

# Outdoor Recreation Trends in South East Queensland

## Outdoor Recreation Trends in South East Queensland



Between 1997 – 2007

# Outdoor recreation trends in South East Queensland

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# Section 1

## Acknowledgements

The Outdoor Recreation Trends in South East Queensland (1997– 2007) (Trends Analysis) was a joint initiative of several Queensland Government agencies and SEQWater. These agencies financed and provided expertise for the Trends Analysis. Contributing agencies included:

- Department of Local Government, Sport and Recreation
- Department of Infrastructure and Planning
- Environmental Protection Agency
- Queensland Health
- SEQWater Corporation Ltd

Significant technical and editorial contributions to the Trends Analysis were made by the following:

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# Section 2

## Executive summary

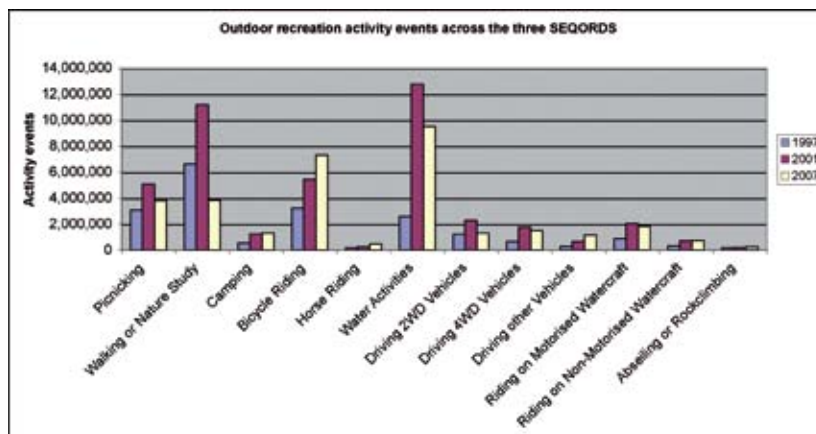
In 1997, 2001 and 2007, residents of South East Queensland (SEQ), Australia were surveyed about their participation in 12 outdoor recreation activities. The results of each of these surveys were published as a ‘South East Queensland Outdoor Recreation Demand Study’ (SEQORDS) in 1998, 2002 and 2008 respectively.

The Outdoor Recreation Trends in South East Queensland (1997 - 2001) (Trends Analysis), examines selected trends in outdoor recreation participation by residents of SEQ that were noted in the 2007 SEQORDS. The selected trends include constraints; recreation setting preferences; gender, physically active forms of outdoor recreation and changes to participation. The interests of the various agencies which contributed financially to the Trends Analysis helped determine topics for analysis.

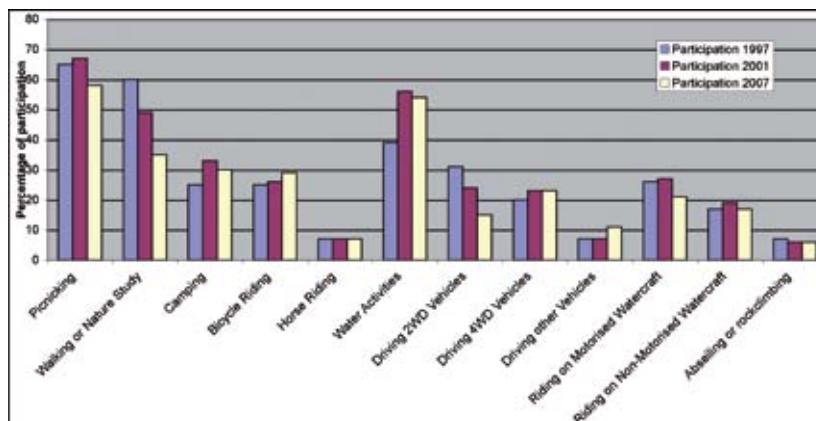
The need for research into the outdoor recreation trends was highlighted in the 2007 SEQORDS. A key recommendation of the 2001 SEQORDS was that the cycle of future outdoor recreation demand studies in SEQ be increased to 5–7 years, to allow identification and confirmation of any trends. The identification and confirmation of any trends have been fulfilled through the 2007 SEQORDS and the Trends Analysis.

Figure 1 shows the trends in activity-events (one person participating once in an outdoor recreation activity or the number of participants multiplied by the frequency with which they participate)<sup>1</sup> and Figure 2 shows trends in the current participation

**Figure 1: Outdoor recreation activity-events across the three SEQORDS**



**Figure 2: Percentage of SEQ resident population participating<sup>2</sup> in outdoor recreation activities across the three SEQORDS.**



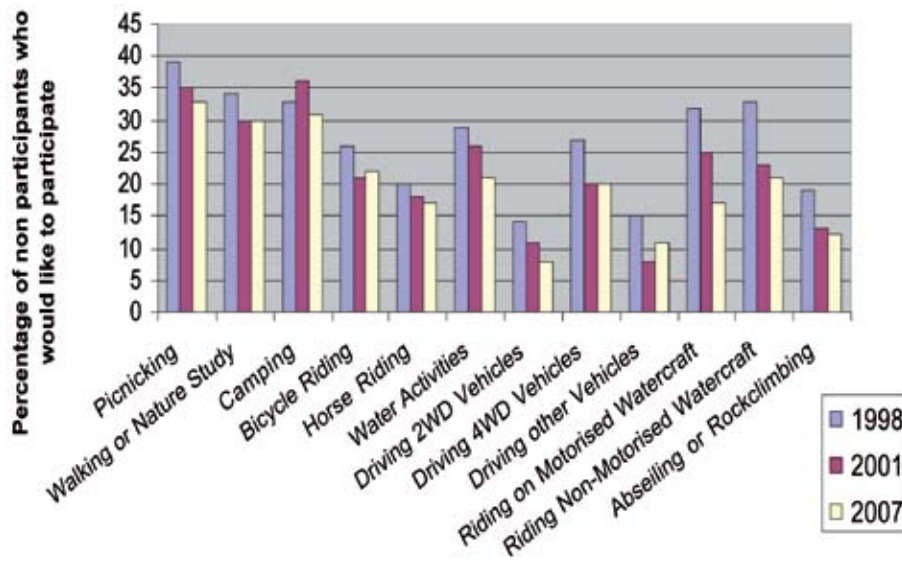
<sup>1</sup> Refer to Section 4: Classification of Key Terms for a further explanation of the concept of *activity-events*

<sup>2</sup> ‘Participation’ was defined as – participating in an outdoor recreation activity at least once in the 12 months prior to the survey.

