76.3
Grazing	50 25.1	4 2.0	94 47.0	14 7.0	40 20.2	11 5.6
Timber	6 3.0	3 1.5	34 17.0	5 2.5	6 3.0	14 7.1
Tourism	4 2.0	7 3.5	4 2.0	10 5.0	9 4.5	9 4.5
Mining	6 3.0	3 1.5	9 4.5	2 1.0	4 2.0	17 8.6
Beekeeping	1 0.5	5 2.5	6 3.0	2 1.0	4 2.0	2 1.0
Seed or wildflower collection	3 1.5	0 0.0	1 0.5	0 0.0	2 1.0	2 1.0
Total Respondents	199 100.0	199 100.0	200 100.0	200 100.0	198 100.0	198 100.0

	Kingaroy	Maryborough	North Coast	North East Coast	SEQ RFA Rural	SEQ RFA
None	123 61.5	168 84.8	168 84.8	126 63.0	338 79.3	229 86.4
Grazing	50 25.0	10 5.1	8 4.0	49 24.5	41 9.6	13 4.9
Timber	17 8.5	9 4.5	10 5.1	16 8.0	17 4.0	5 1.9
Tourism	4 2.0	9 4.5	6 3.0	8.0 4.0	22 5.2	9 3.4
Mining	10 5.0	1 0.5	7 3.5	5 2.5	13 3.1	4 1.5
Beekeeping	7 3.5	4 2.0	3 1.5	7 3.5	7 1.6	7 2.6
Seed or wildflower collection	0 0.0	1 0.5	0 0.0	4 2.0	0 0.0	0 0.0
Total Respondents	200 100.0	198 100.0	198 100.0	200 100.0	426 100.0	265 100.0

Note: This is a multiple dichotomy table.

Source: EBC (1998).

3.5 PROXIMITY TO NATIVE FORESTS AND NATIONAL PARKS

Table 3.7 provides an indication of whether areas of native forest, as subjectively defined by the respondent, are in close proximity to the respondents home. Throughout the SEQ RFA, 50% of respondents indicated that areas of native forest were within 15 minutes drive of their home, with this increasing to 75% within the North Coast sector and reducing to 30% in the Gladstone sector.

Table 3.7. “Are there any areas of native forest within 15 minutes drive of your home?”

Responses	Brisbane					
	Beaudesert	Metro	Builyan	Bundaberg	Esk	Gladstone
No	80 40.4	97 48.7	99 49.5	107 53.8	124 62.0	137 70.3
Yes	118 59.6	102 51.3	101 50.5	92 46.2	76 38.0	58 29.7
Total Respondents	198 100.0	199 100.0	200 100.0	199 100.0	200 100.0	195 100.0

	Kingaroy	Maryborough	North Coast	North East Coast	SEQ RFA Rural	SEQ RFA
No	105 52.8	100 50.8	49 25.0	106 53.0	171 40.2	115 43.6
Yes	94 47.2	97 49.2	147 75.0	94 47.0	254 49.8	149 56.4
Total Respondents	199 100.0	197 100.0	196 100.0	200 100.0	425 100.0	264 100.0

Note: There is a significant relationship between proximity to forests and sector of residence, $\chi^2(9)=102.17, p<.001$

Source: EBC (1998).

3.6 INVOLVEMENT IN FOREST MANAGEMENT, PLANNING OR PROTECTION

When respondents were asked if they had any involvement in forest management, planning or protection in Queensland, only 7% of respondents in the SEQ RFA sample indicated involvement. Table 3.8 shows that involvement in forest management, planning or protection did not differ significantly across the 10 sectors. In addition, no significant relationships could be established between involvement in forest management, planning or protection and the sex of the respondent, the respondent's proximity to native forests or national parks or the age of respondents.

Table 3.8. "Have you had any involvement in forest management, planning or protection in Queensland?"

Responses	Brisbane					
	Beaudesert	Metro	Builyan	Bundaberg	Esk	Gladstone
No	180	183	179	191	193	189
	90.5	92.4	89.9	96.0	97.0	95.0
Yes	19	15	20	8	6	10
	9.5	7.6	10.1	4.0	3.0	5.0
Total Respondents	199	198	199	199	199	199
	100.0	100.0	100.0	100.0	100.0	100.0
Responses	Kingaroy	Maryborough	North Coast	North East Coast	SEQ RFA Rural	SEQ RFA
No	185	185	189	188	408	244
	92.5	93.0	94.5	94.0	95.1	92.8
Yes	15	14	11	12	21	19
	7.5	7.0	5.5	6.0	4.9	7.2
Total Respondents	200	199	200	200	429	263
	100.0	100.0	100.0	100.0	100.0	100.0

Note: There was no significant relationship between involvement and sector of residence.

Source: EBC (1998).

When examining the type of involvement in forest management, planning or protection across the total sample, Table 3.9 indicates that the majority of this involvement was work related (34%).

Table 3.9. "What type of involvement have you had?" (Total Sample)

Type of Involvement	Frequency	Percent
Work related	46	33.8
Replanting native trees	27	19.9
Community group or organization	25	18.4
Educational or study programs	12	8.8
Landholder	10	7.4
Lobby government (protesting)	3	2.2
Other	16	11.8
Total Respondents	136	100.0

Note: This is a multiple response table.

Source: EBC (1998).

4. VALUE ORIENTATIONS

Given that the survey was based on telephone interviews with respondents, the most appropriate method for identifying specific value orientations was through the use of belief statements. Fourteen belief statements were used to identify the value orientations of respondents and were based on previous survey research in Tasmania, Victoria and Western Australia and through direct consultations with stakeholders in Queensland. It is recognised that additional belief statements would be required in order to identify more specifically the value orientations of the general population, however time constraints associated with telephone interviews and the requirement to accommodate stakeholder issues, precluded the use of additional statements in the survey. Nevertheless, it is argued that the belief statements that have been used provide general indicators of the value orientations held by the general community within the survey area.

While the percentage of agreement with each belief statements has been analyzed, it must be recognised that many of the belief statements are related and measure a common underlying factor or value orientation. Inter-correlations across all 14 belief statements indicated four common factors, where the belief statements within each factor were correlated and yet uncorrelated or independent of the belief statements within other factors.

Four factors were identified when the inter-correlations amongst all 14 belief statements were analysed and a principal components analysis with varimax rotation applied to the inter-correlation matrix. The four factors accounted for 50.7% of the total variance (Table 4.1), with the four factors identified as (i) forest management concern, (ii) intrinsic values or beliefs, (iii) dependency on timber and forest industries and (iv) extrinsic use values or beliefs.

Table 4.1. Principal Components Analysis of 14 Belief Statements

Factors	Eigenvalues	Percent of Variance	Cumulative Percent
Factor 1: Forest Management Concern	3.1281	22.3	22.3
Factor 2: Intrinsic Value	1.7549	12.5	34.9
Factor 3: Dependency on Timber and Forest Industries	1.2166	8.7	43.6
Factor 4: Extrinsic Value	0.9981	7.1	50.7

Source: EBC (1998).

Table 4.2 shows the factor loadings, which are the correlations between items and factors, for each of the 14 belief statements on each of the four factors. As is evident in Table 4.2, there are clearly four factors identifiable within the data, with item loadings clearly identifiable with each of the four factors.

Table 4.2. Factor Structure for the 14 Belief Statements

Belief Statements	Factor 1 Environmental Concern	Factor 2 Intrinsic Value	Factor 3 Dependency on Timber	Factor 4 Extrinsic Value
FACTOR 1: Forest Management Concern				
I am concerned about the management and use of native forests in QLD	0.72876	0.18164	-0.02375	0.14150
I am confident that native forests are being well managed in QLD ¹	-0.68640	0.20398	0.20320	0.12241
Better laws are needed to regulate the use of native forests in QLD	0.55495	0.23887	0.13592	-0.06058
The balance of the forest ecosystem is fragile	0.51768	0.45954	-0.20598	0.09713
Laws to protect native forests do not affect me ¹	-0.41211	-0.18024	0.00126	0.09716
FACTOR 2: INTRINSIC VALUE				
Forests are important for their own sake	0.21980	0.63606	-0.22462	0.05471
I appreciate the natural beauty of the forest	0.30163	0.57875	-0.23593	0.14145
The conservation and protection of native forests in QLD will benefit the QLD economy	0.27100	0.55968	0.04884	-0.19619
Forest industries should be more involved in the management of forests	-0.16145	0.53963	0.15248	0.28163
FACTOR 3: DEPENDENCY ON TIMBER AND FOREST INDUSTRIES				
If the forest and timber industries didn't exist in this area I would have to live somewhere else	0.04222	-0.16642	0.78230	0.00273
The area in which I live is very dependent on the timber and logging industry	-0.07090	-0.03476	0.77629	0.16587
FACTOR 4: EXTRINSIC USE VALUES				
I sometimes feel torn between the need for jobs and the need to protect native forests in QLD	0.11603	0.12675	-0.03489	0.73913
Protecting native forests will threaten jobs	-0.11933	-0.48653	0.14602	0.59205
The timber industry is important to the QLD economy	-0.21661	0.16859	0.34652	0.53451

Note: ¹These belief statements are negatively correlated with the associated factor.

Source: EBC (1998).

Table 4.3 shows the percentage agreement with each of the 14 belief statements for the total sample, the SEQ RFA sample and the SEQ RFA Rural sample. Although the percentage agreement is reported for each belief statement, the interpretation of individual belief statements should be undertaken with some caution as the reliability of a single belief statement is clearly not as accurate as a composite scale derived through the summation of several belief statements. With this caution in mind the percentages reported in Table 4.3, show the population within the SEQ RFA region has high levels of concern about the management and use of native forests in Queensland (84%), believed that better laws were needed to regulate the use of native forests (88%), that protecting native forests would not threaten jobs (76%) and that the conservation and protection of native forests in Queensland would benefit the Queensland economy (87%). As might be expected given the high levels of extrinsic and intrinsic value associated with forests, 65% of the population also report that sometimes their beliefs about the need for employment and the need to protect native forests were in conflict.

Table 4.3. Percentage Agreement: 14 Belief Statements

Belief Statements	Total Sample % Agreement	SEQ RFA % Agreement	SEQ RFA Rural % Agreement
FACTOR 1: Forest Management Concern			
I am concerned about the management and use of native forests in QLD	82.89	83.72	86.47
I am confident that native forests are being well managed in QLD	45.28	44.49	43.37
Better laws are needed to regulate the use of native forests in QLD	82.94	87.64	85.64
The balance of the forest ecosystem is fragile	89.56	94.59	91.96
Laws to protect native forests do not affect me	35.43	33.71	35.66
FACTOR 2: INTRINSIC VALUE			
Forests are important for their own sake	98.18	98.49	96.94
I appreciate the natural beauty of the forest	99.09	99.24	100.00
The conservation and protection of native forests in QLD will benefit the QLD economy	83.59	87.27	85.68
Forest industries should be more involved in the management of forests	84.52	82.95	83.74
FACTOR 3: DEPENDENCY ON TIMBER AND FOREST INDUSTRIES			
If the forest and timber industries didn't exist in this area I would have to live somewhere else	9.06	10.30	6.34
The area in which I live is very dependent on the timber and logging industry	24.94	14.34	20.98
FACTOR 4: EXTRINSIC USE VALUES			
I sometimes feel torn between the need for jobs and the need to protect native forests in QLD	63.46	65.00	62.02
Protecting native forests will threaten jobs	36.62	24.22	35.59
The timber industry is important to the QLD economy	83.58	77.78	82.46

Note: Percentage agreement is the percentage of respondents indicating either strongly agree or agree.
Source: EBC (1998).

Belief statements within each of the four factors were summed and an additive composite index derived for each of the four factors. It is recognised that factor scores could have been used in deriving the composite index, however the interpretation of findings based on factor scores is difficult, particularly for non expert readers, and as such a more interpretable additive index has been used. Table 4.4 shows the mean scores for each of the belief statements and the mean scores for the composite index for the total sample, the SEQ RFA sample and the SEQ RFA Rural sample. The alpha values reported in Table 4.4 vary from moderate to moderately high and show the extent of inter-item correlation for belief statements within each factor that are used to form the composite scale. It is the composite scale for each of the factors or value orientations which is used in the following analyses.

Table 4.4. Item Means and Standard Deviations: 14 Belief Statements

Belief Statements	Total Sample		SEQ RFA		SEQ RFA Rural	
	Mean	SD	Mean	SD	Mean	SD
FACTOR 1: Forest Management Concern						
I am concerned about the management and use of native forests in QLD	1.94	0.66	1.93	0.66	1.83	0.67
I am confident that native forests are being well managed in QLD ¹	2.60	0.68	2.63	0.67	2.64	0.73
Better laws are needed to regulate the use of native forests in QLD	1.98	0.79	1.92	0.61	1.88	0.66
The balance of the forest ecosystem is fragile	1.76	0.64	1.62	0.59	1.68	0.61
Laws to protect native forests do not affect me ¹	2.75	0.69	2.78	0.69	2.78	0.78
Composite Index (Alpha=0.65)	2.06	0.43	2.00	0.40	1.99	0.43
FACTOR 2: INTRINSIC VALUE						
Forests are important for their own sake	1.70	0.51	1.65	0.54	1.63	0.54
I appreciate the natural beauty of the forest	1.47	0.52	1.40	0.51	1.38	0.49
The conservation and protection of native forests in QLD will benefit the QLD economy	1.99	0.62	1.98	0.61	1.89	0.65
Forest industries should be more involved in the management of forests	2.01	0.61	2.01	0.63	1.91	0.67
Composite Index (Alpha=0.52)	1.80	0.36	1.76	0.37	1.73	0.39
FACTOR 3: DEPENDENCY ON TIMBER AND FOREST INDUSTRIES						
If the forest and timber industries didn't exist in this area I would have to live somewhere else	3.11	0.59	3.10	0.58	3.23	0.60
The area in which I live is very dependent on the timber and logging industry	2.88	0.71	3.08	0.65	2.99	0.71
Composite Index (Alpha=0.56)	2.99	0.54	3.09	0.50	3.11	0.54
FACTOR 4: EXTRINSIC USE VALUES						
I sometimes feel torn between the need for jobs and the need to protect native forests in QLD	2.30	0.72	2.29	0.69	2.30	0.77
Protecting native forests will threaten jobs	2.70	0.65	2.86	0.64	2.78	0.72
The timber industry is important to the QLD economy	2.02	0.60	2.13	0.62	2.06	0.60
Composite Index (Alpha = 0.40)	2.34	0.44	2.42	0.43	2.40	0.46

Note: ¹The scales for these items have been reversed when forming the composite index.

Cronbach's Alpha has been used to test the reliability of the composite index. Alpha is based on the total sample and varies between 0.00 and 1.00. An Alpha of 1.00 indicates the items forming the scale are all highly correlated.

Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree.

Source: EBC (1998).

4.1 FOREST MANAGEMENT CONCERN

Forest management concern was the most reliable factor and accounted for the highest percentage of variation amongst the 14 belief statements. In the context of this research and on the basis of the belief statements which are used to form this scale, forest management concern is based primarily on concern about the management and use of native forests. It should be emphasised that forest management concern is a general value orientation, with the specific issues of concern being highly variable within the population and across different population subgroups. Concern may for instance be based on the effects of bushfires on native forests, the logging of native forests or specific management practices or regimes occurring within native forests. To this extent forest management concern may be more closely aligned with the effects of human use on native forest ecosystem health and integrity.

Table 4.5 shows the composite score for forest management concern within the SEQ RFA, and SEQ RFA Rural samples and forest management concern scores across each of the 10 sectors. The means of 1.98 and 2.00 for forest management concern within the SEQ RFA sample and the SEQ RFA Rural sample show moderate levels of forest management concern on this composite index, where the index varies between 1 (very high concern) and 4 (very low concern). Table 4.5 also shows the 10 sectors ordered in relation to the percentage employed in agriculture and forestry. The mean scores for forest management concern across sectors show some association with the percentage employed in agriculture and forestry within each sector.

Table 4.5. Forest Management Concern by Sector

	Builyan	North East Coast	Kingaroy	Beaudesert	Esk	Maryborough
% Employed in Agric. & Forestry	46.35	39.40	34.02	19.43	19.13	13.25
Mean Score	2.16	2.05	2.14	2.03	2.13	2.07
Standard Deviation	0.44	0.41	0.42	0.48	0.32	0.43
	Bundaberg	North Coast	Gladstone	Brisbane	SEQ RFA Rural	SEQ RFA
% Employed in Agric. & Forestry	10.47	8.07	2.29	1.04		
Mean Score	1.99	1.90	2.05	2.01	1.98	2.00
Standard Deviation	0.45	0.48	0.38	0.39	0.45	0.40

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree.
 There is a statistically significant difference in mean forest management concern scores across the 10 sectors, $F(9,1736)=6.06, p<.001$.
 There is a significant linear relationship between sectors ordered in relation to percentage of the workforce employed in agriculture and forestry (ABS, 1991) and concern scores, $F(1,1765)=22.87, p<.001$. Some caution should be used in interpreting the linear effect as the assumption of equal appearing intervals has been violated.

Source: EBC (1998).