# Section 2

## Executive summary cont.

Figure 3: Percentage of SEQ resident population who did not participate in outdoor recreation, but wanted to, in the three SEQORDS



as measured by the proportion of the surveyed population (i.e. the population of SEQ) currently participating multiplied by the regional population. Figure 3 displays the proportion of non-participants who would like to participate from the three SEQORDS. These figures were previously presented in the 2007 SEQORDS report. (The data for these figures can also be seen in Appendix 1)

A number of observations are pertinent to trends in outdoor recreations participation:

1. There is a peak in activity-events in 2001 for seven out of the 12 outdoor recreation activities surveyed.
2. In all activities except *walking or nature study*, participation

(measured as activity-events) for 2007 are higher than 1997 (see Figure 1).

3. Participation rates (measured as the percentage of the population of SEQ which is participating – see Figure 2) for *walking or nature study* and *driving 2WD vehicles* have declined steadily over the three SEQORDS.
4. In some activities such as *bicycle riding*, *riding other vehicles* and *camping* there has been a steady increase in participation rates over the three SEQORDS.
5. For all 12 outdoor recreation activities there has been a decrease in the percentage of SEQ residents who are non-participants but would like to participate.

It should be noted that although there has been a decline in participation rates for many activities, the activity-events for almost all activities in 2007 are higher than the 1997 benchmark. For example, *picnicking* had 3,096,000 activity-events in 1997 and in 2007 there were 3,835,902 (after a peak in 2001 of 5,093,904 activity events). In the same period, the participation rate for *picnicking* went down from 65% of the population of SEQ to 58% but this was offset by the increased regional population.

Compared to 1997, in 2007 there were 739,902 more picnicking activity-events in SEQ. The number of activity-events better describes



the magnitude of participation than does the participation rate (i.e. the proportion of the surveyed population which participates) by itself.

In practical terms, the increasing regional population means that managers of outdoor recreation sites may have observed increased visitation even though participation rates and/or frequency of participation did not increase greatly compared to 1997.

The issues addressed in the Trends Analysis that relate to the changes noted above are as follows:

- the impact of constraints on activity-events;
- the relationship between outdoor recreation settings and constraints;
- trends in physically active forms of outdoor recreation across the three SEQORDS;
- the patterns in gender participation in outdoor recreation;
- the trends in each of the outdoor recreation activities across the three SEQORDS; and
- research questions to guide a future research framework for outdoor recreation use and demand in SEQ.

#### **The impact of constraints on activity-events**

Constraints on participation in outdoor recreation activities impact either on participation rates (% of population participating) or the frequency of participation

(average number of times per year people participated in the activity). Understanding the effects of constraints is useful in explaining the trends in outdoor recreation participation across the three SEQORDS.

For most activities, there was an increase in the number of people reporting 'time' as a major constraint between the 2001 and the 2007 SEQORDS. However, there were four activities in which 'time' as a constraint decreased from 1997 to 2007. These were (1) driving 2WD vehicles, (2) riding motorised watercraft, (3) riding non motorised watercraft and (4) walking or nature study. Other constraints will therefore explain the decreases noted in the activity-events results for these activities. Constraints that generally contributed to decreased frequency of participation for current participants were 'nowhere to go', 'family health', 'cost' and 'lack of equipment'.

#### **The relationship between outdoor recreation settings and constraints**

Most people who participate in the 12 surveyed activities prefer recreation settings which are slightly more *natural* than those they currently use. This trend has been observed across all three SEQORDS. However, there are some shifts occurring in recreation setting preferences. Survey data suggests that constraints are increasingly influencing the setting preferences and use.

For some activities, recreation setting use and preference is focused on

*very natural* and/or *totally natural* settings. Other activities may be less dependent or not dependent on the naturalness of recreation settings, as is indicated by greater use of, and preference for *somewhat natural* settings. One factor influencing this may be the impact of constraints on people's choice of places for their preferred activities. *Somewhat natural* settings may have fewer constraints (e.g. travel to and from is easier) which results in more use of *somewhat natural* settings despite a general preference for settings which are more *natural*. Use of *totally natural* settings is increasing despite major constraints (e.g. travel time and distance; needs for fitness, specialist skills and equipment) involved with accessing such places. In the Trends Analysis, participants in all outdoor recreation activities who identified 'nowhere to go' as a major constraint are more likely to prefer *totally natural* settings.

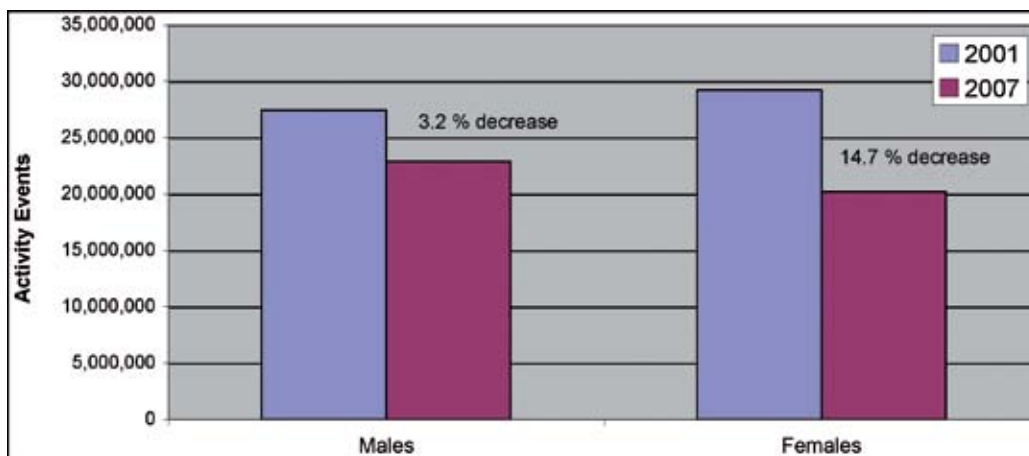
#### **Trends in physically active forms of outdoor recreation across the three SEQORDS**

There are some indicators of engagement in physical activity in outdoor recreation activities within the three SEQORDS. These include the rates of participation, frequency of participation and motivation for participation in selected physically active forms of outdoor recreation. Physically active forms of outdoor recreation include walking or nature study, bicycle riding, horse riding, water activities, riding non-motorised watercraft, riding other motor vehicles and abseiling/rock-climbing.

# Section 2

## Executive summary cont.

**Figure 4: Changes in activity-event data for selected physically active forms of outdoor recreation for males and females** (activity-event totals have been aggregated)



Overall there was an increase in activity-events from 1997 to 2007. Bicycle riding was the only activity to show sustained increases in activity-events from 1997 to 2007. There was also a slight increase in exercise and running in the outdoors between 2001 and 2007. The proportion of participation in the ‘goal focused’ (i.e. the primary purpose of participation was related to fitness, skills improvement, equipment testing, challenge or conquering nature) for the selected activities in 2007 is less than the 1997 SEQORDS but has increased since the 2001 study. This increase might reflect the rise in popularity of adventure racing since 2001.

Over the three surveys, ‘goal-focused’ participation (i.e. the primary purpose of participating was related to fitness, skills improvement, equipment testing, challenge or

conquering nature) was highest in 1997, dropped to its lowest in 2001 and has since increased (refer to Figure 58).

Despite the overall increase in activity-events for selected physically active forms of outdoor recreation between 1997 and 2007, participation peaked in 2001 and has declined since then. Between 2001 and 2007, there were significant decreases in water activities and walking or nature study participation.

Despite the overall increase in the activity-events for selected physical outdoor recreation activities between 1997 and 2007 there has been a decrease in activity-events from the peak in 2001. The decrease in activity-events can be attributed to a decrease in water activities and walking or nature study between 2001 and 2007.

### Patterns in gendered outdoor recreation participation

The major finding of the study was that female participation as measured by activity-events for aggregated physically active forms of outdoor recreation declined greater than males between 2001 and 2007. These changes are displayed in Figure 4.

The large decrease in activity-events for females is a consequence of a major decline in female participation in water-activities.

The Trends Analysis also found that there was a uniform decline for males and females in walking or nature study across the study region. Bicycling had a uniform increase with no difference between males and females. Increasingly, there are more activity-events for females than males in horse riding and abseiling/rock-climbing.

### **Trends in each of the outdoor recreation activities across the three SEQORDS**

The summary below outlines explanations for the changes in activity-events and to a lesser extent participation rates and frequency of participation for each activity over the three SEQORDS.

#### **Picnicking**

The overall decline in picnicking activity rates can be attributed to a declining participation rate in the 25 to 39 age group (and to a lesser extent the 40–54). This is most likely caused by an increase in ‘family’ constraints. Another explanation could be the introduction of Sunday retail trading and the preference of many families to frequent shopping centres as a social activity. It may also be affected by the decrease in driving 2WD vehicles. Picnicking has the highest use in the *somewhat natural* category.

#### **Walking or nature study**

The major decline in activity rates can be explained through increases in ‘health’ and ‘family’ constraints, particularly in the 25–54 age groups. It must be noted that time pressures and the introduction of Sunday retail trading may have contributed to the decline. Another point to consider is that the measurement of current participants and non-participants constraints may not capture the reasons for the decrease in walking or nature study. *Somewhat natural settings* are most used for walking or nature study but increasingly *very natural settings* are being used.

#### **Camping**

Activity-events have increased for camping. Rates of participation for all age groups are higher in 2007 than for 1997. *Very natural settings* are the most used.

#### **Water activities**

Activity-events are higher in 2007 than in 1997 but have declined from a peak in 2001. ‘Health’ and ‘nowhere to go’ have impacted on activity-events. *Somewhat natural settings* were the most used.

#### **Bicycling**

Bicycling has large increases in activity-events. This is attributed to increased participation by older age groups. Constraints have not reduced participation rates. The predominant use is *somewhat natural settings* but increasingly *very natural settings* are being used. This suggests that a significant proportion of cycling is mountain bike riding on unsealed tracks.

#### **Motorised watercraft**

Activity-events have increased from 1997 but are slightly down compared to 2001. Frequency declined slightly and this may be caused by current participants reporting higher ‘cost’ constraints. This was particularly so for younger age groups who had a decline in frequency of participation. There was also a decline in the participation by older age groups. The *somewhat natural setting* is the most popular but *very natural* is a close second.

#### **Non-motorised watercraft**

Activity-events increased from 1997 to 2007. Overall participation rates decreased slightly. There was a slight increase in ‘nowhere to go’ constraint for non-participants. Frequency-of-participation rates increased and this caused the rise in activity-events. The *somewhat natural setting* is the most popular but *very natural* is a close second.

#### **Horse riding**

Activity-events increased significantly. The ‘nowhere to go’ constraint increased markedly for current participants but it appears not to have led to a decrease in frequency-of-participation rates. This indicates that participants still went horse riding but were limited to fewer places where they could ride. The 25–39 age group increased its frequency of participation. Use of *very natural* and *somewhat natural settings* increased while use of *totally natural setting* declined over the three SEQORDS.