Although Table 4.5 shows significant variation in forest management concern across the 10 sectors, this analysis does not indicate which of the 10 sectors are specifically different from each other in relation to forest management concern. Table 4.6 shows the results of testing all pairwise comparisons between the 10 sectors in relation to forest management concern. It is apparent from Table 4.6 and Figure 2, that the population in Bundaberg has significantly higher levels of forest management concern than the population within the sectors of Builyan, Kingaroy and Esk and that most notably the North Coast sector differs significantly, with higher levels of concern, from the Builyan, North East Coast, Kingaroy, Esk and Maryborough sectors. As such it appears that the North Coast sector, has higher levels of forest management concern than five other sectors within the SEQ RFA region. Figure 3 thematically maps the distribution of forest management concern values across the 10 sectors within the SEQ RFA region.

Table 4.6. Forest Management Concern by Sector: Tukey's HSD Test for Simple Effects

	North				
	Builyan	East Coast	Kingaroy	Beaudesert	Esk
Builyan	—				
North East Coast	0.279	—			
Kingaroy	1.000	0.588	—		
Beaudesert	0.079	1.000	0.237	—	
Esk	0.998	0.803	1.000	0.422	—
Maryborough	0.489	1.000	0.798	0.997	0.936
Bundaberg	0.004	0.901	0.022	0.998	0.054
North Coast	0.001	0.025	0.001	0.190	0.001
Gladstone	0.290	1.000	0.601	1.000	0.813
Brisbane	0.025	0.995	0.098	1.000	0.211

	Maryborough	Bundaberg	North Coast	Gladstone	Brisbane
Bundaberg	0.774	—			
North Coast	0.012	0.681	—		
Gladstone	1.000	0.897	0.025	—	
Brisbane	0.969	1.000	0.309	0.994	—

Note: Tukey's HSD test has been used to test for all pairwise comparisons. The values reported in the table are probability values, with values highlighted in bold indicating a significant difference between pairs of sectors.

Source: EBC (1998).

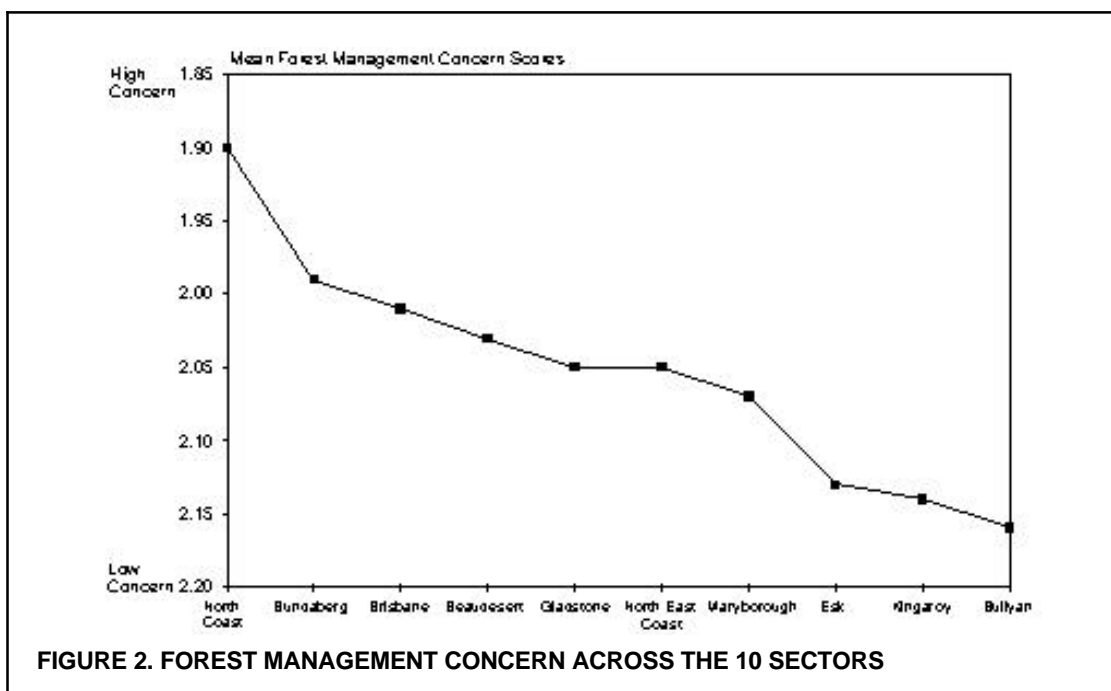


FIGURE 2. FOREST MANAGEMENT CONCERN ACROSS THE 10 SECTORS

When comparisons in forest management concern were made across the total sample between those who had visited State Forests and National Parks and those who had not, respondents who had visited State Forests and National Parks within the last year had significantly higher levels of forest management concern than those who had not visited State Forests and National Parks (Table 4.7). While there is a significant relationship between concern and visiting State Forests and National Parks any causal relationship is unidentified. For instance, it maybe that people with high levels of concern tend to visit State Forests and National Parks or that visiting State Forests and National Parks permits higher levels of forest management concern to develop.

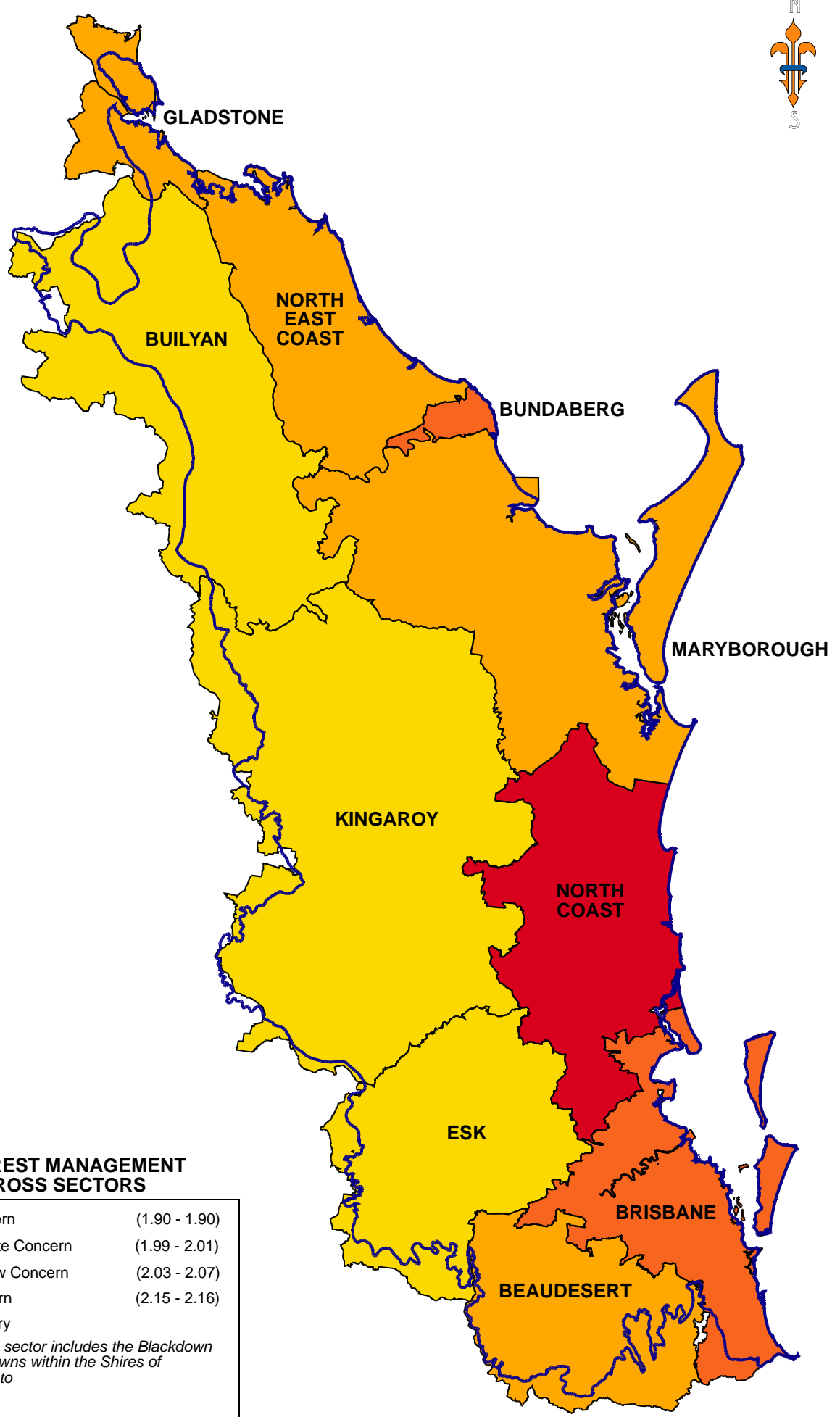


FIGURE 3. FOREST MANAGEMENT CONCERN ACROSS SECTORS

	Higher Concern	(1.90 - 1.90)
	High-Moderate Concern	(1.99 - 2.01)
	Moderate-Low Concern	(2.03 - 2.07)
	Lower Concern	(2.15 - 2.16)
	RFA Boundary	

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

Table 4.7. Forest Management Concern by Visiting State Forests and National Parks (Total Sample)

	Visited State Forests or National Parks in the last Year	
	Visited	Not Visited
Mean Score	2.00	2.11
Standard Deviation	0.44	0.41

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those respondents who had and had not visited state forests and national parks within the last year, $t(1743)=5.35, p<.001$

Source: EBC (1998).

Table 4.8 and Figure 4 also show a significant linear relationship between forest management concern and the frequency of visiting State Forests and National Parks, with increasing frequency of visitation being associated with higher levels of forest management concern.

Table 4.8. Forest Management Concern by Frequency of Visiting State Forests and National Parks (Total Sample)

	Frequency of Visiting State Forests or National Parks			
	Once a month or more	Once every 3 months	Once every 6 months	Once a year
Mean Score	1.95	1.97	2.02	2.05
Standard Deviation	0.49	0.46	0.41	0.39

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores across frequency of visiting state forests and national parks within the last year, $F(3, 827)=2.62, p<.05$. A significant linear relationship exists across mean scores, $F(1,827)=7.19, p<.01$.

Source: EBC (1998).

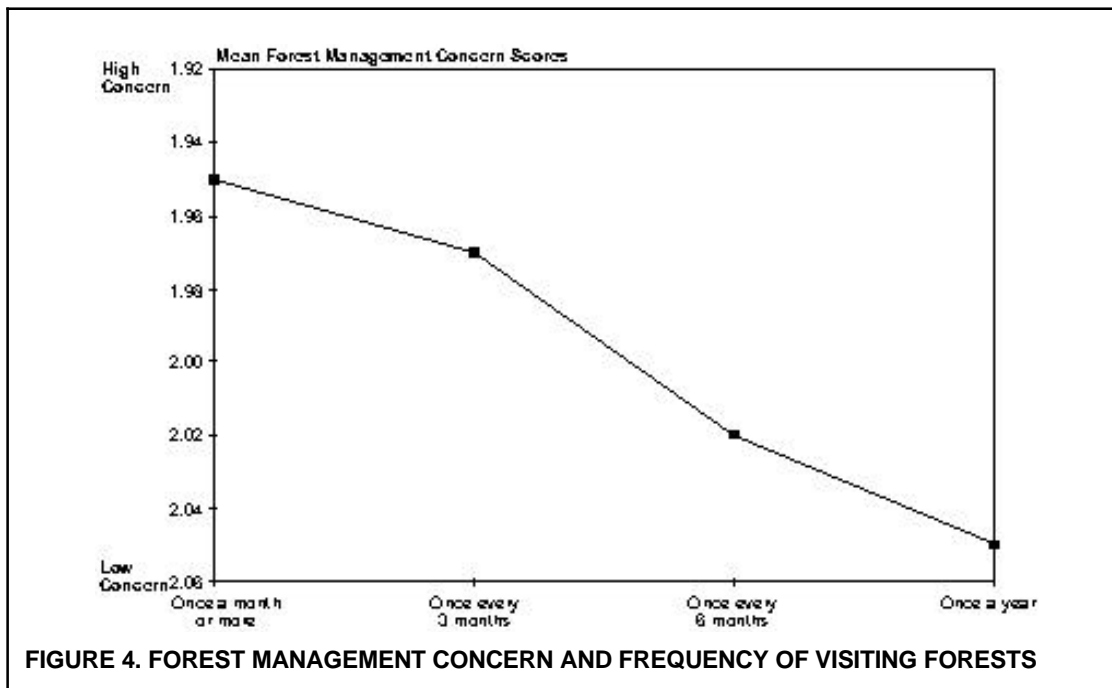


Table 4.9 also shows higher levels of forest management concern amongst those respondents who live within 15 minutes drive of State Forests and National Parks, however as indicated earlier, while there is an association between proximity and forest management concern the direction of any causal relationship is difficult to establish. In this case, respondents may choose to live closer to State Forests and National Parks because of their concern about environmental issues, or their higher levels of forest management concern may have occurred because of their residential proximity to State Forests and National Parks.

Table 4.9. Forest Management Concern by Proximity to State Forests and National Parks (Total Sample)

	Proximity of State Forests or National Parks to Home	
	Within 15 minutes drive	Over 15 minutes drive
Mean Score	2.01	2.10
Standard Deviation	0.45	0.40

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those who have state forests and national parks within and over 15 minutes drive from their home, $F(1,1755)=18.64, p<.001$.

Source: EBC (1998).

As might be expected, Table 4.10 shows a significant relationship between forest management concern and involvement in forest management planning or protection, with higher levels of forest management concern amongst those respondents who have been involved in forest management, planning or protection.

Table 4.10. Forest Management Concern by Involvement in Forest Management, Planning or Protection (Total Sample)

	Involvement in Forest Management, Planning or Protection	
	Involvement	No Involvement
Mean Score	1.98	2.06
Standard Deviation	0.48	0.42

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those who have and those who have no involvement in forest management, planning or protection, $F(1, 1758)=3.89, p<.05$.

Source: EBC (1998).

Table 4.11 shows a statistically significant difference between the sex of the respondent and forest management concern scores, with females having significantly higher levels of forest management concern than males.

Table 4.11. Forest Management Concern by Sex of Respondents (Total Sample)

	Sex of Respondents	
	Male	Female
Mean Score	2.08	2.04
Standard Deviation	0.44	0.42

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between males and females, $F(1, 1756)=3.95, p<.05$.

Source: EBC (1998).

Although there was no significant interaction between sex and age in relation to forest management concern, there was a significant relationship between the age of the respondent and their forest management concern scores. Table 4.12 and Figure 5 show a highly significant and consistent relationship between age and forest management concern, with younger respondents who are between 20 and 29 years of age having the

highest levels of concern. From 30 to over 80 years of age there is a clear linear relationship between age and forest management concern, with older respondents having lower levels of forest management concern than younger respondents (Figure 5).

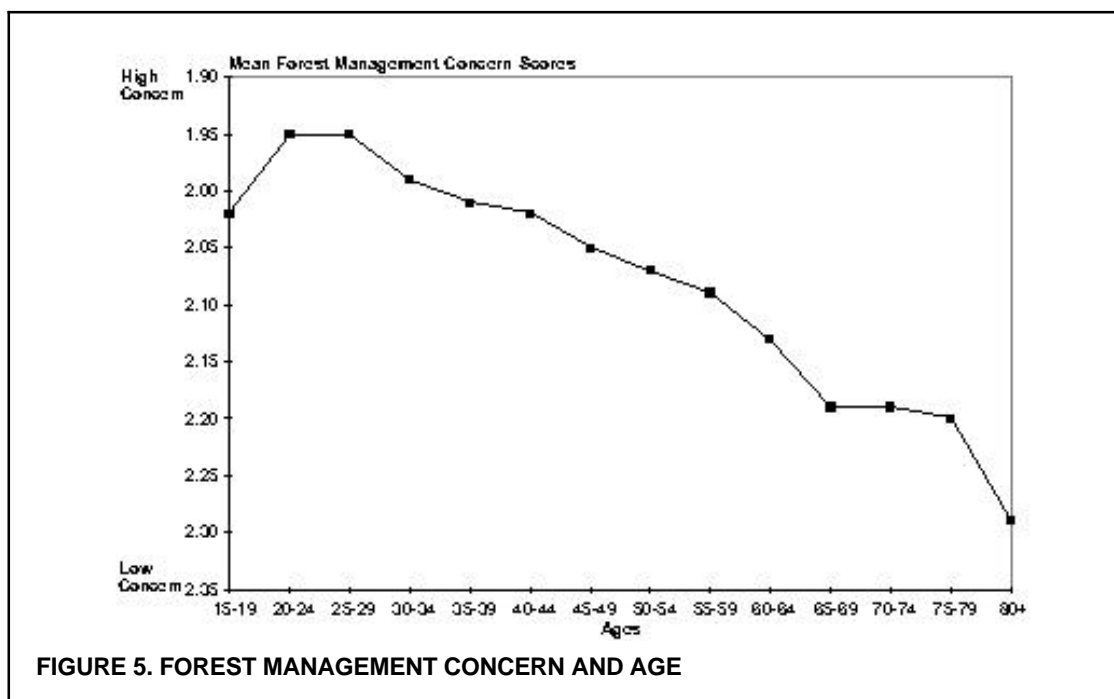
Table 4.12. Forest Management Concern by Age of Respondents

	Ages of Respondents (years)						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Mean Score	2.02	1.95	1.95	1.99	2.01	2.02	2.05
Standard Deviation	0.37	0.42	0.42	0.44	0.43	0.43	0.42
	50-54	55-59	60-64	65-69	70-74	75-79	80+
Mean Score	2.07	2.09	2.13	2.19	2.19	2.20	2.29
Standard Deviation	0.44	0.45	0.43	0.38	0.38	0.46	0.35

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree.
 There is a statistically significant difference in mean forest management concern scores across the 14 age groups, $F(13, 1745)=4.46, p<.001$.