#### **Driving 2WD vehicles**

Activity-event numbers increased in 2001 but by 2007 had returned to just greater than 1997 numbers. The 25–39 and 40–54 age groups show a large decrease in participation rates. ‘Cost’ constraints for non-participants are increasing. It may be that the 25–39 and 40–54 age groups have less disposable income for driving given the rise in fuel prices and other economic concerns.

# Section 2

## Executive summary cont.

'*Nowhere to go*' also increased as a constraint for current participants. This may be the result of increased traffic congestion or increase perceptions of traffic congestion in SEQ road systems. Coupled with the '*cost*' constraint, this will have a large effect on participation rates and frequency-of-participation. Decreases in driving 2WD vehicle rates also impact on other outdoor recreation activities that are dependent on 2WD transportation. *Very natural* and *somewhat natural* settings are most used by participants.

### **Driving 4WD vehicles**

Activity-events have increased since 1997 but are slightly down on 2001 figures. Decreased participation frequency was the main reason for the decrease in activity-events. The decline in participation frequency for current participants can be explained by a rise in '*family*' constraints and a relatively high '*time*' constraint. The constraints affecting driving 2WD vehicles appear to be different to those affecting driving 4WD vehicles. Data from the SEQORDS suggest that '*cost*' does not play as significant role in limiting 4WD driving. *Very natural settings* are still the most used.

### **Driving/riding other motorised vehicles**

This refers to driving or riding "trail bikes" – off-road motorcycles and similar vehicles. There is a large increase in activity-events. There is approximately a 65% increase in the participation rate of the 15–24 age group between 2001 and 2007. '*No time*' is an issue for current participants but that is becoming less of a constraint. This can help explain increases in participation frequencies. '*Nowhere to go*' is an increasing constraint for current participants but this has not deterred current participants from participating more frequently than in the past. For those people who currently participate, '*cost*' is decreasing as a constraint. *Very natural settings* dominate over *somewhat natural* setting use. The least used setting was *totally natural* but use of this setting increased over the three SEQORDS.

### **Abseiling/rock-climbing**

Activity-events rose across the three SEQORDS. Frequency-of-participation was the reason for the increase in activity-events and effectively offset a decrease in participation rates. *Somewhat natural settings* are the most frequently used setting but increasingly *very natural settings* are being used.

### **Fishing**

Fishing was not in the SEQORDS. Other surveys by the Queensland Department of Primary Industries and Fisheries and the Australian Bureau of Statistics provide comprehensive data on recreational fishing. Comment is presented here because of the rise in participation rates. Between 2001 and 2007, the fishing participation rate increased from 4% to 8%.

### **Future Research**

The issues identified in this study that give direction to future research are:

- continued need to chart the trends in outdoor recreation demand;
- more detailed analysis of constraints to outdoor recreation participation that relate to social issues within the context of population growth;
- how the issues resulting from population growth may affect spatial distribution of existing and future outdoor recreation settings and opportunities; and
- examine the policy, planning and management implications of the bio-physical, social and economic impacts of outdoor recreation activities.

# Section 3

## Introduction

In 1997, 2001 and 2007, residents of SEQ, Australia were surveyed about their participation in 12 outdoor recreation activities. In each of these, a stratified random sample of SEQ residents over the age of 18 were asked a series of questions in a survey administered by telephone. In 1997 and 2001, additional facilitated workshops with randomly selected interviewees further explored certain qualitative aspects of participation in outdoor recreation activities.

Details about the methodology and results of each survey were published under the title of '*South East Queensland Outdoor Recreation Demand Study*' (SEQORDS) in 1998, 2002 and 2008 respectively. In 1999, a fourth regional-scale outdoor recreation participation survey of eight local government areas in central eastern Queensland was completed. The report on this survey was published in 2000 as the '*Central Queensland Outdoor Recreation Demand Study*'.

The need for research into the outdoor recreation participation trends was highlighted in the 2007 SEQORDS. A key recommendation

of the 2001 study was that the cycle of future outdoor recreation demand studies in SEQ be increased to 5–7 years, to allow identification and confirmation of any trends. The identification and confirmation of any trends have been fulfilled through the 2007 SEQORDS and the Trends Analysis.

Data from the 1997, 2001 and the 2007 SEQORDS can be used to chart the trends in outdoor recreation participation and potential demand. To some extent this has been undertaken in the 2007 SEQORDS. However, this report examines some of the trends highlighted in the 2007 SEQORDS in more detail.

The specific objectives for the Trends Analysis was to analyse:

- the relationship between outdoor recreation settings and constraints;
- trends in physically active forms of outdoor recreation across the three SEQORDS;
- the patterns in gendered outdoor recreation participation; and
- the trends in each of the outdoor recreation activities across the three SEQORDS.

An extra objective was to propose research questions to guide a future research framework for outdoor recreation use and demand in SEQ. For more background on the issues surrounding the current study please refer to the 2007 SEQORDS.

The Trends Analysis is limited in its scope and depth of analysis in a number of ways. Firstly, the data from the 2007 SEQORDS is mostly quantitative in nature and thus interpretation and conclusions of the results are limited to inferences concerning reasons for certain trends. There is a limited amount of comments given by respondents in the interviews concerning constraints and this information forms the basis of much of the discussion. Some qualitative findings were used from the 2001 SEQORDS to aid in interpretations in the Trends Analysis.

Secondly, the size of the research grant has limited the scope of the present study. Further resources are needed to undertake a comprehensive review of literature surrounding the reasons for certain trends identified in the present study. This should be considered as a scoping study to identify issues and determine future research needs.

# Section 4

## Clarification of key terms

The key terms presented in this study are similar to those used in the 2007 SEQORDS. However, there are some differences in the list of outdoor recreation activities chosen for analysis. These are detailed below.

Outdoor recreation activities, recreation settings, and motivation are key concepts that are fundamental to this study. The following definitions from the 2007 SEQORDS are restated here and serve to clarify the meanings of key concepts.

### 4.1 Outdoor recreation activities

Outdoor recreation activities are undertaken outside the confines of buildings and may be undertaken without the existence of any built facility or infrastructure. They may require large areas of land, water and/or air, which may need to be predominantly unmodified or natural (Batt, 2000). As a subset of leisure, outdoor recreation provides opportunities for people to enhance their quality of life through activities that are enjoyable and relaxing, foster relationships both with other people and with the biophysical environment, and may contribute significantly to an individual's identity (Haggard and Williams, 1992). The outdoor recreation activities in the Study are listed in Table 1. Activities additional to the 2007 SEQORDS are used in this study. These activities are highlighted in Table 1

**Table 1: Activities included in the Outdoor Recreation Trends Study**

1. Picnicking
2. Walking or Nature Study (eg bird watching, photography)
3. Camping
4. Bicycle Riding
5. Horse Riding
6. Water Activities (eg swimming [excluding constructed pools], snorkelling)
7. Driving 2WD Vehicles on Unsealed Roads
8. Driving 4WD Vehicles on Unsealed Roads
9. Driving Other Vehicles on Unsealed Roads
10. Riding on Motorised Watercraft (eg speed boat, jet ski)
11. Riding on Non-Motorised Watercraft (eg canoe, sailing, kayak)
12. Abseiling/Rock-climbing
13. Fishing*
14. Other Walking*
15. Exercise*
16. Running*
17. Gardening*
18. Other Outdoor Recreation*

\* New categories for the Outdoor Recreation Trends Study

## 4.2 Recreation settings

All recreation activities occur within a specific context called a *recreation setting*. A recreation setting is defined through the particular biophysical, social, cultural and managerial attributes of a place in which recreation takes place (Clark and Stankey, 1979). These attributes of the place – the ‘*recreation settings*’ – in which a recreation activity occurs, operate to modify the recreation activity which occurs in that place.

For example, swimming can be enjoyed in a crowded public swimming pool, in a large dam, in a remote mountain lake, in big surf or in the sea around a coral reef. In each of these settings, ‘swimming’ attracts different people with different motivations, risk management skills, swimming skills, fitness, strength, needs to socialise and equipment. Swimming in any one of these settings is not a complete substitute for swimming in any other setting. People choose, consciously or otherwise, the particular situation or setting in which they swim. Some individuals will choose to swim in all of these settings at different times in their lives.

Each combination of setting and recreation activity is a different *recreation opportunity*. Change the recreation *activity* or the recreation *setting* and a different recreation opportunity results. The concept of recreation opportunity (combinations of recreation activity and recreation setting) is used to understand and provide for recreation diversity – the variety of recreation opportunities

that a community may seek. Each recreation opportunity is a specific product of policy, planning, management and marketing.

A recreation setting classification system – the Recreation Opportunity Spectrum – has been developed (originally by Clark and Stankey, 1979) in order to describe the variety of recreation settings. Many public sector agencies which provide outdoor recreation opportunities use the Recreation Opportunity Spectrum or a system derived from it. For example, the recreation setting classification system currently used

by the Queensland Parks and Wildlife Service is called the *Landscape Classification System*. In this system, nine recreation settings, ranging from “Wild Natural Remote (Landscape Class 1) to “Urban Developed Built” (Landscape Class 9) are defined. A full description of these recreation setting classes can be found in the 1997, 2001 and 2007 SEQORDS.

For the purposes of the 2007 SEQORDS and the Trends Analysis, a simplified system of three recreation settings was used. The recreation settings are described in Table 2.

**Table 2: Recreation Settings used for the SEQORDS 1997, 2001 and 2007**

<b>Somewhat Natural Landscape</b>	A <i>somewhat natural</i> landscape is close to suburbs or cleared farmland, which is accessible by conventional vehicles or vessels, has buildings highly visible and other people are usually present. (Equivalent to Landscape Classes 5 and 6 – see 2007 SEQORDS)
<b>Very Natural Landscape</b>	A <i>very natural</i> landscape is away from suburbs and cleared farmland, which may be difficult to access by vehicles or vessels, has few built structures visible and few other people present. (Equivalent to Landscape Classes 3 and 4 – see 2007 SEQORDS)
<b>Totally Natural Landscape</b>	A <i>totally natural</i> landscape is far from suburbs and cleared farmland, which has no access by vehicles or vessels, there are no built structures visible and little or no evidence of other people. (Equivalent to Landscape Classes 1 and 2 – see 2007 SEQORDS))

# Section 4

## Clarification of key terms cont.

### 4.3 Motivations

Motivation is described as that which “*impels people to action and gives direction to that action once it is aroused*” (Mannell and Kleiber, 1997). Motivation can be described as intrinsic or extrinsic. Intrinsic motivation is the state in which an individual engages in activity because of the rewards that are inherent in the activity itself. Extrinsic motivation, on the other hand, is the state in which an individual engages in an activity in order to achieve some other goal. For example, a person might go for a bicycle ride for the simple fun of riding a bike (intrinsic motivation) or to become absorbed in something other than work (intrinsic motivation) or to increase fitness (extrinsic motivation) or to compete in a race (extrinsic motivation).

Intrinsic motivation forms an essential component of leisure (Neulinger, 1981). In this study, motivations for participation were classified into intrinsic (leisurely) motivations or extrinsic (goal focused or competitive) motivations. These motivation classes are described in Table 3. Each of these motivation classes was used in conjunction with activities 4–12 described in Table 1.

### 4.4 Activity-events

Calculating activity-event data is a particular way of assessing the participation by people in outdoor recreation activities. It is quite distinct from calculating the percentage of the population that participates in outdoor recreation activities. Activity-event calculation can be explained in the following way.

For the 12 months preceding the surveys, each of the three SEQORDS measured:

1. the number of SEQ residents (also shown as the percentage of SEQ’s resident population) who participated in each of the 12 outdoor recreation activities; and
2. the frequency of participation by SEQ’s resident population in each of the 12 outdoor recreation activities.