There is a significant linear relationship between concern and age, $F(1, 1745)=39.85, p<.001$.

Source: EBC (1998).



Each respondent was asked if they, or any members of their household were employed in the timber, tourism, mining, beekeeping, seed or wildflower collection and grazing industries. Households with members employed in these industries were compared in relation to forest management concern with households with no members employed in these industries. Table 4.13 shows significantly higher levels of forest management concern amongst those households with no forest or forest related industry employees, when compared to households with forest or forest related industry employees.

Table 4.13. Forest Management Concern by Household Members Employed in Forest or Forest Related Industries (Total Sample)

	Households Members Employed in Forest Related Industries	
	Members Employed	No Members Employed
Mean Score	2.11	2.03
Standard Deviation	0.41	0.43

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those respondents who have household members employed in forest related industries and those who do not, $F(1, 1760)=12.26, p<.001$.

Source: EBC (1998).

When comparisons within specific industry groups were made in relation to forest management concern only household employees within grazing industries were found to differ in the level of forest management concern from household with employees not in the grazing industries. Table 4.14 shows that households with grazing industry employees had significantly lower levels of forest management concern than households with no grazing industry employees.

Table 4.14. Forest Management Concern by Household Members Employed Grazing Industries (Total Sample)

	Households Members Employed in Grazing Industries	
	Members Employed	No Members Employed
Mean Score	2.17	2.03
Standard Deviation	0.41	0.43

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those respondents who have household members employed in the grazing industries and those who do not, $F(1, 1765)=25.89, p<.001$.

Source: EBC (1998).

4.2 INTRINSIC VALUES

The intrinsic value scale consisted of four belief statements which emphasised the intrinsic non use value of forests, including their inherent and aesthetic values and the importance of protection and preservation. This value orientation is also closely associated with a biospheric or ecocentric value orientation which places an emphasis on the inherent value of nature independent of any human value that may be ascribed to it.

Table 4.15 shows relatively high mean scores for intrinsic value within the SEQ RFA and SEQ RFA Rural samples. This also supports the high levels of intrinsic value within these samples identified in Table 4.3. Table 4.15 also shows each of the 10 sectors ordered in relation to the percentage of the population within each sector employed in agriculture and forestry. This Table indicates that not only is there a significant difference amongst each of the 10 sectors in relation to the intrinsic value of forests, but that there is a possible association between the percentage of the population employed in agriculture and forestry and intrinsic value, with low employment in this industry sector being associated with higher levels of intrinsic value within the population.

Table 4.15. Intrinsic Values by Sector

	North					
	Bullyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
% Employed in Agric. & Forestry	46.35	39.40	34.02	19.43	19.13	13.25
Mean Score	1.84	1.83	1.74	1.77	1.92	1.86
Standard Deviation	0.34	0.38	0.33	0.36	0.31	0.31

	North				SEQ RFA	SEQ
	Bundaberg	Coast	Gladstone	Brisbane	Rural	RFA
% Employed in Agric. & Forestry	10.47	8.07	2.29	1.04		
Mean Score	1.72	1.56	1.92	1.78	1.71	1.76
Standard Deviation	0.35	0.42	0.35	0.34	0.41	0.37

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree.

There is a statistically significant difference in mean intrinsic value scores across the 10 sectors, $F(9, 1871)=17.23, p<.001$.

There is a significant linear relationship between sectors ordered in relation to percentage of the workforce employed in agriculture and forestry (ABS, 1991) and intrinsic values, $F(1, 1871)=5.97, p<.05$.

Source: EBC (1998).

While Table 4.15 shows there is a significant difference across each of the 10 sectors in relation to the intrinsic value of native forests, Table 4.16 and Figure 6 shows that the population within the North Coast sector has significantly higher levels of intrinsic value than the population within all other sectors. In addition, the population within the Brisbane sector has significantly higher levels of intrinsic value than the population with the Esk and Gladstone and a significantly lower level of intrinsic value than the North Coast sector. Figure 7 shows the thematic distribution of intrinsic value scores across sectors throughout the SEQ RFA region.

Table 4.16. Intrinsic Values by Sector: Tukey's HSD Test for Simple Effects

	North				
	Bullyan	East Coast	Kingaroy	Beaudesert	Esk
Bullyan	—				
North East Coast	1.000	—			
Kingaroy	0.218	0.250	—		
Beaudesert	0.771	0.809	0.999	—	
Esk	0.324	0.276	0.001	0.002	—
Maryborough	1.000	1.000	0.061	0.433	0.690
Bundaberg	0.029	0.035	0.999	0.874	0.001
North Coast	0.001	0.001	0.001	0.001	0.001
Gladstone	0.458	0.401	0.001	0.004	1.000
Brisbane	0.843	0.874	0.993	1.000	0.002

	Mary-	North		Gladstone	Brisbane
	borough	Bundaberg	Coast		
Bundaberg	0.005	—			
North Coast	0.001	0.001	—		
Gladstone	0.813	0.001	0.001	—	
Brisbane	0.517	0.772	0.001	0.005	—

Note: Tukey's HSD test has been used to test for all pairwise comparisons.

The values reported in the table are probability values, with values highlighted in bold indicating a significant difference between pairs of sectors.

Source: EBC (1998).

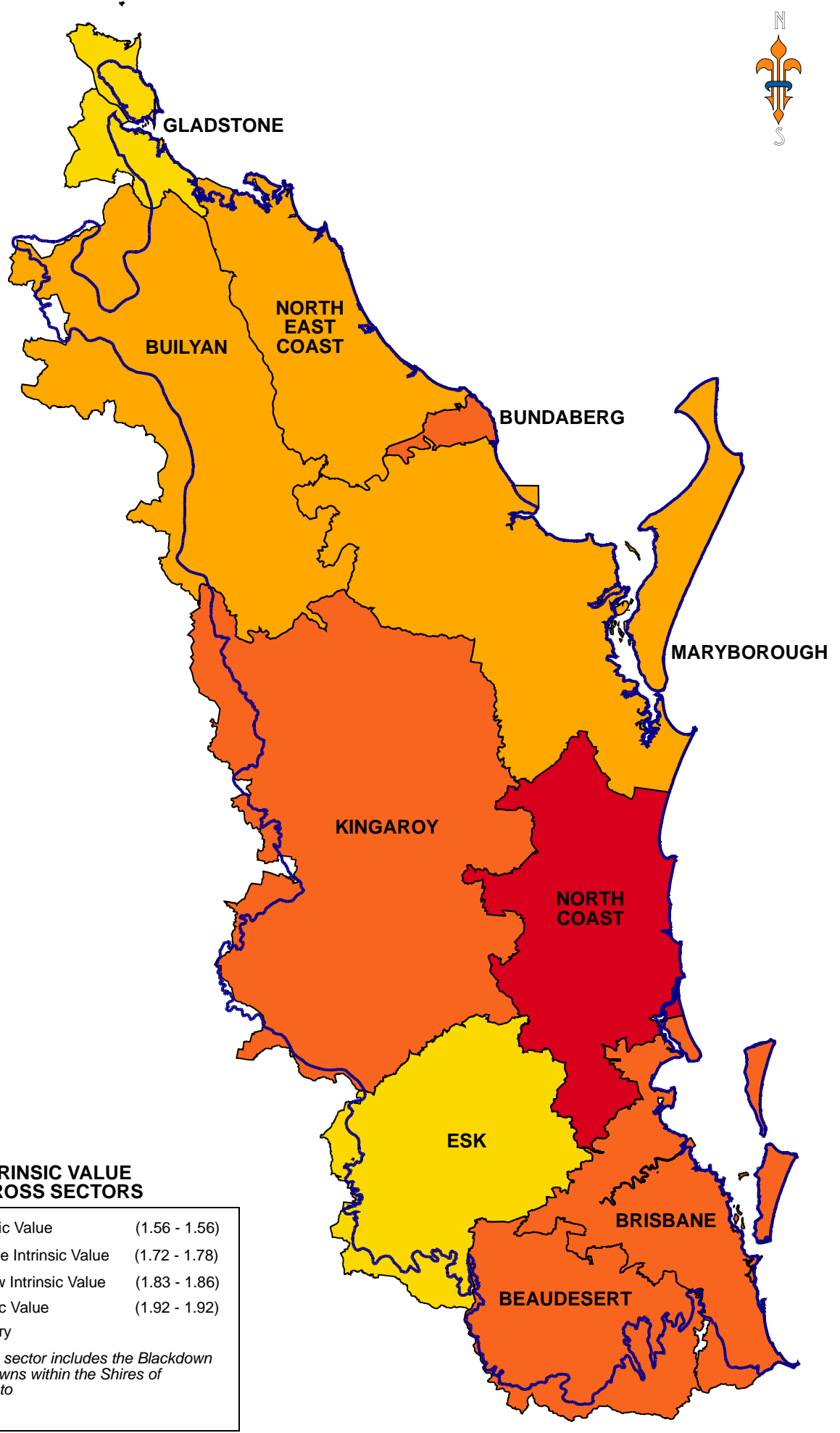








FIGURE 7. INTRINSIC VALUE ACROSS SECTORS

	Higher Intrinsic Value	(1.56 - 1.56)
	High-Moderate Intrinsic Value	(1.72 - 1.78)
	Moderate-Low Intrinsic Value	(1.83 - 1.86)
	Lower Intrinsic Value	(1.92 - 1.92)
	RFA Boundary	

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

 EBC (1998)

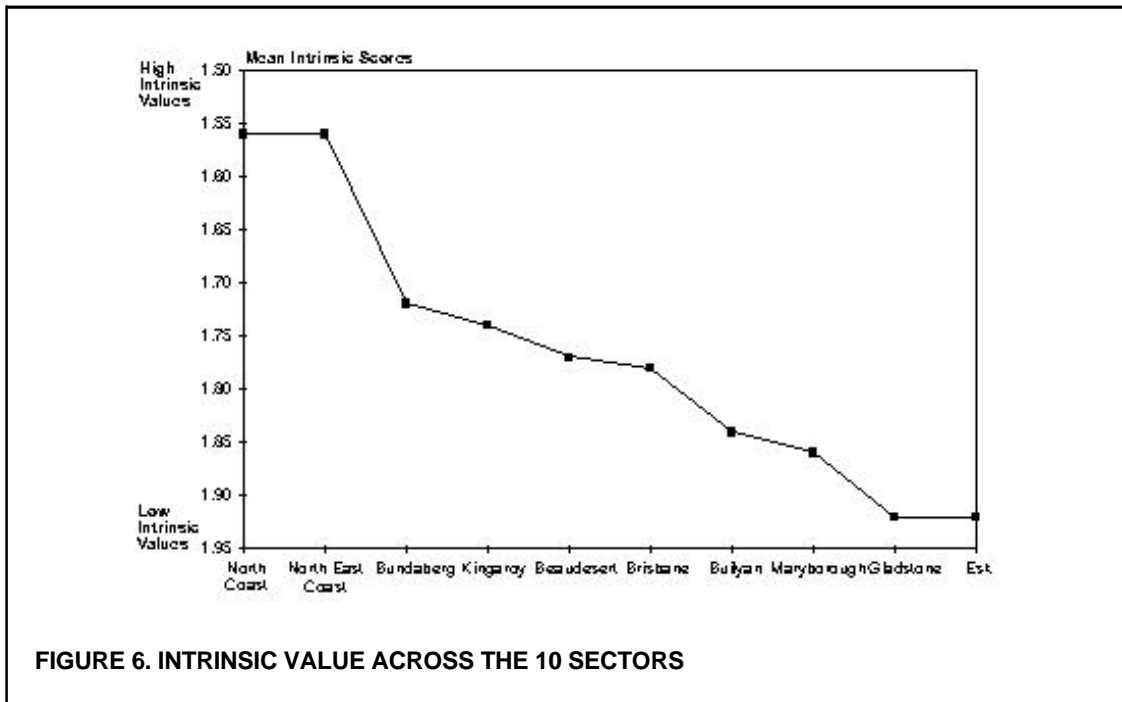


FIGURE 6. INTRINSIC VALUE ACROSS THE 10 SECTORS

Table 4.17 shows a significant relationship between the intrinsic value of native forests and whether respondents had visited State Forests and National Parks within the last year. Those respondents who had visited State Forests and National Parks within the last year were found to have higher intrinsic value scores than those respondents who had not visited State Forests and National Parks. As was discussed in relation to forest management concern, no causal direction can be inferred from this association. In addition, and unlike forest management concern, there was no relationship between intrinsic values and the frequency of visiting State Forests and National Parks.

Table 4.17. Intrinsic Values by Visiting State Forests and National Parks (Total Sample)

	Visited State Forests or National Parks in the last Year	
	Visited	Not Visited
Mean Score	1.75	1.83
Standard Deviation	0.38	0.35

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean intrinsic value scores between those respondents who had and had not visited state forests and national parks within the last year, $F(1, 1849)=22.67, p<.001$

Source: EBC (1998).

Table 4.18 shows a significant relationship between the intrinsic value of native forests and proximity of the respondents home to State Forests and National Parks, with those respondents in close proximity to State Forests and National Parks having higher levels of intrinsic value than those respondents further from State Forests and National Parks.

Table 4.18. Intrinsic Values by Proximity to State Forests and National Parks (Total Sample)

	Proximity of State Forests or National Parks to Home	
	Within 15 minutes drive	Over 15 minutes drive
Mean Score	1.76	1.84
Standard Deviation	0.38	0.34

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean intrinsic value scores between the two levels of proximity, $F(1, 1855)=24.08, p<.001$.

Source: EBC (1998).

Unlike forest management concern, intrinsic value did not differ across levels of involvement in forest management, planning or protection and there was also no difference in levels of intrinsic value across age groups. However, Table 4.19 shows a significant difference in intrinsic value between males and females, with females having higher levels of intrinsic value than males.

Table 4.19. Intrinsic Values by Sex of Respondents (Total Sample)

	Sex of Respondents	
	Male	Female
Mean Score	1.82	1.78
Standard Deviation	0.37	0.35

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean intrinsic value scores between males and females, $F(1, 1863)=4.08, p<.05$.

Source: EBC (1998).

Each respondent was asked if they, or any members of their household were employed in the timber, tourism, mining, beekeeping, seed or wildflower collection and grazing industries. Households with members employed in these industries were compared in relation to their intrinsic value scores with households with no members employed in these industries. Table 4.20 shows significantly higher levels of intrinsic value amongst those households with no forest or forest related industry employees, when compared to households with forest or forest related industry employees.

Table 4.20. Intrinsic Values by Household Members Employed in Forest and Forest Related Industries (Total Sample)

	Households Members Employed in Forest Related Industries	
	Members Employed	No Members Employed
Mean Score	1.83	1.78
Standard Deviation	0.36	0.36

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean forest management concern scores between those respondents who have household members employed in forest related industries and those who do not, $F(1, 1864)=7.10, p<.01$.

Source: EBC (1998).

When comparisons within specific industry groups were made in relation to intrinsic value only household employees within timber and grazing industries were found to differ in the level of intrinsic value from household with employees not in these industries. Table 4.21 shows that households with timber industry employees had significantly lower levels of intrinsic value than households with no timber industry employees.

Table 4.21. Intrinsic Values by Household Members Employed in Timber Industries (Total Sample)

	Households Members Employed in Timber Industries	
	Members Employed	No Members Employed
Mean Score	1.86	1.79
Standard Deviation	0.36	0.36

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean intrinsic value scores between those respondents who have household members employed in forest related industries and those who do not, $F(1, 1871)=4.26, p<.05$.

Source: EBC (1998).

In addition, Table 4.22 shows that households with grazing industry employees had significantly lower levels of intrinsic value than households with no grazing industry employees.

Table 4.22. Intrinsic Values by Household Members Employed in Grazing Industries (Total Sample)

	Households Members Employed in Grazing Industries	
	Members Employed	No Members Employed
Mean Score	1.86	1.78
Standard Deviation	0.35	0.36

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean intrinsic value scores between those respondents who have household members employed in forest related industries and those who do not, $F(1, 1871)=10.24, p<.001$.

Source: EBC (1998).

4.3 EXTRINSIC USE VALUES

Extrinsic use values emphasise the belief in the value of forests for human use and in the context of this research the extrinsic value orientation consists of beliefs associated with the importance of employment over the protection of native forests and the economic value of native forests through timber production. In contrast to the intrinsic value orientation or the closely associated biocentric or ecocentric value orientations, extrinsic use values emphasise the value of nature in relation to human use and human valuation.

Across the SEQ RFA sample the importance of the extrinsic value of native forests is relatively low, when compared to intrinsic values in particular, with a mean extrinsic value score of 2.38 within the SEQ RFA sample on a four point scale (Table 4.23). However, within the SEQ RFA region and across the 10 sectors there is a significant variation in extrinsic value scores, with a possible linear relationship between extrinsic value and sectors ordered in relation to employment in agriculture and forestry. As might be expected, and as shown in Table 4.23, high levels of extrinsic value tend to be associated with those sectors with high levels of employment in forestry and agriculture.

Table 4.23. Extrinsic Values by Sector

	North					
	Builyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
% Employed in Agric. & Forestry	46.35	39.40	34.02	19.43	19.13	13.25
Mean Score	2.18	2.36	2.18	2.46	2.40	2.27
Standard Deviation	0.40	0.42	0.42	0.50	0.35	0.39
	North				SEQ RFA	SEQ
	Bundaberg	Coast	Gladstone	Brisbane	Rural	RFA
% Employed in Agric. & Forestry	10.47	8.07	2.29	1.04		
Mean Score	2.33	2.42	2.38	2.43	2.38	2.43
Standard Deviation	0.46	0.53	0.42	0.43	0.48	0.43

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic value scores across the 10 sectors, $F(9, 1980)=9.78, p<.001$.

There is a significant linear relationship between sectors ordered in relation to percentage of the workforce employed in agriculture and forestry (ABS, 1991) and extrinsic values, $F(1, 1844)=28.50, p<.001$.

Source: EBC (1998).

Table 4.24 and Figure 8 shows that the Builyan and Kingaroy sectors have the highest levels of extrinsic value in the population and that these two sectors differ significantly from all other sectors, with the exception of Maryborough, within the SEQ RFA region. Figure 9 shows the thematic variation in extrinsic value scores across the 10 sectors within the RFA region.

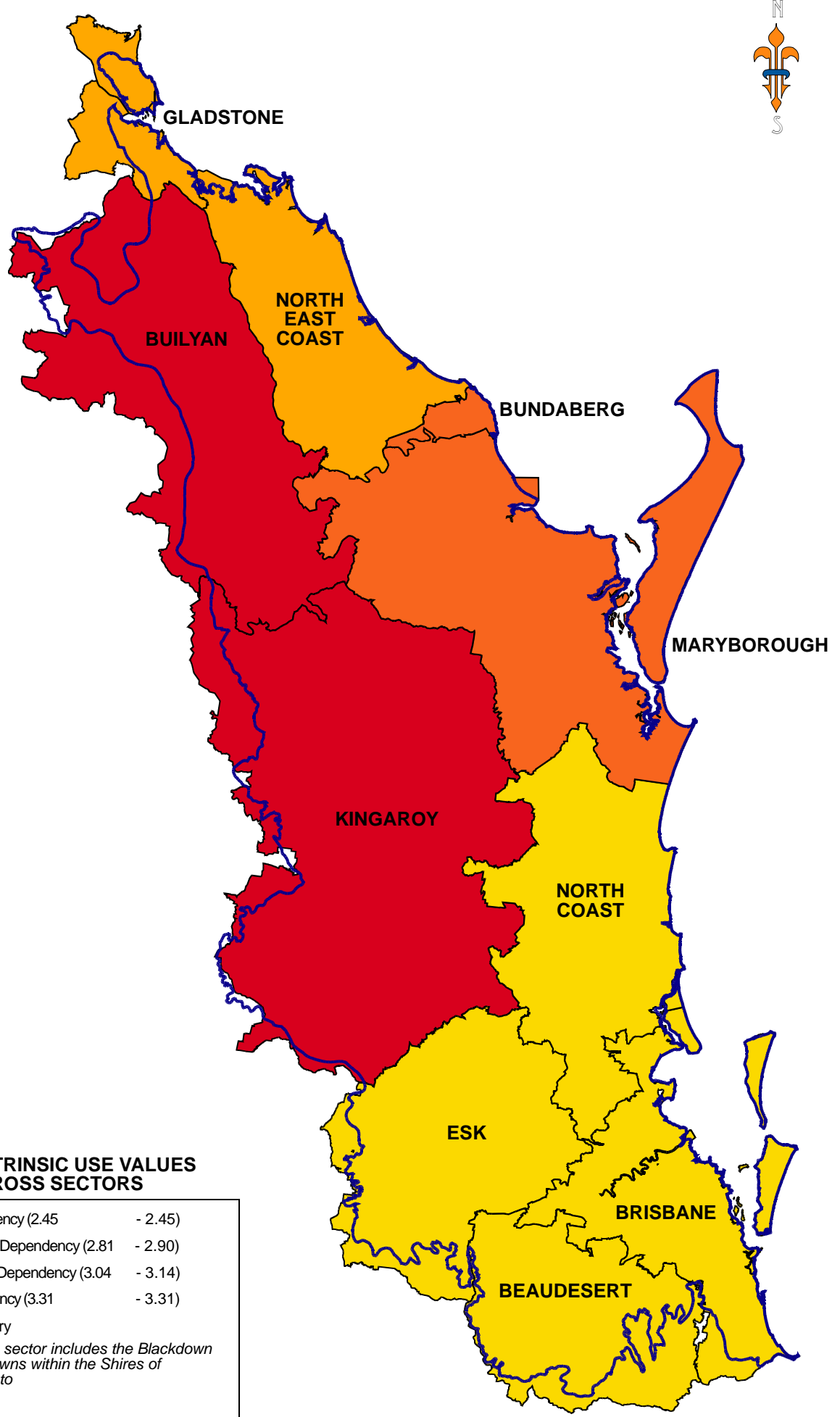


FIGURE 9. EXTRINSIC USE VALUES ACROSS SECTORS

	Higher Dependency (2.45	- 2.45)
	High-Moderate Dependency (2.81	- 2.90)
	Moderate-Low Dependency (3.04	- 3.14)
	Lower Dependency (3.31	- 3.31)

RFA Boundary

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

EBC (1998)

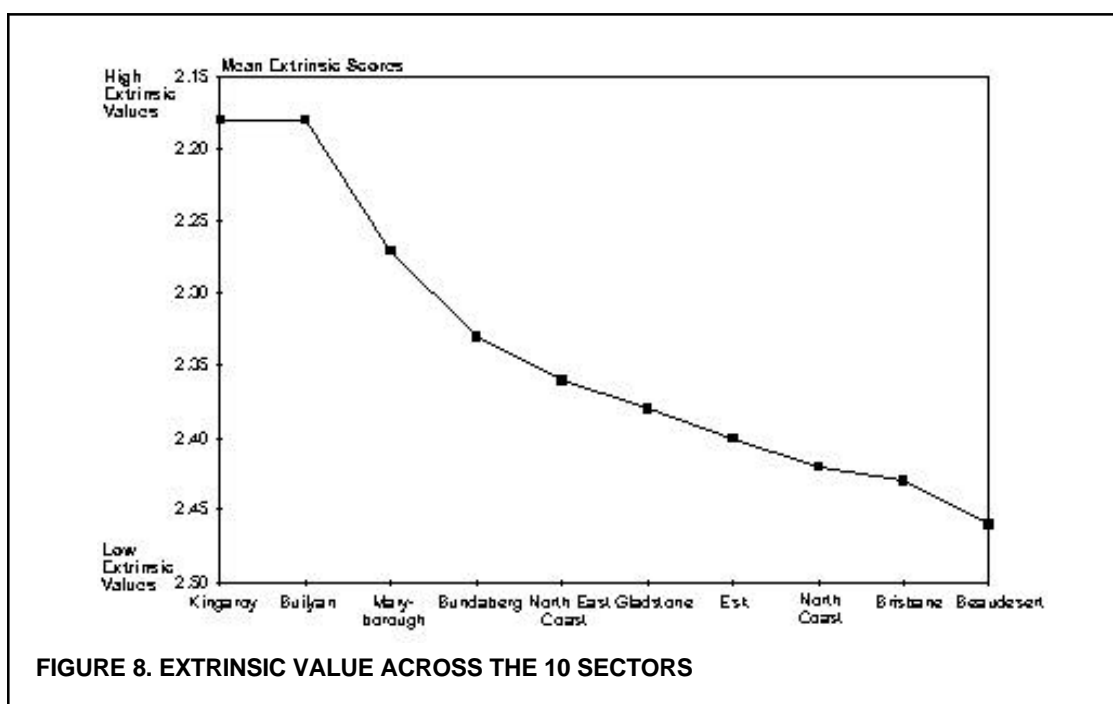
Table 4.24. Extrinsic Values by Sector: Tukey's HSD Test for Simple Effects

	Builyan	North East Coast	Kingaroy	Beaudesert	Esk
Builyan	—				
North East Coast	0.001	—			
Kingaroy	1.000	0.002	—		
Beaudesert	0.001	0.542	0.001	—	
Esk	0.001	0.996	0.001	0.975	—
Maryborough	0.493	0.597	0.609	0.002	0.106
Bundaberg	0.022	1.000	0.035	0.185	0.880
North Coast	0.001	0.964	0.001	0.999	1.000
Gladstone	0.001	1.000	0.001	0.783	1.000
Brisbane	0.001	0.848	0.001	1.000	1.000

	Maryborough	Bundaberg	North Coast	Gladstone	Brisbane
Bundaberg	0.950	—			
North Coast	0.052	0.707	—		
Gladstone	0.372	0.994	0.996	—	
Brisbane	0.013	0.453	1.000	0.005	—

Note: Tukey's HSD test has been used to test for all pairwise comparisons. The values reported in the table are probability values, with values highlighted in bold indicating a significant difference between pairs of sectors.

Source: EBC (1998).



Unlike forest management concern and the intrinsic value orientation, there was no relationship between the extrinsic value orientation and visiting State Forests or National Parks and the frequency of visiting State Forests or National Parks. In addition, there was no relationship between the extrinsic value orientation and residential proximity to State Forests and National Parks or any relationship between the sex or age of the respondent.

Table 4.25 shows a relationship between extrinsic value and involvement in forest management, planning or protection, where those involved in forest management, planning or protection have significantly lower levels of extrinsic value than those not involved in forest management, planning or protection.

Table 4.25. Extrinsic Use Values by Involvement in Forest Management, Planning or Protection (Total Sample)

	Involvement in Forest Management, Planning or Protection	
	Involvement	No Involvement
Mean Score	2.42	2.33
Standard Deviation	0.53	0.44

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic value scores between those who have and those who have no involvement in forest management, planning or protection, $F(1, 1838)=4.63, p<.05$.

Source: EBC (1998).

Respondents were asked if they, or any members of their household were employed in the timber, tourism, mining, beekeeping, seed or wildflower collection and grazing industries. Respondents from households with members employed in these industries were compared in relation to their extrinsic value scores with respondents from households with no members employed in these industries. Table 4.26 shows significantly higher levels of extrinsic value amongst those households with forest or forest related industry employees, when compared to households with no forest or forest related industry employees. If Table 4.26 is compared with Table 4.20, respondents from forest and forest related industry households tend to have higher extrinsic and lower intrinsic values than households with no forest industry employees.

Table 4.26. Extrinsic Values by Household Members Employed in Forest and Forest Related Industries (Total Sample)

	Households Members Employed in Forest Related Industries	
	Members Employed	No Members Employed
Mean Score	2.27	2.37
Standard Deviation	0.42	0.45

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic value scores between those respondents who have household members employed in forest related industries and those who do not, $F(1, 1837)=16.05, p<.001$.

Source: EBC (1998).

When examining respondents from households with specific forest industry employees, Table 4.27 shows that households with timber industry employees have higher extrinsic values than respondents from households with no timber industry employees. In addition, Table 4.28 shows that respondents from households with grazing industry employees have significantly higher levels of extrinsic value than households with no grazing industry employees.

Table 4.27. Extrinsic Values by Household Members Employed in Timber Industries (Total Sample)

	Households Members Employed in Timber Industries	
	Members Employed	No Members Employed
Mean Score	2.19	2.35
Standard Deviation	0.45	0.44

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic scores between those respondents who have household members employed in timber industries and those who do not, $F(1, 1844)=14.44, p<.001$.

Source: EBC (1998).

Table 4.28. Extrinsic Values by Household Members Employed in Grazing Industries (Total Sample)

	Households Members Employed in Grazing Industries	
	Members Employed	No Members Employed
Mean Score	2.26	2.36
Standard Deviation	0.40	0.45

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic value scores between those respondents who have household members employed in grazing industries and those who do not, $F(1, 1844)=11.57, p<.001$.

Source: EBC (1998).

4.4 TIMBER AND LOGGING INDUSTRY DEPENDENCY

The factor associated with timber and logging dependency is not a value orientation, but represents beliefs about how dependent the area in which the respondent lives is on the timber and logging industries. As this factor represents a more objective belief about timber and logging dependency, individual and group differences in perceived dependency are not expected, however regional differences as shown in Table 4.29 would be expected.

Table 4.29 shows that not only is there a significant difference across the 10 sectors in the perceived dependency on the timber and logging industries, but that there is also a probable linear relationship between the level of employment in agriculture and forestry industries within each sector and perceived dependency on the timber and logging industries. Table 4.29 shows that the sectors of Builyan and Kingaroy have the highest levels of perceived dependency when compared the remaining eight sectors.

Table 4.29. Timber and Logging Industry Dependency by Sector

	Builyan	North				
		East Coast	Kingaroy	Beaudesert	Esk	Maryborough
% Employed in Agric. & Forestry	46.35	39.40	34.02	19.43	19.13	13.25
Mean Score	2.45	2.90	2.81	3.31	3.11	3.04
Standard Deviation	0.54	0.42	0.48	0.56	0.43	0.58

	Bundaberg	North			SEQ RFA	SEQ
		Coast	Gladstone	Brisbane	Rural	RFA
% Employed in Agric. & Forestry	10.47	8.07	2.29	1.04		
Mean Score	3.03	3.14	3.06	3.10	3.11	3.09
Standard Deviation	0.42	0.63	0.37	0.49	0.56	0.50

Note: Scale values are represented by (1) strongly agree, (2) agree, (3) disagree, (4) strongly disagree. There is a statistically significant difference in mean extrinsic value scores across the 10 sectors, $F(9, 1980)=44.06, p<.001$.

There is a significant linear relationship between sectors ordered in relation to percentage of the workforce employed in agriculture and forestry (ABS, 1991) and perceived dependency on forestry and logging, $F(1, 1980)=142.91, p<.001$.

Source: EBC (1998).

Table 4.30 and Figure 10 show that Builyan and Kingaroy have significantly higher levels of perceived dependency when compared to the remaining eight sectors, and that the Beaudesert sector has the lowest level of perceived dependency on timber and logging when compared to the remaining sectors.

Figure 11 shows thematically variations in perceived dependency on timber and logging industries across each of the 10 sectors within the SEQ RFA region.

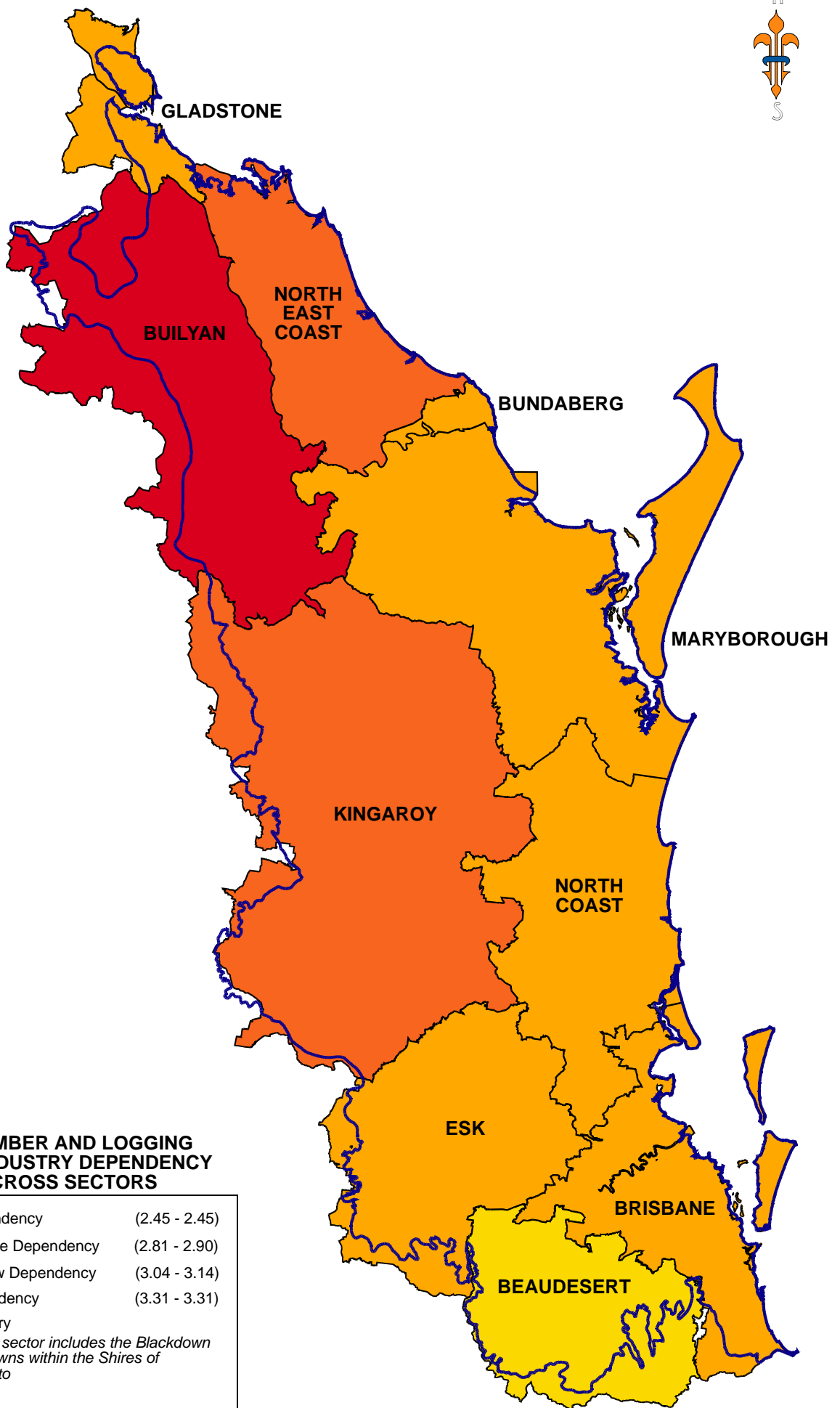


FIGURE 11. TIMBER AND LOGGING INDUSTRY DEPENDENCY ACROSS SECTORS

	Higher Dependency	(2.45 - 2.45)
	High-Moderate Dependency	(2.81 - 2.90)
	Moderate-Low Dependency	(3.04 - 3.14)
	Lower Dependency	(3.31 - 3.31)
	RFA Boundary	