Knowledge of the number of individuals and percentage of the regional population who participated in any of the 12 outdoor recreation activities, as well as the number of times (frequency) per year that they participated in those activities, allows

the number of activity-events in the 12 month period prior to each survey to be calculated.

The number of activity-events can be calculated in three ways –

1. by multiplying the participation rate (the absolute number and percentage of individuals in the target population who participate in an outdoor recreation activity) by the **median** (the mid-point between the most active half of the population and the least active half) frequency of participation;
2. by multiplying the participation rate by the **mean** (or average) frequency of participation; or
3. by multiplying the participation rate by the **mode** (most frequently recorded number) frequency of participation.

Unless otherwise stated, the number of activity-events has been calculated using the *median* frequency. Further detail about the statistical analyses undertaken for the SEQORDS is available in the reports previously published about each of these studies. Refer to Section 15 for details of these references.

**Table 3: Motivations classifications used in the SEQORDS**

<b>Leisurely</b>	Sightseeing, looking, learning, unwinding, escaping, relaxing, experiencing peace and quiet (but may still involve hard exertion)
<b>Goal focused</b>	Fitness, skills improvement, test equipment, challenge, conquering nature
<b>Competitively</b>	Maximum distance, minimum time, fastest, most accurate, most difficult, training for competition



The number of activity-events per unit time is a way of measuring the magnitude of participation by the whole of the SEQ resident population in an activity over a specified period. Both the number of participants and the frequency of participation are useful measures but neither provides a complete understanding of participation. Variations in either or both of these measures indicate changes in participation which may have significance for policy, planning or management.

A land manager or tourist operator might notice an increased number of activity-events for a particular activity in a particular place. This increase could result from several interactions between the number of people participating and the frequency of participation. For example, an increased number of activity-events may result from:

- a decrease in the total number of people participating which is offset by some people who participate much more frequently; or
- a large increase in the number of people participating without any increase in participation frequency.

The former situation might require more frequent onsite staff presence to monitor safety and maintain facilities. The latter situation might require construction of additional car park and toilet capacity to cater for peak demands on weekends or during holidays. The data from the three SEQORDS were intended to provide a sub-regional scale overview of participation and constraints on

participation for the residents of SEQ. The number of activity-events for each outdoor recreation activity in the region, the total number of outdoor recreation activity-events for the region and changes to these data over time help provide an understanding of the consumption of and demand for outdoor recreation opportunities in SEQ.



# Section 5

## Methodology

The aim of the 2007 SEQORDS was to mirror the 2001 study so that comparisons between the 1997, 2001 and the 2007 SEQORDS were valid. Overall there was relatively little difference in methodology between the three studies. The small differences that did occur may contribute to some of the observed changes between the three studies. The key methodological aspects relevant to the comparative analysis of the three SEQORDS are presented in Table 4.

The most significant difference between the three studies was the difference between the sample of age

groups and the actual population. See Table 5 for the data on sampling of demographic profile.

The major conclusion concerning the differences between the three studies is that sampling of certain age profiles for the 2001 study may lead to an overestimation of participation and frequency rates of activities in the 25–39 and 40–54 age groups. This may help explain why the participation rates and frequency rates in some activities peak in 2001 and then decline in 2007. However this explanation would not account for all the changes noted between the 2001 and the 2007 results.

A major limitation of the Trends Analysis, is that there is no extensive qualitative data in the 2007 SEQORDS that can help explain the trends noted. The 2001 qualitative results as well as the interview respondent comments concerning constraints on the 2007 SEQORDS are the empirical basis from which much of the analysis is derived. Other literature has also contributed to the Trends Analysis.

**Table 4: Key methodological features of the three SEQORDS**

Methodological Feature	1997	2001	2007
Sample Size	2221	2820	1334
Confidence Interval	2.1 (95%)	2.2 (95%)	2.7 (95%)
Definition of Outdoor Recreation Activities	Swimming used instead of water activities in the telephone interview	Water activities replaced swimming	Water activities used in survey
Distributions of Sample –Demographic features	Sample replicated age profile of population	Some age groups sampled were not representative of the general population	Sample replicated age profile of population

**Table 5: Comparison of sample age groups over the three SEQORDS**

Age range	1997 study	2001 study	2007 study	Actual Pop. 15 years of age or over
15–17 years	5%	5%	18%	9% (15–19)
18–24 years	14%	9%		9% (20–24)
25–39 years	29%	29%	27%	27%
40–54 years	25%	31%	26%	26%
55–64 years	10%	13%	14%	14%
65 years or more	16%	13%	15%	15%

(Note: the 15–17 and the 18 to 24 year age group were combined in 2007)

# Section 6

## Literature review: social trends and outdoor recreation

A brief literature review was conducted with the aim of complementing the analysis of trends presented in the latter sections of this report. The literature explores some of the issues that may affect outdoor recreation participation rates, setting use and preference, physically active forms of outdoor recreation and the gendered nature of outdoor recreation activity. It is not a comprehensive review. Further work is needed to undertake a thorough review of literature on contemporary issues relating to outdoor recreation participation issues.

The issues that have been selected for the Outdoor Recreation Trends Study include:

- decrease in the amount of ‘time’ available for outdoor recreation participation;
- the effect of Sunday trading on potential participation in leisure;
- social changes and leisure; and
- decreasing opportunities for outdoor recreation in SEQ.

Each of these issues will be discussed in turn in the sections below.

### 6.1 Decrease in the amount of ‘time’ allocated for outdoor recreation

Time is an issue for people who wish to engage in outdoor recreation in SEQ. Before the three SEQORDS were conducted, the average amount of time people spent on recreational pursuits in Australia decreased by 90 minutes per day from 1992 to 1997. In 1997 people aged over 15 years spent 1 hour and 43 minutes on sport and recreation per day (Australian Bureau of Statistics, 2006).