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

EBC (1998)

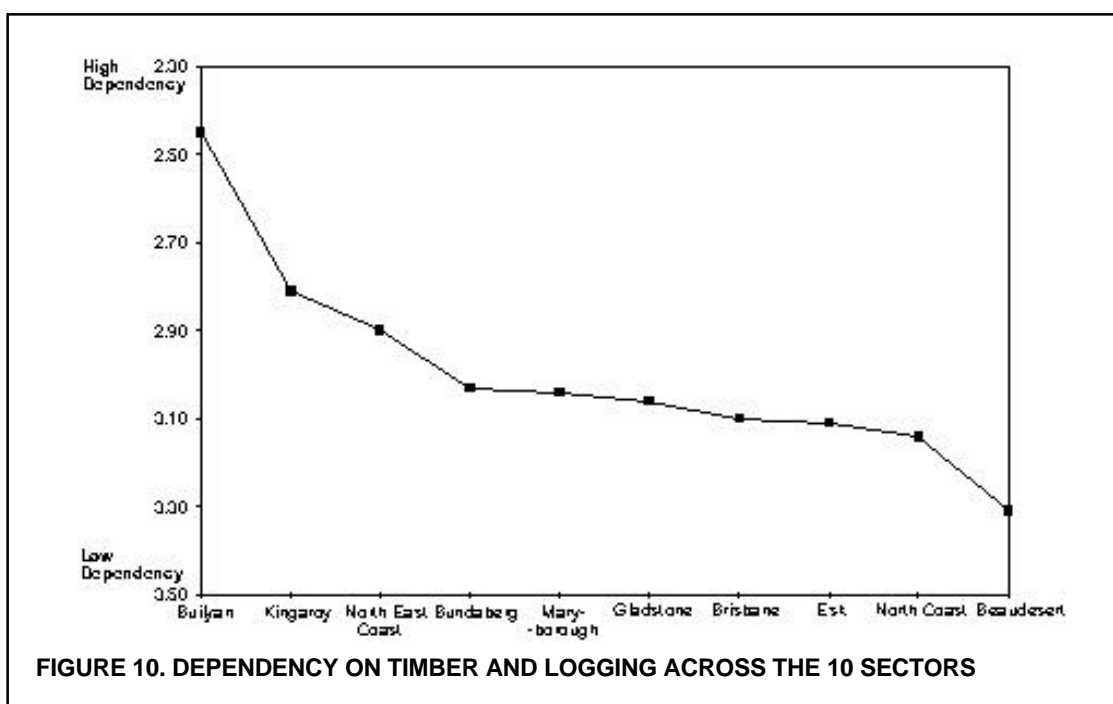
Table 4.30. Timber and Logging Industry Dependency by Sector: Tukey's HSD Test for Simple Effects

	Builyan	North East Coast	Kingaroy	Beaudesert	Esk
Builyan	—				
North East Coast	0.001	—			
Kingaroy	0.001	0.721	—		
Beaudesert	0.001	0.001	0.001	—	
Esk	0.001	0.002	0.001	0.001	—
Maryborough	0.001	0.191	0.001	0.001	0.926
Bundaberg	0.001	0.238	0.001	0.001	0.895
North Coast	0.001	0.001	0.001	0.025	0.999
Gladstone	0.001	0.058	0.001	0.001	0.995
Brisbane	0.001	0.004	0.001	0.001	1.000

	Maryborough	Bundaberg	North Coast	Gladstone	Brisbane
Bundaberg	1.000	—			
North Coast	0.508	0.707	—		
Gladstone	1.000	0.994	0.816	—	
Brisbane	0.966	0.453	0.997	0.999	—

Note: Tukey's HSD test has been used to test for all pairwise comparisons. The values reported in the table are probability values, with values highlighted in bold indicating a significant difference between pairs of sectors.

Source: EBC (1998).



5. USE OF STATE FORESTS AND NATIONAL PARKS

The questionnaire included several questions which focused on the use and frequency of use of State Forests and National Parks in Queensland. Questions were also included which identified the name or location of the State Forest or National Park visited in the last 12 months and the type of activities undertaken in the State Forest or National Park.

5.1 USE OF STATE FORESTS AND NATIONAL PARKS

Within the last year an estimated 44% of the population within the SEQ RFA region were found to have visited State Forests or National Parks (Table 5.1).

Table 5.1. "During the last year, have you visited any State Forests or National Parks in Queensland?"

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Visited Forests or National Parks	918	46.5	117	44.2	215	50.8
Not visited Forests or National Parks	1,058	53.5	148	55.8	208	49.2
Total Respondents	1,976	100.0	265	100.0	423	100.0

Source: EBC (1998).

Within the SEQ RFA region and across the 10 sectors the population within the Beaudesert sector were most likely to have visited State Forests and National Parks within the last year when compared to all remaining sectors, while the populations of Gladstone and Bundaberg were least likely to have visited State Forests and National Parks (Table 5.2 and Figure 12).

Table 5.2. Visiting State Forests and National Parks by Sector

	North					
	Builyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
Visited Forests or National Parks	99 <i>50.0</i>	88 <i>44.7</i>	91 <i>46.0</i>	116 <i>59.2</i>	82 <i>41.2</i>	88 <i>44.2</i>
Not visited Forests or National Parks	99 <i>50.0</i>	109 <i>55.3</i>	107 <i>54.0</i>	80 <i>40.8</i>	117 <i>58.8</i>	111 <i>55.8</i>
Total Respondents	198 <i>100.0</i>	197 <i>100.0</i>	198 <i>100.0</i>	196 <i>100.0</i>	199 <i>100.0</i>	199 <i>100.0</i>

	North				SEQ RFA	SEQ
	Bundaberg	Coast	Gladstone	Brisbane	Rural	RFA
Visited Forests or National Parks	81 <i>40.9</i>	108 <i>55.4</i>	80 <i>40.6</i>	85 <i>42.7</i>	215 <i>50.8</i>	117 <i>44.2</i>
Not visited Forests or National Parks	117 <i>59.8</i>	87 <i>44.6</i>	117 <i>59.4</i>	114 <i>57.3</i>	208 <i>49.2</i>	148 <i>55.8</i>
Total Respondents	198 <i>100.0</i>	195 <i>100.0</i>	197 <i>100.0</i>	199 <i>100.0</i>	423 <i>100.0</i>	265 <i>100.0</i>

Note: There is a statistically significant association between visiting State Forests and National Parks and the 10 sectors, $X^2(9)=29.17$, $p<.001$.

Values in italics are percentages.

Source: EBC (1998).

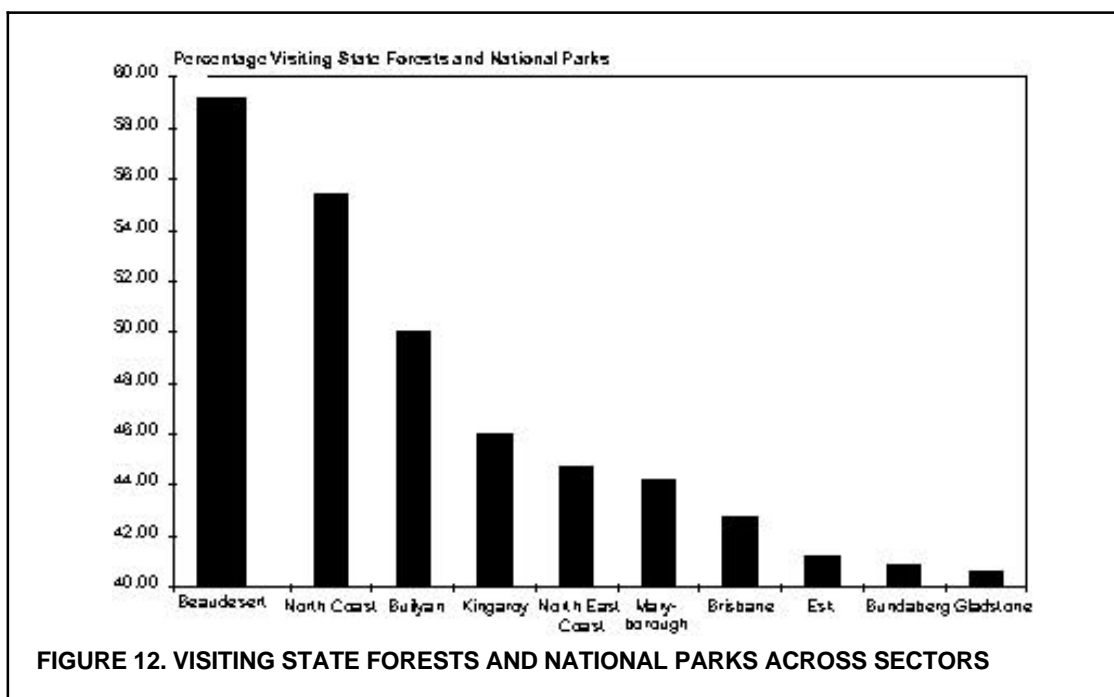


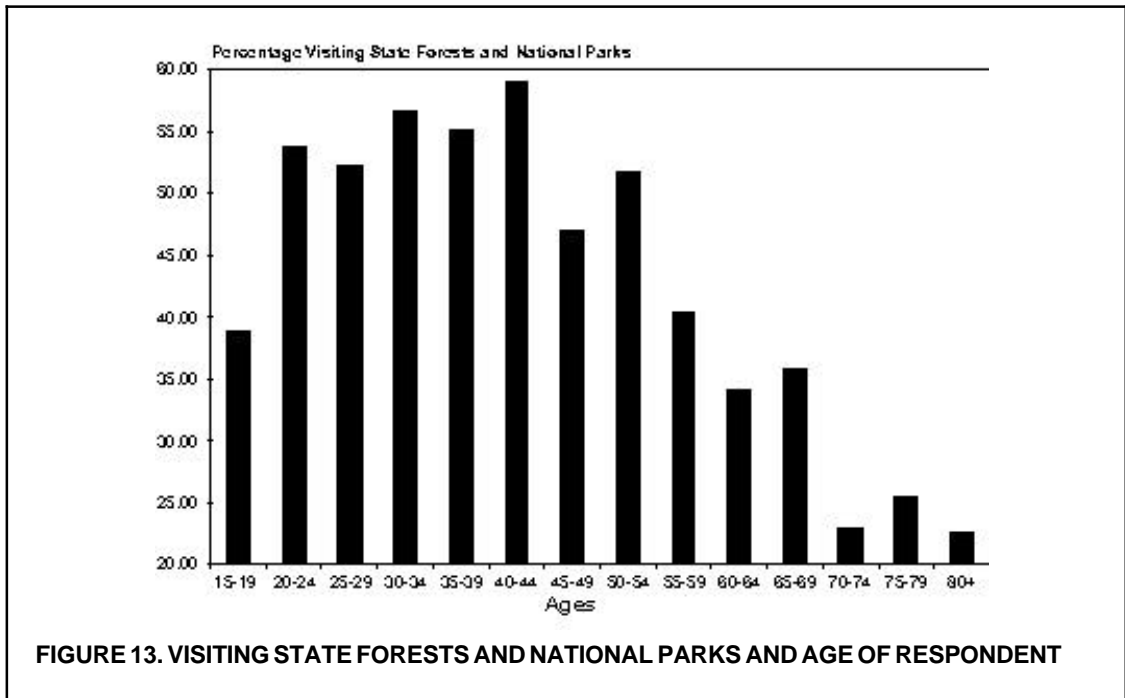
Table 5.3 and Figure 13 show the relationship between visiting State Forests and National Parks and the respondents age. Visiting State Forests and National Parks appears to be highest amongst the 20-44 year old age group. After 44 years of age, and as shown in Figure 13, there is a gradual decrease in visiting State Forests and National Parks.

Table 5.3. Visiting State Forests and National Parks by Age of Respondents

	Ages of Respondents (years)						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Visited Forests	37	49	71	103	129	127	92
	<i>38.9</i>	<i>53.8</i>	<i>52.2</i>	<i>56.6</i>	<i>55.1</i>	<i>59.1</i>	<i>46.9</i>
Not Visited	58	42	65	79	105	88	104
	<i>61.1</i>	<i>46.2</i>	<i>47.8</i>	<i>43.4</i>	<i>44.9</i>	<i>40.9</i>	<i>53.1</i>
Total Respondents	95	91	136	182	234	215	196
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
	50-54	55-59	60-64	65-69	70-74	75-79	80+
Visited Forests	100	63	51	47	22	12	7
	<i>51.8</i>	<i>40.4</i>	<i>34.2</i>	<i>35.9</i>	<i>22.9</i>	<i>25.5</i>	<i>22.6</i>
Not Visited	93	93	98	84	74	35	24
	<i>48.2</i>	<i>59.6</i>	<i>65.8</i>	<i>64.1</i>	<i>77.1</i>	<i>74.5</i>	<i>77.4</i>
Total Respondents	193	156	149	131	96	47	31
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: There is a statistically significant association between visiting State Forests and National Parks and the 14 age groups, $X^2(13)=90.41$, $p<.001$.
Values in italics are percentages.

Source: EBC (1998).



As might be expected, and as shown in Table 5.4, respondents living within 15 minutes drive of a State Forest or National Park are more likely to have visited a State Forest or National Park within the last year, than those respondents who live greater than 15 minutes drive from a State Forest or National Park.

Table 5.4. Visiting State Forests and National Parks by Proximity

	Proximity to State Forests and National Parks to Home	
	Within 15 minutes Drive	Over 15 minutes Drive
Visited Forests or National Parks	399	511
	<i>40.5</i>	<i>52.5</i>
Not visited Forests or National Parks	587	462
	<i>59.5</i>	<i>47.5</i>
Total Respondents	986	973
	<i>100.0</i>	<i>100.0</i>

Note: There is a statistically significant association between visiting State Forests and National Parks and proximity to State Forests and National Parks, $\chi^2(1)=28.60, p<.001$. Values in italics are percentages.

Source: EBC (1998).

5.2 FREQUENCY OF USE OF STATE FORESTS OR NATIONAL PARKS

The frequency of visiting State Forests or National Parks is shown in Table 5.5. Within the SEQ RFA sample, the distribution appears to be bimodal, with a third of respondents visiting once every three months and a third visiting once a year.

Table 5.5. "How often have you visited these forests or parks?"

Frequency of visits	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Once a month or more	184	20.1	15	12.9	39	18.8
Once every three months	228	24.9	37	31.9	57	27.4
Once every six months	210	23.0	25	21.6	50	24.0
Once a year	292	31.9	39	33.6	62	29.8
Total Respondents	914	100.0	116	100.0	208	100.0

Source: EBC (1998).

Within each of the 10 sectors there are significant variations in the frequency of visiting State Forests and National Parks, with approximately 42% of the population within the Esk and Gladstone samples visiting once a year and 32% within the Builyan sample visiting State Forests and National Parks once a month or more.

Table 5.6. Frequency of Visiting State Forests and National Parks by Sector

	North					
	Builyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
Once a month or more	32 <i>32.0</i>	17 <i>19.3</i>	17 <i>18.7</i>	23 <i>20.0</i>	11 <i>13.6</i>	23 <i>26.4</i>
Once every 3 months	19 <i>19.0</i>	23 <i>26.1</i>	24 <i>26.4</i>	32 <i>27.8</i>	18 <i>22.2</i>	22 <i>25.3</i>
Once every six months	18 <i>18.0</i>	22 <i>25.0</i>	22 <i>24.2</i>	27 <i>23.5</i>	18 <i>22.2</i>	19 <i>21.8</i>
Once a year	31 <i>31.0</i>	26 <i>29.5</i>	28 <i>30.8</i>	33 <i>28.7</i>	34 <i>42.0</i>	23 <i>26.4</i>
Total Respondents	100 <i>100.0</i>	88 <i>100.0</i>	91 <i>100.0</i>	115 <i>100.0</i>	81 <i>100.0</i>	87 <i>100.0</i>
	North				SEQ RFA	SEQ
	Bundaberg	Coast	Gladstone	Brisbane	Rural	RFA
Once a month or more	14 <i>17.1</i>	28 <i>26.7</i>	9 <i>11.5</i>	10 <i>11.5</i>	39 <i>18.8</i>	15 <i>12.9</i>
Once every 3 months	22 <i>25.3</i>	17 <i>20.7</i>	29 <i>27.6</i>	14 <i>17.9</i>	57 <i>27.4</i>	37 <i>31.9</i>
Once every six months	21 <i>25.6</i>	23 <i>21.9</i>	23 <i>29.5</i>	17 <i>19.5</i>	50 <i>24.0</i>	25 <i>21.6</i>
Once a year	30 <i>36.6</i>	25 <i>23.8</i>	32 <i>41.0</i>	30 <i>34.5</i>	62 <i>29.8</i>	39 <i>33.6</i>
Total Respondents	198 <i>100.0</i>	195 <i>100.0</i>	197 <i>100.0</i>	199 <i>100.0</i>	208 <i>100.0</i>	116 <i>100.0</i>

Note: There is a statistically significant association between the frequency of visiting State Forests and National Parks and the 10 sectors, $X^2(27)=39.50$, $p<.05$.
Values in italics are percentages.

Source: EBC (1998).

Although there were no sex or age differences in frequency of visiting State Forests or National Parks, those respondents living within 15 minutes drive of a State Forest or National Park visited forests and parks with more frequency than those respondents living over 15 minutes drive from State Forests and National Parks (Table 5.7).

Table 5.7. Frequency of Visiting State Forests and National Parks by Proximity

	Proximity to State Forests and National Parks to Home	
	Within 15 minutes Drive	Over 15 minutes Drive
Once a month or more	140 <i>27.7</i>	44 <i>11.0</i>
Once every three months	140 <i>27.7</i>	87 <i>21.7</i>
Once every six months	103 <i>20.4</i>	104 <i>25.9</i>
Once a year	122 <i>24.2</i>	166 <i>41.4</i>
Total Respondents	505 <i>100.0</i>	401 <i>100.0</i>

Note: There is a statistically significant association between the frequency of visiting State Forests and National Parks and proximity to State Forests and National Parks, $X^2(3)=58.01$, $p<.001$.
Values in italics are percentages.

Source: EBC (1998).

5.3 LOCATION OF STATE FORESTS AND NATIONAL PARKS

In addition to identifying the frequency of use of native forests, respondents were also asked to identify up to four State Forests or National Parks that they had visited or used within the last year. No specific reference was made in the question to recreational use or any specific type of use. Respondents could identify up to four State Forests or National Parks they had visited within the last year. Table 5.8 shows that 60% of respondents within the SEQ RFA sample had visited one State Forest or National Park within the last year, and 25% had visited two State Forests or National Parks within the last year.

Table 5.8. Number of Specific State Forests and National Parks Visited Within the Last Year

Number Visited	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
One	616	66.7	71	60.2	141	65.6
Two	176	19.0	30	25.4	43	20.0
Three	81	8.8	9	7.6	21	9.8
Four	51	5.5	8	6.8	10	4.7
Total Respondents	1,076	100.0	148	100.0	216	100.0

Note: A maximum of four locations could be identified.

Source: EBC (1998).

Across the total sample, respondents identified 320 State Forest and National Park locations they had visited within the last year. Table 5.9 shows for the total sample, the most commonly reported State Forests and National Parks that were visited. The four most commonly reported locations were Lamington National Park (9.4%), Bunya Mountains National Park (9.2%), the Fraser Island Section of the Great Sandy National Park (6.9%) and the Tambourine Mountains National Park (6.1%). Of note in Table 5.9 is the high percentage of 'Other locations' (47%), which indicates respondents are identifying highly specific and idiosyncratic locations not commonly reported by the majority of respondents.

Table 5.9. Location or Name of State Forests or National Parks Visited Within the Last 12 Months (Total Sample)

Name of State Forest or National Park	Frequency	Percent
Lamington NP	87	9.42
Bunya Mountains NP	85	9.20
Great Sandy NP (Fraser Island)	64	6.93
Tambourine Mountains NP	58	6.28
Noosa Park	57	6.17
Cania Gorge NP	44	4.76
Burrum Coast NP	38	4.11
Yerimbulah NP	27	2.92
Great Sandy NP (Cooloola)	24	2.60
Kalpower NP	23	2.49
Eurimbula NP	23	2.49
Deepwater NP	21	2.27
Mt French	20	2.16
Conondale NP	19	2.06
Ravesbourne NP	17	1.84
O'Reilys	16	1.73
Main Range NP	16	1.73
Brisbane Forest Park	13	1.41
Carnarvon NP	13	1.41
Condallia Falls	13	1.41
Wongi SF	13	1.41
Kroombit Tops NP	12	1.30
Blackdown Tablelands NP	13	1.41
Crows Nest NP	11	1.19
Poona NP	11	1.19
Girraween NP	11	1.19
Bundaberg (near)	10	1.08
The Palms NP	10	1.08
Witches Falls	10	1.08
Central Queensland	15	1.62
North Queensland	41	4.44
Other locations (9 or less respondents)	432	46.75
Total Respondents	924	100.00

Note: This is a multiple response table where all rows of the table are independent.

Source: EBC (1998).

5.4 ACTIVITIES IN STATE FORESTS OR NATIONAL PARKS

In addition to identifying the location of the State Forest or National Park visited within the last year, respondents also identified the type of activities they participated in at these locations. Table 5.10 shows that the most commonly reported activity in State Forests and National Parks within the SEQ RFA sample was bushwalking (62%), followed by picnics (25%), camping (12%) and viewing the scenery (12%).

Table 5.10. Activities in State Forests or National Parks (Total Sample)

Activities	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Bushwalking	519	56.85	73	61.86	123	58.29
Picnics	182	19.93	30	25.42	47	22.27
Camping	145	15.88	14	11.86	34	16.11
View the scenery	141	15.44	14	11.86	41	19.43
Fishing	103	11.28	9	7.63	18	8.53
Swimming	94	10.30	12	10.17	27	12.80
Driving and 4WD	81	8.87	8	6.78	18	8.53
BBQs	55	6.02	7	5.93	12	5.69
Work related	43	4.71	3	2.54	11	5.21
Bird watching	23	2.52	1	0.85	5	2.37
Boating (inc canoeing)	15	1.64	2	1.69	2	0.95
To socialise	13	1.42	1	0.85	3	1.42
Educational purposes	12	1.31	5	4.95	2	0.95
Playing	10	1.10	2	1.69	3	1.42
Hotel accommodation	9	0.99	4	3.39	1	0.47
Bike riding	9	0.99	0	0.00	3	1.42
Photography	9	0.99	2	1.69	2	0.95
Surfing	7	0.77	1	0.85	3	1.42
Horse riding	7	0.77	2	1.69	1	0.47
Live there	7	0.77	1	0.85	0	0.00
Climbing	7	0.77	1	0.85	3	1.42
Flower collecting	6	0.66	0	0.00	3	1.42
Day trip	6	0.66	1	0.85	1	0.47
Other activities	43	4.70	0	0.00	13	6.16
Total	913	100.00	118	100.0	211	100.0

Note: 'Other' activities includes five or less respondents in the Total Sample and three or less respondents who were unclassified in the SEQ RFA Rural sample.

This is a multiple response table where all rows are independent.

Source: EBC (1998).

6. ATTITUDES TO FOREST MANAGEMENT AND USE

6.1 INDUSTRY AND RECREATION ACTIVITY IN STATE NATIVE FORESTS

The perceived acceptability of industry and recreation activity in State Forests and National Parks was also examined. Respondents were asked whether recreation, tourism, beekeeping, grazing, logging or mining should be allowed in State native forests in Queensland. Table 6.1 shows that within the SEQ RFA sample, the majority of respondents believed that recreation (84%), tourism (65%) and beekeeping (57%) should be allowed in State native forests.

Table 6.1. "Which of the following, if any, do you think should be allowed in State Native Forests in Queensland?"

Activity	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Recreation	1,614	83.6	213	84.2	361	86.4
Tourism	1,499	77.7	165	65.2	330	78.9
Beekeeping	1,392	72.1	145	57.3	315	75.0
Grazing	704	36.5	43	17.0	128	30.6
Logging	597	30.9	43	17.0	119	28.5
Mining	270	14.0	20	7.9	49	11.7
Total Respondents	1,930	100.0	265	100.0	423	100.0

Note: This is a multiple dichotomy table, where all rows are independent.

Source: EBC (1998).

In relation to forest management and use (Table 6.2 and Figure 14), the majority of the population within the SEQ RFA region believed that recreation (84%), tourism (65%) and beekeeping (57%) should be allowed in State native forests in Queensland, and conversely that grazing (17%), logging (17%) and mining (8%) should not be allowed. Only in the Bullyan sector does a majority of the population support logging (67%) and grazing (66%) in State native forests.

Table 6.2. Attitudes to Industry and Recreation Activity in State Native Forests by Sector

	North					
	Bullyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
Recreation	163 <i>82.3</i>	140 <i>74.1</i>	164 <i>85.0</i>	169 <i>89.4</i>	157 <i>82.6</i>	169 <i>85.8</i>
Tourism	170 <i>85.9</i>	134 <i>70.9</i>	153 <i>79.3</i>	168 <i>88.9</i>	136 <i>71.6</i>	164 <i>83.2</i>
Beekeeping	171 <i>86.4</i>	135 <i>71.4</i>	150 <i>77.7</i>	141 <i>74.6</i>	135 <i>71.1</i>	152 <i>77.2</i>
Grazing	130 <i>65.7</i>	74 <i>39.2</i>	103 <i>53.4</i>	65 <i>34.4</i>	59 <i>31.1</i>	79 <i>40.1</i>
Logging	132 <i>66.7</i>	56 <i>29.6</i>	90 <i>46.6</i>	57 <i>30.2</i>	43 <i>22.6</i>	61 <i>31.0</i>
Mining	50 <i>25.3</i>	32 <i>16.9</i>	42 <i>21.8</i>	25 <i>13.2</i>	12 <i>6.3</i>	31 <i>15.7</i>
Total Respondents	198 <i>100.0</i>	189 <i>100.0</i>	193 <i>100.0</i>	189 <i>100.0</i>	190 <i>100.0</i>	197 <i>100.0</i>

	Bundaberg	North Coast	Gladstone	Brisbane	SEQ RFA Rural	SEQ RFA
	Recreation	148 <i>75.1</i>	179 <i>92.7</i>	167 <i>85.6</i>	158 <i>83.6</i>	361 <i>86.4</i>
Tourism	144 <i>73.1</i>	159 <i>82.4</i>	157 <i>80.5</i>	114 <i>60.3</i>	330 <i>78.9</i>	165 <i>65.2</i>
Beekeeping	123 <i>62.4</i>	148 <i>76.7</i>	136 <i>69.7</i>	101 <i>53.4</i>	315 <i>75.0</i>	145 <i>57.3</i>
Grazing	56 <i>28.4</i>	47 <i>24.4</i>	66 <i>33.8</i>	25 <i>13.2</i>	128 <i>30.6</i>	43 <i>17.0</i>
Logging	40 <i>20.3</i>	60 <i>31.1</i>	35 <i>17.9</i>	23 <i>12.2</i>	119 <i>28.5</i>	43 <i>17.0</i>
Mining	21 <i>10.7</i>	24 <i>12.4</i>	21 <i>10.8</i>	12 <i>6.3</i>	49 <i>11.7</i>	20 <i>7.9</i>
Total Respondents	197 <i>100.0</i>	193 <i>100.0</i>	195 <i>100.0</i>	189 <i>100.0</i>	423 <i>100.0</i>	265 <i>100.0</i>

Note: This is a multiple dichotomy table, where all rows are independent.
Values in italics are percentages.

Source: EBC (1998).

When respondents were asked whether logging could coexist with beekeeping, conservation, grazing, tourism, recreation or mining the majority of respondents believed that, with the exception of mining, all activities could coexist with logging (Table 6.3). However, considerable caution needs to be used in the interpretation of findings based on this question as the term logging was not defined and was possibly open to various subjective interpretations by the respondent. For instance, and in relation to logging activity, the intensity, type and frequency of logging activity were not defined allowing considerable subjective variation in the interpretation and meaning of this term.

Table 6.3. "Do you think logging can coexist with any of the following activities?"

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Beekeeping	1,155	75.1	126	68.9	212	68.4
Conservation	1,128	73.4	126	68.9	237	76.5
Grazing	1,113	72.4	114	62.3	205	76.1
Tourism	1,103	71.8	122	66.7	219	70.6
Recreation	1,091	71.0	121	66.1	215	69.4
Mining	826	53.7	97	53.0	158	51.0
Total Respondents	1,537	100.0	265	100.0	423	100.0

Note: This is a multiple dichotomy table, where all rows are independent.

Source: EBC (1998).

Within each of the 10 sectors the majority of respondents again believed that all activities with the exception of mining could coexist with logging (Table 6.4). There were however significant differences in the percentage of respondents who believed specific activities

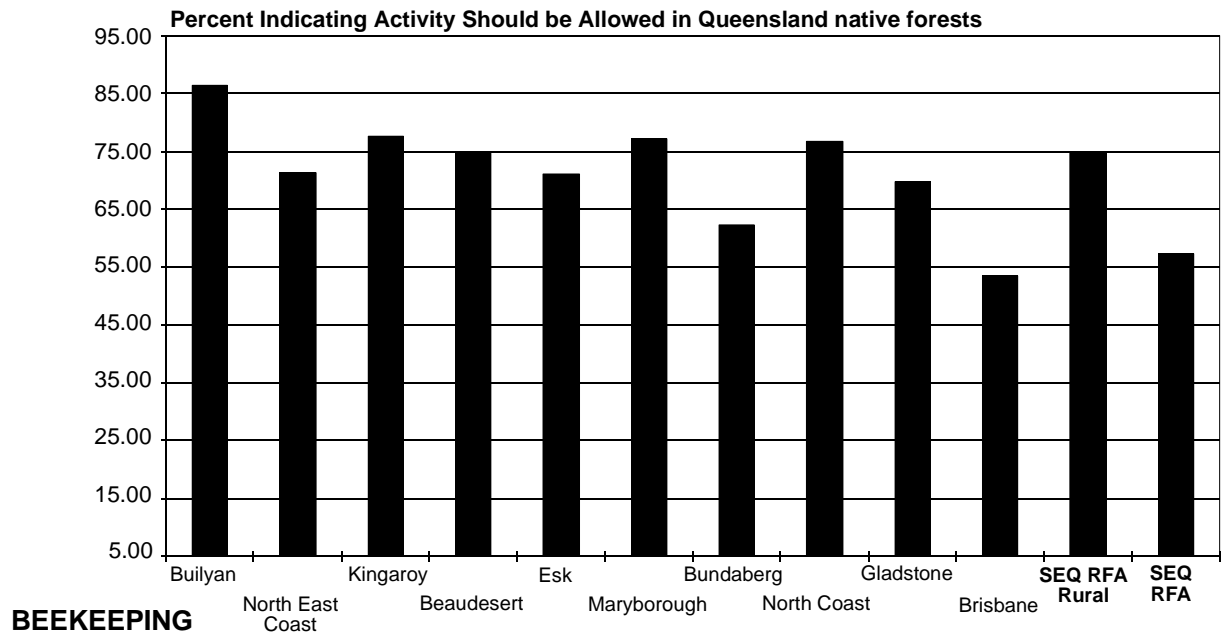
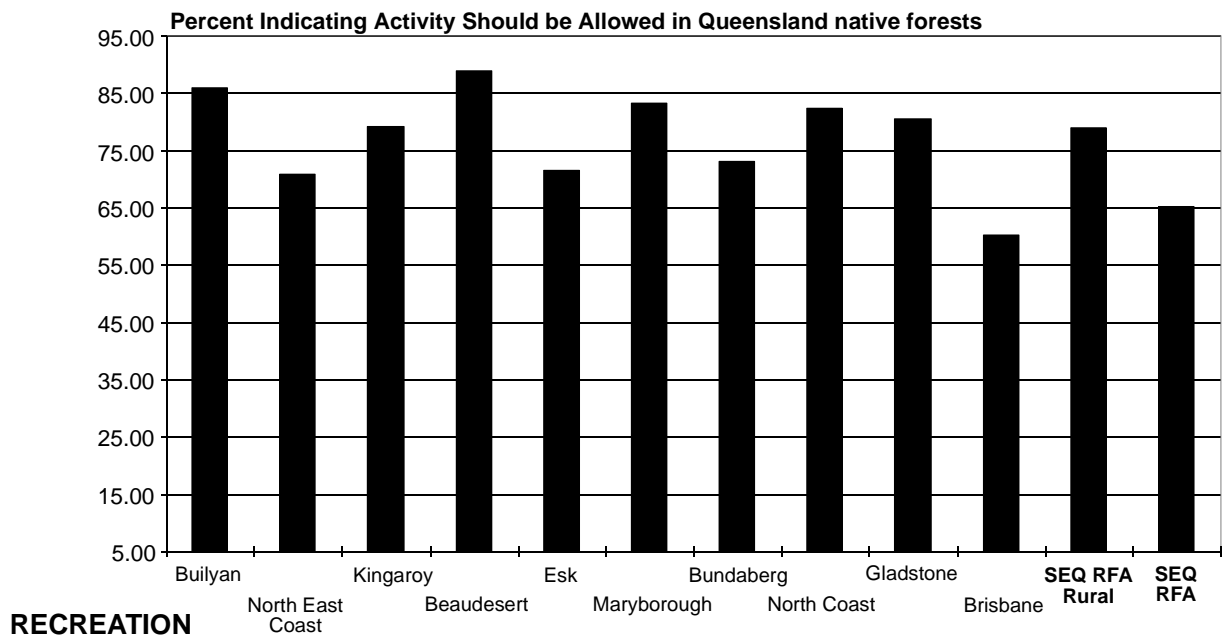
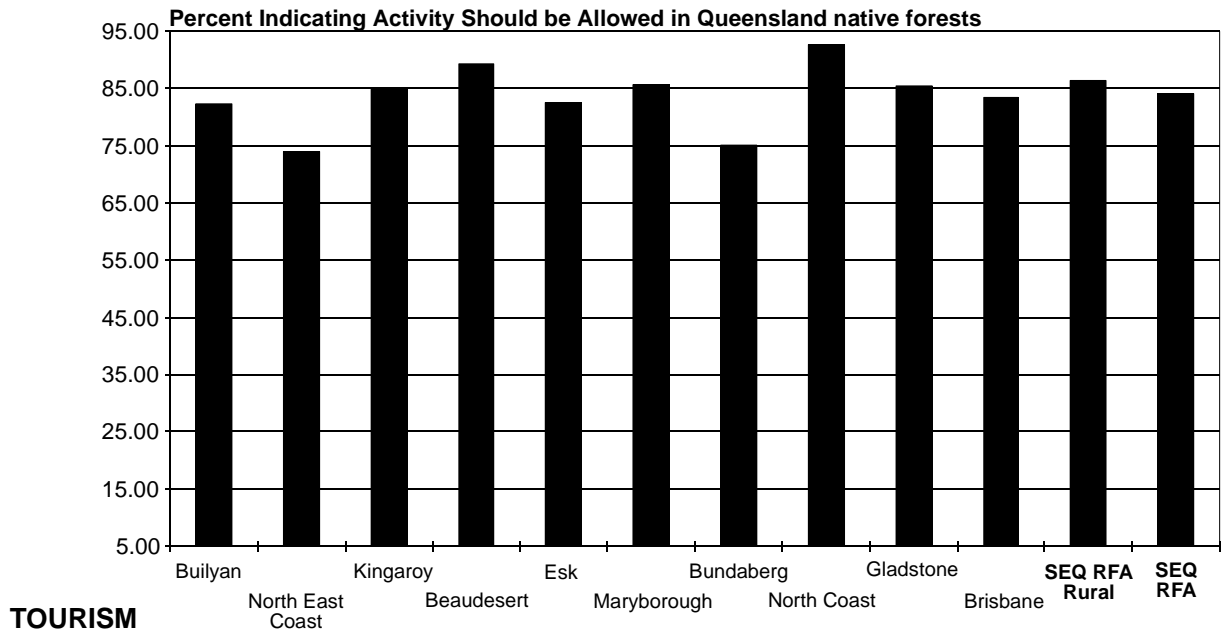