It is difficult to estimate the changes in time use from 1999 to 2007 because the Australian Bureau of Statistics did not collect time use data over that time period. An indication of the changing relative priorities of work and leisure can be found in the changes to features of employment over the period of the three SEQORDS.

There have been major changes to the way people have been employed in Australia during the period of the three SEQORDS. These changes can affect outdoor recreation. There are two key aspects that can influence participation rates of outdoor recreation. These are: the change in number of hours worked by full time workers and the changes to casual and part time employment. The changes in these types of employment have particular impacts on free time and therefore may constrain participation and frequency of participation in outdoor recreation activities.

The changes to hours worked by full time employees change free time available for leisure for that group. For full time work there has been an increase in the total number of hours worked in Australia over the period of the three SEQORDS:

*Average weekly hours for full-time workers increased from 40.2 hours to 41.9 hours between 1985 and 2005. This trend has been similar for both male and female full-time workers, with men’s hours increasing 1.9 hours per week (to 43.2 hours) over the period, and women’s increasing 1.7 hours per week (to 39.3 hours). (ABS 2007)*

This increase in working hours may impact on “free” time for leisure which includes outdoor recreation. Of major concern from a ‘benefits of leisure and recreation’ perspective, has been a rise in the hours by employees who are already working long hours. For a growing number of workers the idea of free time is becoming an elusive reality:

*The proportion of employees who worked 50 hours or more increased between 1979 and 1999, from 14% to 19%, but had declined slightly to 18% in 2005. The proportion of employees who worked very long hours (60 hours or more), continued to increase from 8% in 1979 to 11% in 2005. (ABS 2007).*

However, not all people are employed in full time work. Changes to casual and part time employment can also reveal the amount of “free” time available for individuals undertaking this type of work. The proportion of part-time workers has increased from 16% in 1979 to 29% in 2005 and there was a corresponding decrease in the rates of full time employment. This may be seen to be a positive in the allocation of time to leisure in many instances because of increased work flexibility. However, because of the type of work, the pay rates, and the timing of the work, this rise in casual/part-time work can have negative impacts on leisure and outdoor recreation.

## Section 6

# Literature review: social trends and outdoor recreation cont.

There are two issues regarding casual employment that have the potential to impact on participation rates of outdoor recreation. These are: the hours worked, and the rates of pay. The proportion of people who work in part time employment and are time poor, is growing. Decreases in the length of holidays and less free time during the working week (because workers need to work longer hours in a number of lower paying jobs) mean that people have less free time for leisure and recreation. More people being employed in casual/part time employment will lead to less people having the time to undertake outdoor recreation activities. This is particularly so for outdoor recreation activities which require large amounts of time.

From an income perspective the changes to the number of casual employees can also explain trends in outdoor recreation. In terms of financial motivation, there has been an increase in part-time workers wanting to work more hours. In 2005, 7% of part-time workers wanted to work more hours compared with 6% in 1995 (ABS 2006).

The implications of this are that there are more people who have “free” time but do not have the funds to pursue leisure and outdoor recreation interests. At the same time, there are more people who have enough money but do not have the time. It must also be noted that these issues are distributed unequally throughout the population. People from lower socioeconomic backgrounds are more likely to experience both these issues of part-time work compared to higher paid full time employees.

Based on the above data the main conclusions are that full-time workers are finding themselves with less free time to undertake recreation and that an increasing number of people who undertake part-time work are also time poor or they have decreased funds for possible expenditure on outdoor recreation. These features may explain certain trends in participation rates outlined in the sections below.

### 6.2 The effect of Sunday trading on potential participation in leisure

The introduction of Sunday trading is likely to have had a major impact on outdoor recreation participation rates. However, there is limited data on the relationship between the effects of Sunday trading on consumer behaviour and subsequent impact on outdoor recreation. Research attention is also needed to determine the impact of Sunday trading on the leisure time of the workforce employed on Sundays. Despite limited research that directly focuses on outdoor recreation the impact can be inferred from research on consumer behaviour as well as statistics on employment trends.

The introduction of Sunday trading has had an effect on shopping behaviour, and thus a likely impact on leisure and recreation. In a study on the introduction of Sunday trading and general shopping behaviour in NSW, the findings indicate that the change in shopping behaviour is large enough that it will have a likely impact on the leisure and recreation of the population. Baker (2002) found

that the number of visits to shopping centres increases when Sunday trading is introduced and thus there is a corresponding increase in the time spent at shopping centres. There is also a tendency for more visits towards the end of the week and during the weekend.

The potential impact on leisure and outdoor recreation is that people will tend to go shopping instead of undertaking other forms of leisure and recreation on the weekend. Although shopping may not take up all of the hours that could be used for recreation on a Sunday, the introduction of shopping on Sundays places another activity within the time budget that individuals or families now need to negotiate.

Sunday trading also impacts on employees. Not only is there an impact from people switching preferences to participating in shopping on Sundays but also the people employed during this time will have decreased opportunities to recreate on Sundays. Approximately 15% of the work force in Australia is employed in retail on Sundays (Baker, 2002). This alone may explain much of the decreases noted between the 2001 and the 2007 SEQORDS.

Another feature of the Sunday trading employment characteristics is the age groups that are employed during Sundays. The majority of people employed in retail outlets are young people. Up to 50% of these people are aged between 15–19 (Social Trends ABS 2004). This means that younger people have more employment demands placed on them and thus

have decreased opportunities for outdoor recreation as a result of the change in trading hours.

The conclusions from the above discussion are as follows. The effect of Sunday trading for a large proportion of the population has been to shift the type of leisure away from outdoor and other sporting leisure activities to one which is indoors and dominated by a consumptive leisure experience. Additionally there are a significant number of people employed on Sundays to service this consumptive indoor leisure experience. Community groups opposing the introduction of Sunday trading alleged that the introduction would impact on sport, community involvement and religious activities. There was little exposure given to the possible effect on outdoor recreation. Further research is needed to verify the conclusion that Sunday trading has had a major impact on participation rates and frequency rates between 2001 and the 2007 SEQORDS.