FIGURE 14: ATTITUDES TO INDUSTRY AND RECREATION ACTIVITY IN STATE NATIVE FORESTS (Percentage Agreement with Activities Permitted in State Native Forests)

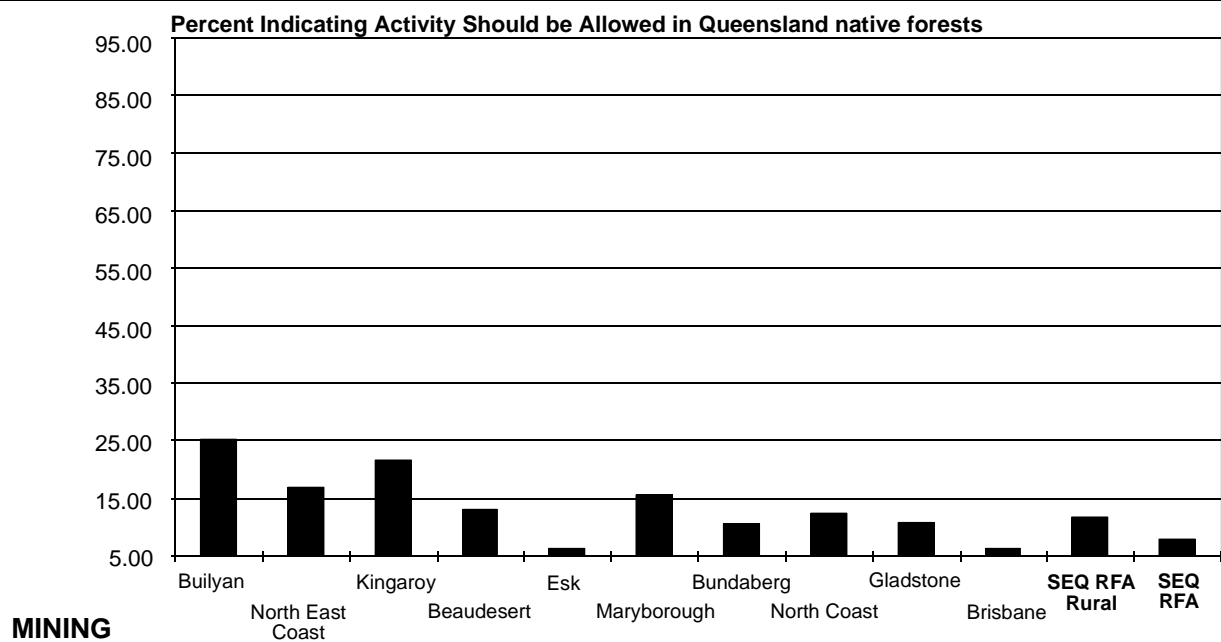
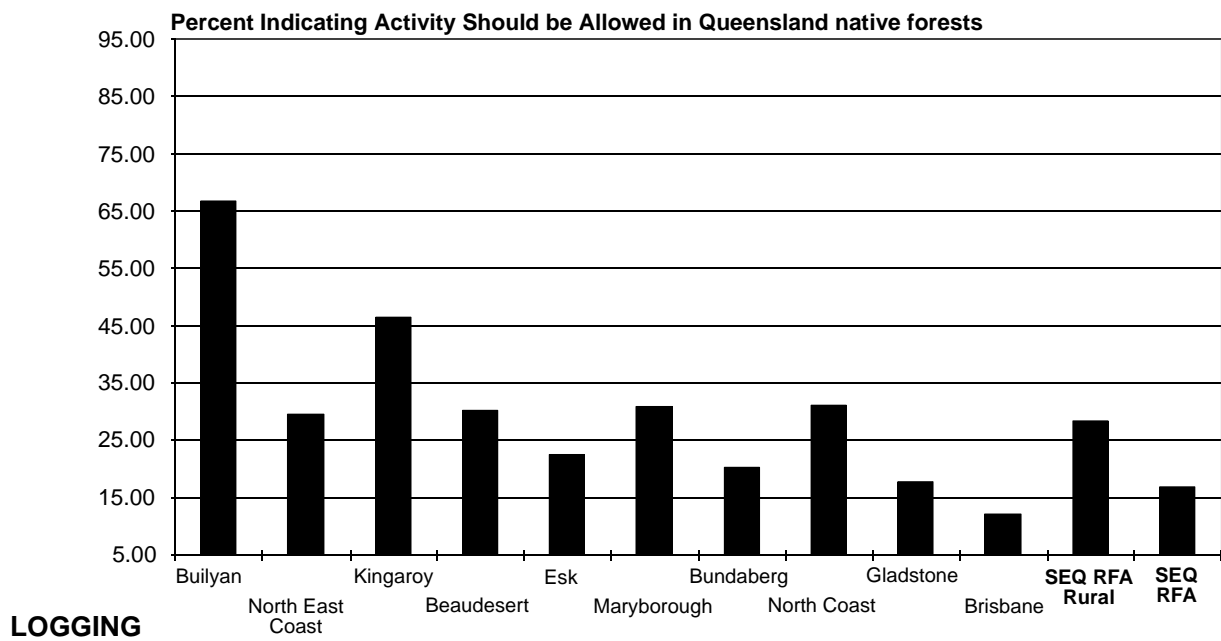
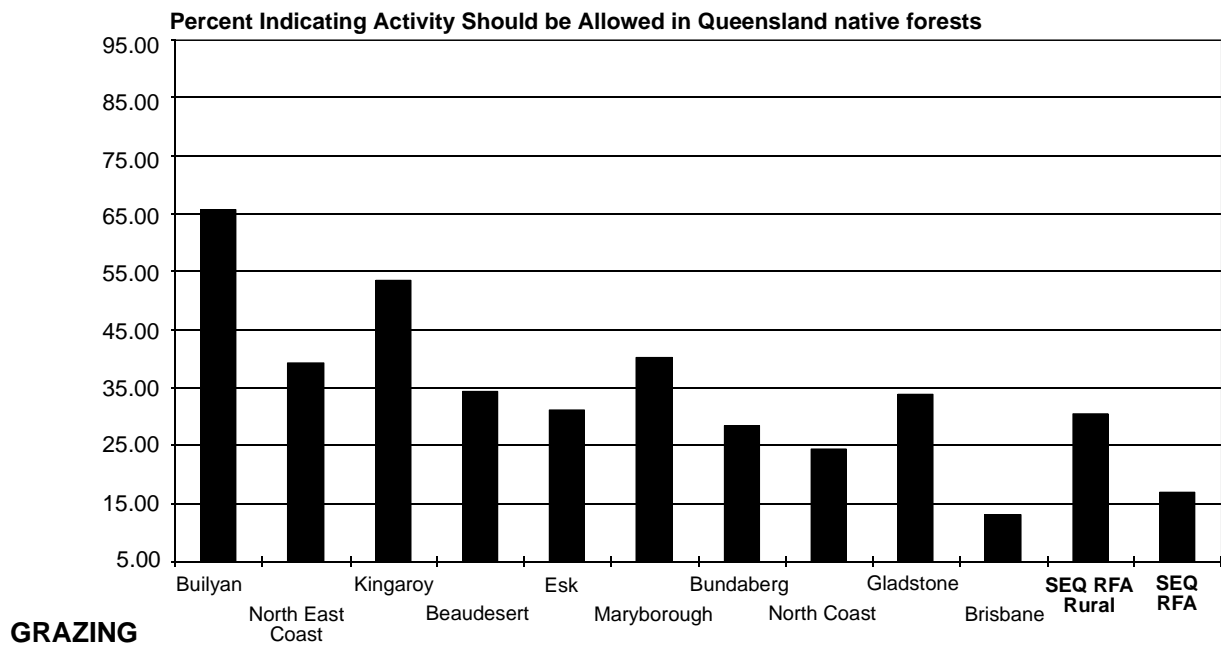


FIGURE 14: ATTITUDES TO INDUSTRY AND RECREATION ACTIVITY IN STATE NATIVE FORESTS (CONT.) (Percentage Agreement with Activities Permitted in State Native Forests)

could coexist with logging. For example, and in relation to grazing, 88% of respondents within the North East Coast sector believed grazing could coexist with logging, while in Gladstone only 61% believed grazing could coexist with logging. Similarly, while 61% of the population in the North East Coast sector believed mining could coexist with logging, only 42% of the Esk sample believed mining could coexist with logging.

Table 6.4. Attitudes Towards Logging Coexisting with other Activities in State Native Forests by Sector

	North					
	Builyan	East Coast	Kingaroy	Beaudesert	Esk	Maryborough
Beekeeping	139	136	140	108	106	140
	<i>78.1</i>	<i>87.2</i>	<i>80.5</i>	<i>67.5</i>	<i>68.4</i>	<i>87.0</i>
Conservation	132	121	132	118	105	115
	<i>74.2</i>	<i>77.6</i>	<i>75.9</i>	<i>73.5</i>	<i>67.7</i>	<i>71.4</i>
Grazing	151	137	135	115	102	121
	<i>84.8</i>	<i>87.8</i>	<i>77.6</i>	<i>71.9</i>	<i>65.8</i>	<i>75.2</i>
Tourism	138	125	125	107	107	120
	<i>77.5</i>	<i>80.1</i>	<i>71.8</i>	<i>66.9</i>	<i>69.0</i>	<i>74.5</i>
Recreation	132	122	129	99	103	120
	<i>74.2</i>	<i>78.2</i>	<i>74.1</i>	<i>61.9</i>	<i>66.5</i>	<i>74.5</i>
Mining	99	96	105	84	65	96
	<i>55.6</i>	<i>61.5</i>	<i>60.3</i>	<i>52.5</i>	<i>41.9</i>	<i>59.6</i>
Total Respondents	178	156	174	160	155	161
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

	North				SEQ RFA	SEQ
	Bundaberg	Coast	Gladstone	Brisbane	Rural	RFA
Beekeeping	109	79	108	90	212	126
	<i>78.4</i>	<i>59.8</i>	<i>71.5</i>	<i>68.7</i>	<i>68.4</i>	<i>68.9</i>
Conservation	106	108	103	88	237	126
	<i>76.3</i>	<i>81.8</i>	<i>68.2</i>	<i>67.2</i>	<i>65.3</i>	<i>68.9</i>
Grazing	102	75	92	83	205	114
	<i>73.4</i>	<i>56.8</i>	<i>60.9</i>	<i>63.4</i>	<i>76.1</i>	<i>62.3</i>
Tourism	101	85	113	82	219	122
	<i>72.7</i>	<i>64.4</i>	<i>74.8</i>	<i>62.6</i>	<i>70.6</i>	<i>66.7</i>
Recreation	102	90	111	83	215	121
	<i>73.4</i>	<i>68.2</i>	<i>73.5</i>	<i>63.4</i>	<i>69.4</i>	<i>66.1</i>
Mining	75	59	75	72	158	97
	<i>54.0</i>	<i>44.7</i>	<i>49.7</i>	<i>55.0</i>	<i>51.0</i>	<i>53.0</i>
Total Respondents	139	132	151	131	423	265
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: This is a multiple dichotomy table, where all rows are independent.
Values in italics are percentages.

Source: EBC (1998).

6.2 ATTITUDES TOWARDS PLANNING THE USE OF NATIVE FORESTS

An open-ended question was used to identify what respondents considered to be “the most important thing that needs to be considered in planning for the future use of native forests in Queensland”. Table 6.5 shows that within the SEQ RFA sample, a third of all respondent specifically identified the preservation of forests. Within this sample other issues respondents considered important when planning for the future use of forests included forest regeneration, stopping logging activity and the protection of native animal species and habitats. Given the qualitative nature of the data obtained and the diverse range of issues identified the interpretation of differences across sectors would be difficult and has not been undertaken for this question.

Table 6.5 “What do you think is the most important thing that needs to be considered in planning for the future use of native forests in Queensland?”

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Preservation of forests	473	29.86	73	31.60	95	27.30
Forest regeneration	113	7.13	16	6.92	29	8.33
Replanting trees	107	6.76	13	4.89	16	4.60
Planning and management	103	6.50	5	2.16	26	7.47
Improving accessibility	87	5.49	8	3.46	21	6.03
Conservation	77	4.86	9	3.89	19	5.46
Fire management	73	4.61	8	3.46	18	5.17
Protect native animal species/habitat	65	4.10	11	4.76	22	6.32
Sustainability	56	3.54	5	2.16	14	4.02
Stop logging	52	3.28	14	5.62	12	3.45
General management and maintenance	43	2.71	11	4.76	4	1.15
Limiting visitation/ access	32	2.02	4	1.73	8	2.30
Protecting areas	30	1.89	6	2.59	6	1.72
Tighter regulations on use	28	1.77	6	2.59	11	3.16
Allow selective logging	17	1.07	1	0.43	2	0.57
Balance development and preservation	16	1.01	4	1.73	3	0.86
Providing for multiple use	15	0.95	1	0.43	0	0.00
More public education	15	0.95	6	2.59	5	1.44
Expansion of existing parks for future growth	11	0.69	1	0.43	3	0.86
Noxious weed management	11	0.69	0	0.00	4	1.15
Environmental impact	10	0.63	0	0.00	4	1.15
Stop developments	9	0.57	1	0.43	3	0.86
Tourism	9	0.57	2	0.86	2	0.57
Maintain logging industry	8	0.51	1	0.43	1	0.29
More ranger control and policing	8	0.51	0	0.00	0	0.00
Improve walking trails	6	0.38	3	1.29	0	0.00
Consultation with public	6	0.38	1	0.43	3	0.86
Maintain biodiversity	6	0.38	1	0.43	2	0.57
Location of National Parks	6	0.38	3	1.29	2	0.57
Employment	5	0.32	2	0.86	0	0.00
Other (4 or less respondents)	87	5.49	53	22.94	13	3.73
Total Respondents	1,584	100.0	231	100.0	348	100.0

Source: EBC (1998).

6.3 ATTITUDES TOWARDS DECISION MAKING

When respondents were asked who they considered should be involved in making decisions about State native forests in Queensland, the majority of respondents within the SEQ RFA sample indicated that the local community should be involved in decision making. However, if responses which included State Government departments, the government generally, Local Government and the Commonwealth Government are considered together, the majority of the population also believed that government should be involved in decision making. Following local community and 'government' involvement, there is also support as evident in Table 6.6, for the involvement of conservation and environmental groups. As such Table 6.6 appears to indicate a significant percentage of the population believe that both the local community, government (either at Local, State or Commonwealth level) and conservation and environment groups should be involved in the decision making process.

Table 6.6 "Who do you think should be involved in making decisions about state native forests in Queensland?"

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Local community	942	51.50	132	53.44	200	50.25
State Government Departments	469	25.64	39	15.79	100	25.13
Government (general)	327	17.88	57	23.08	83	20.85
Local Government	190	10.39	31	12.55	53	13.32
Conservation & environment groups	174	9.51	35	14.17	47	11.81
Everyone	157	8.58	12	4.86	25	6.28
Forest experts	133	7.27	14	5.67	41	10.30
Forest or park rangers	87	4.76	32	12.96	19	4.77
Forest industries	78	4.26	9	3.64	15	3.77
All interest groups	74	4.05	7	2.83	19	4.77
Commonwealth Government	58	3.17	10	4.05	23	5.78
Forest users	46	2.52	6	2.43	12	3.02
Indigenous groups	26	1.42	5	2.02	7	1.76
Politicians	24	1.31	6	2.43	5	1.26
Not government or politicians	24	1.31	1	0.40	4	1.01
Farmers and graziers	19	1.04	2	0.81	1	0.25
Independent body	18	0.98	1	0.41	4	1.01
Landowners	17	0.93	0	0.00	1	0.25
Tourism Agencies or Departments	13	0.71	1	0.40	3	0.75
Environmental Scientists	10	0.55	0	0.00	4	1.01
Others	58	3.17	8	3.46	14	3.51
Total Respondents	1,829	100.00	247	100.00	398	100.0

Note: 'Others' includes less than 8 respondents for the total sample, 3 or less respondents where appropriate for the SEQ RFA sample, and 2 or less respondents where appropriate for the SEQ RFA Rural sample.

Up to three response categories were permitted.

This is a multiple dichotomy table, where all rows are independent.

Source: EBC (1998).

6.4 EFFECT ON COMMUNITIES OF CHANGES IN THE USE OF FORESTS

Within the SEQ RFA sample, 78% of respondents believed there had not been a change in the use of forests in their area which had affected the community in which they lived (Table 6.7).

Table 6.7. "In the last two years, has there been a change in the use of forests in your area which has affected the community in which you live?"

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
No effect on community	1,628	82.51	204	77.86	331	78.99
Effected community	345	17.49	58	22.14	88	21.01
Total Respondents	1,973	100.0	262	100.0	419	100.0

Source: EBC (1998).

Table 6.8 and Figure 15 show significant variation across sectors in the extent to which respondents within each sector believe their community has been effected by a change in the use of forests. The most effected communities appear to be in the Builyan and North Coast sectors, while the least effected are within the Gladstone and Brisbane sectors (Figure 16).

Table 6.8. Effect of Change in the Use of Forests on Communities by Sector

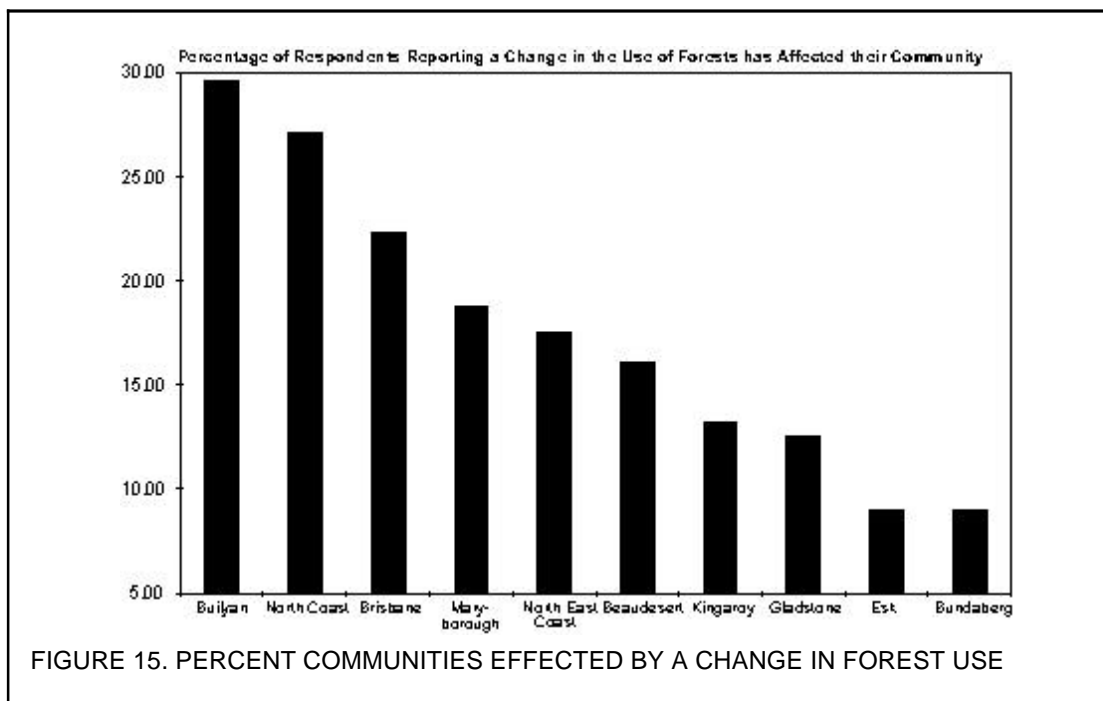
	Builyan	North East Coast	Kingaroy	Beaudesert	Esk	Maryborough
No effect on community	140 <i>70.4</i>	165 <i>82.5</i>	171 <i>86.8</i>	167 <i>83.9</i>	181 <i>91.0</i>	161 <i>81.3</i>
Effected community	59 <i>29.6</i>	35 <i>17.5</i>	26 <i>13.2</i>	32 <i>16.1</i>	18 <i>9.0</i>	37 <i>18.7</i>
Total Respondents	199 <i>100.0</i>	200 <i>100.0</i>	197 <i>100.0</i>	199 <i>100.0</i>	199 <i>100.0</i>	198 <i>100.0</i>

	Bundaberg	North Coast	Gladstone	Brisbane	SEQ RFA Rural	SEQ RFA
No effect on community	182 <i>91.0</i>	140 <i>72.9</i>	168 <i>87.5</i>	153 <i>77.7</i>	331 <i>79.0</i>	204 <i>77.9</i>
Effected community	18 <i>9.0</i>	52 <i>27.1</i>	24 <i>12.5</i>	44 <i>22.3</i>	88 <i>21.0</i>	48 <i>22.1</i>
Total Respondents	200 <i>100.0</i>	192 <i>100.0</i>	197 <i>100.0</i>	197 <i>100.0</i>	419 <i>100.0</i>	265 <i>100.0</i>

Note: Values in italics are percentages.

There is a significant association between affect on community and the 10 sectors, $X^2(9)=61.97, p<.05$

Source: EBC (1998).



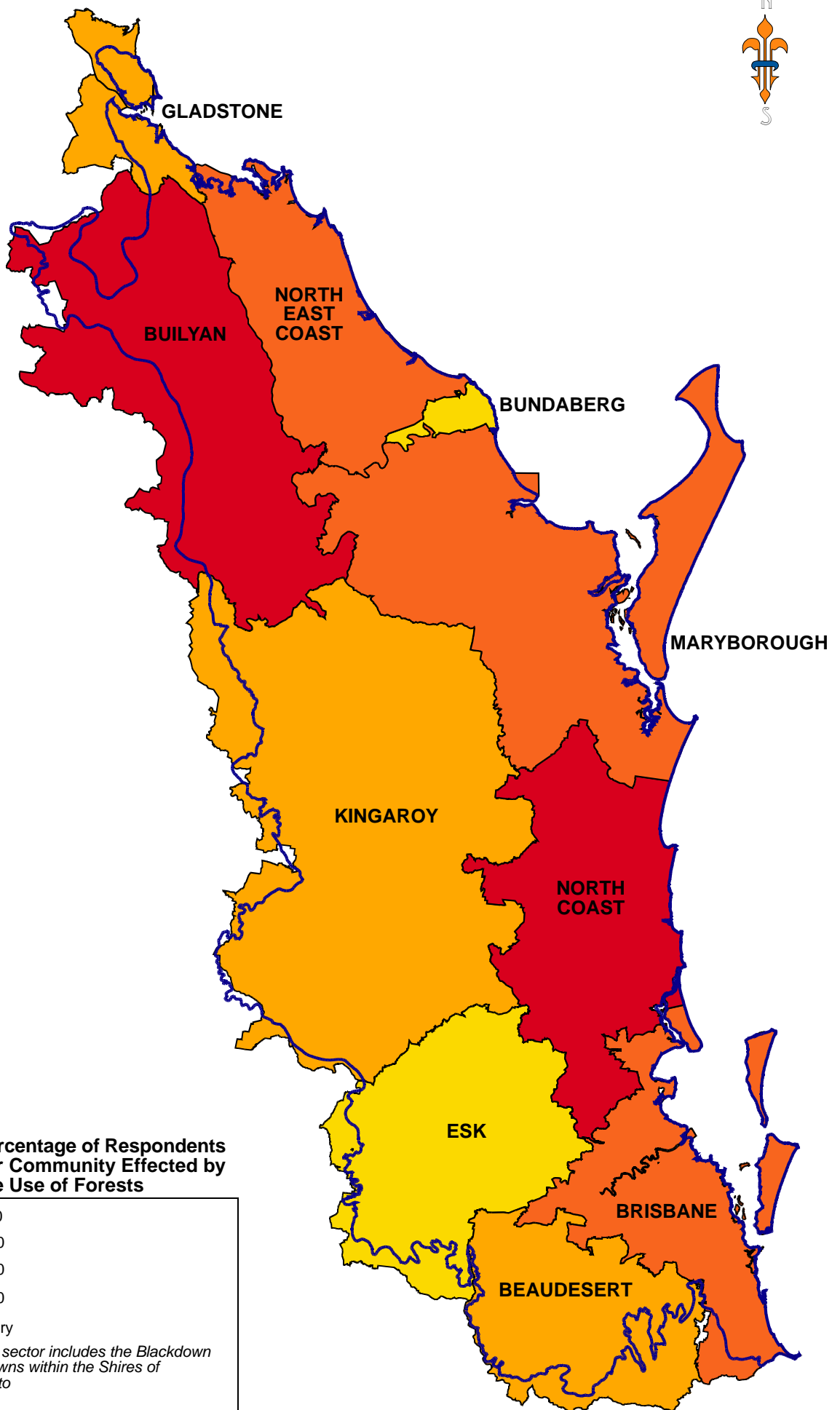


FIGURE 16. Percentage of Respondents Indicating their Community Affected by Changes in the Use of Forests

	29.60 - 22.30
	22.30 - 16.10
	16.10 - 9.00
	9.00 - 0.00
	RFA Boundary

Note: The Buiyan sector includes the Blackdown Tablelands and towns within the Shires of Eidsvold and Monto

EBC (1998)

Table 6.9 shows the type of community effects from a change in the use of forests identified by respondents. Within the SEQ RFA sample the majority of respondents (53%) indicated the main effect to be the clearing of forests for housing developments, however this was primarily an issue for respondents within the North Coast sector and Brisbane sectors. Throughout the total sample, other effects include the reduction in timber supply to mills, and the commencement or stopping of logging activities.

Table 6.9. Type of Community Effects from a Change in the Use of Forests

Response	Total Sample		SEQ RFA		SEQ RFA Rural	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Clearing forests for housing developments	85	25.15	31	53.45	26	30.59
Timber supply to mills reduced	30	8.88	0	0.00	3	3.53
Logging commenced	26	7.69	4	6.90	7	8.24
Logging stopped	26	7.69	1	1.72	6	7.06
Increase in tourists	22	6.51	1	1.72	7	8.24
Employment reduced	21	6.21	0	0.00	4	4.71
Restricted access to forests	18	5.33	0	0.00	2	2.35
Sawmill closed or closing	14	4.14	0	0.00	4	4.71
Clearing forests for agriculture	11	3.25	1	1.72	3	3.53
Improved access to forests	10	2.96	4	6.90	2	2.35
Wildlife, fauna and flora destroyed	9	2.66	3	5.17	2	2.35
More 'green' activism	7	2.07	2	3.45	1	1.18
Mining in area increased	7	2.07	0	0.00	2	2.35
Higher fees or charges to access parks	6	1.78	2	3.45	2	2.35
Bushfires occurred	6	1.78	0	0.00	2	2.35
Other	99	29.28	9	1.51	26	30.59
Total Respondents	338	100.00	58	100.00	85	100.0

Note: 'Others' includes less than 4 respondents for the total sample, 2 or less respondents where appropriate for the SEQ RFA sample, and 2 or less respondents where appropriate for the SEQ RFA Rural sample.
This is a multiple response table, where all rows are independent.

Source: EBC (1998).

INTERVIEWER NAME: _____

Hello, my name is _____. I'm from a company called EBC and we are doing a survey for the Commonwealth and Queensland Governments. The survey is part of work being done to prepare a regional forest agreement for South East Queensland.

It will take about 10 minutes for me to go through the questions and all information is anonymous and confidential. Would you mind answering a few questions for me?

IF YES, THEN RECORD:

1. AREA CODE: _____ Town or Suburb _____

2. Gender: Male Female

ASK THE FOLLOWING QUESTIONS:

3. During the last year, have you visited any State Forests or National Parks in Queensland?

No (GO TO QUESTION 6) Yes

4. How often have you visited these forests or parks?

Once a month or more Once every three months
 Once every six months Once a year

5. What was the name of the forest or park you visited and what did you do there?

Name of Place (<i>Specific Location</i>) (<i>Name of NP or state forest</i>)	What did you do there? (<i>Type of recreation or other activity</i>)
--	---

1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

6. Are there any areas of state native forest or national park within 15 minutes drive of your home?

No Yes

7. Which of the following, if any, do you think should be allowed in state native forests in Queensland? (*Read out list. May report more than one*)

<input type="checkbox"/> Grazing	<input type="checkbox"/> Tourism
<input type="checkbox"/> Beekeeping	<input type="checkbox"/> Mining
<input type="checkbox"/> Logging	<input type="checkbox"/> Recreation
<input type="checkbox"/> Or any other activity _____	

8. What do you think is **the most important thing** that needs to be considered in planning for the future use of native forests in Queensland?

Don't know

9. Who do you think should be involved in making decisions about state native forests in Queensland?

Don't know

10. In the last two years, has there been a change in the use of forests in your area which has affected the community in which you live?

No (GO TO QUESTION 12) Yes

11. What were these changes?

1. _____

2. _____

3. _____

When people talk about native forests a lot of different issues are raised. I am going to read out some statements that people make about forests and I would like you to indicate in general how much you agree or disagree with each statement. I want you to tell me if you strongly agree, agree, disagree or strongly disagree with each statement.

(1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree)

- | | | | | |
|--|---|---|---|---|
| 12. The area in which I live is dependent on the timber and logging industry | 1 | 2 | 3 | 4 |
| 13. Better laws are needed to regulate the use of native forests in Queensland | 1 | 2 | 3 | 4 |
| 14. Laws to protect native forests do not affect me | 1 | 2 | 3 | 4 |
| 15. If the forest and timber industries didn't exist in this area I would have to live somewhere else | 1 | 2 | 3 | 4 |
| 16. The conservation and protection of native forests in Queensland will benefit the Queensland economy | 1 | 2 | 3 | 4 |
| 17. I appreciate the natural beauty of the forest | 1 | 2 | 3 | 4 |
| 18. I am concerned about the management and use of native forests in Queensland | 1 | 2 | 3 | 4 |
| 19. The balance of the forest ecosystem is fragile | 1 | 2 | 3 | 4 |
| 20. The timber industry is important to the Queensland economy | 1 | 2 | 3 | 4 |
| 21. I sometimes feel torn between the need for jobs and the need to protect native forests in Queensland | 1 | 2 | 3 | 4 |
| 22. I am confident that native forests are being well managed in Queensland | 1 | 2 | 3 | 4 |
| 23. Forests are important for their own sake | 1 | 2 | 3 | 4 |
| 24. Forest industries should be more involved in the management of forests | 1 | 2 | 3 | 4 |
| 25. Protecting native forests will threaten jobs | 1 | 2 | 3 | 4 |

26. Have you had any involvement in forest management, planning or protection in Queensland?

No (GO TO QUESTION 28) Yes

27. What type of involvement have you had?

28. Are you, or any members in your household, employed in the timber, tourism, mining, beekeeping, seed, wildflower collection or grazing industries?

None of these industries

<input type="checkbox"/> Timber	<input type="checkbox"/> Beekeeping
<input type="checkbox"/> Tourism	<input type="checkbox"/> Seed or wildflower collection
<input type="checkbox"/> Mining	<input type="checkbox"/> Grazing

29. Do you think logging can coexist with any of the following activities?

None of these

<input type="checkbox"/> Beekeeping	<input type="checkbox"/> Recreation
<input type="checkbox"/> Tourism	<input type="checkbox"/> Conservation
<input type="checkbox"/> Mining	<input type="checkbox"/> Grazing

30. Can I ask you in what year you were born? _____

31. What is your usual occupation? _____

32. Do you have any other comments or suggestions about the management of forests in Queensland? *(Record as much verbatim detail as possible)*

THANK YOU FOR YOUR TIME