### 6.3 Social changes that affect leisure and recreation

The social changes relevant to explaining changes to participation rates are as follows:

- Changes in computer based leisure including the Internet; and
- Home entertainment.

The number of households with home Internet access has increased significantly since 1997. By 2004–05 the number of households that had home access to the Internet had risen to almost 56% (4.4 million)

compared to 16% (1.1 million) in 1997 (ABS 2005). In terms of frequency of Internet usage the number of adults aged 18 and over (7.8 million) using the Internet at home every day was 36%. Of the population who used it once a week there was an increase in use of 49% in the year prior to April 2003. Access to the Internet also increases as children grow older. Of children aged from 5–8 year old 37% had used the Internet in the 12 months prior to April 2003. Of children aged 12–14 years old the number rises to 88%. Increased use of the Internet impacts on the time budgets of people and thus increases in Internet and recreational computer use takes away from other leisure pursuits including outdoor recreation.

Included in the home-based leisure category for the purposes of the present study are: computer games; audio systems; pay TV; and other television technology including wide screen television. Changes to sales data of these products can indicate the changes in leisure preferences. Trends in real household financial consumption expenditure can indicate changes to home based leisure. Some expenditure can be assigned to purchases of home furnishings etc. but the majority of expenditure is on home entertainment systems.

There has been an increase in real household financial consumption expenditure from 4.95 in 1996 to 5.6% in 2006. This expenditure includes money spent on pay TV. In June 2005 approximately 1.7 million households subscribed to pay TV providers. In 1997 the number of users was negligible. (ANZ Economics 2006)

Also impacting on outdoor recreation has been the decrease in cost of electronic home based entertainment systems. The decreased cost of home based leisure activities will ultimately lead to an increase in time spent undertaking the activity. This will most likely be at the expense of other activities including outdoor recreation. The decrease in cost is significant.

*In particular, average consumer prices for audiovisual and computing equipment in June 2006 were half what they were in 2001 and a quarter of their 1989–1990 levels. This category includes massively popular items such as televisions, audio systems and PC's all of which are becoming integrated into comprehensive home entertainment systems. (ANZ Economics 2006)*

The rise of new home based entertainment technology and the decrease in costs has led to home based leisure becoming more popular. The increased availability of the Internet and development of computer games has led to the increased popularity of home based leisure. The trend in leisure and recreation in Australia based on work-life balance and preference for leisure pursuits presented so far is one of decreasing time for leisure, some issue of cost for certain groups and a general increased preference for home based leisure. Outdoor recreation consequently has become less important. This consequence may explain decreases in some activities.

## Section 6

# Literature review: social trends and outdoor recreation cont.

### 6.4 Gender issues

Gender issues are a complex and important issue to examine in light of changes to recent trends in outdoor recreation. The following literature will focus on the recent issues of risk to women whilst undertaking outdoor recreation. Many of the gender issues outlined in the Senate Inquiry into Women in Sport and Recreation in Australia (2006) are pertinent. However, this Trends Analysis will focus on risk and women's participation in outdoor recreation from a regional perspective.

In recent time there has been an increase in the reported number of sexual assaults on women in public places whilst they have been recreating. These attacks have been given prominence in the media. An example of the media response is provided in Figure 5.

Behavioural guidelines have been publicised in an attempt to educate women who venture into public open spaces. The attacks that have been reported in the media are indicative of statistical increases in sexual assault rates in recent years. The statistics for sexual assault in the SEQORDS region are presented in Table 6.

The data indicate that there was a large increase in reported cases of sexual assault in the study region. In metro north region of Brisbane there was an increase of 21% of the reported cases of sexual assault between 2004/2005 and 2005/2006.

Figure 5: ABC media report March 2007

**Police predict more Brisbane bikeway attacks**  
Posted Sat Mar 3, 2007 8:34am AEDT

The head of the Queensland police task force investigating a series of assaults on women in Brisbane says he believes there will be more attacks. Since early last year, 42 women have been attacked along Brisbane's bikeways.

Police task force Echo Shine is investigating and has identified about 300 men of interest. Interviews are being conducted, DNA samples taken and alibis checked. Task force head Detective Inspector Bob Hytch believes there are at least two serial sexual offenders targeting women. More than a month has passed since the last attack, but he believes it is only a matter of time before another happens. *"I'm a realist – I believe the attacks will occur again,"* he said. A \$50,000 reward was announced last month for any information leading to an arrest.

Table 6: Changes in reported sexual assault statistics in the SEQORDS region (Numbers in brackets are for the year 2005–2006)

Area	Reported in 2006–2007	Per 100 000 population	Percentage change reported 2006–2007
Metro South	914 (927)	122 (126)	-1% (17%)
Metro North	707 (689)	116 (115)	3% (21%)
SEQ	735 (685)	109 (103)	7% (14%)

Source: Queensland Police Service Annual Report Crime Management

In all three regions there was a significant rise in reported cases during this time period. In the next time period (2005/2006 to 2006/2007) there was a slight increase.

It must be noted that this data includes assaults that may have taken place in domestic or other non-outdoor situations. However, the results do indicate that the media's claim of increased daylight attacks on females in parklands is not without validity. From this data it can be assumed that womens' participation in activities such as walking and other activities undertaken alone in parklands have decreased as a result of fear of attack. Further study is needed to verify the extent of the impact on participation rates.

## 6.5 Liveability and outdoor recreation in SEQ

The central argument presented in this section is that the impact of population growth is becoming a core issue that is affecting the liveability of SEQ. At present the impact of population growth could be considered a significant secondary issue. However, this issue is increasing in magnitude. The increasing impact on outdoor recreation mirrors the increase in issues of sustainability associated with of population growth within SEQ. The discussion that follows below outlines the argument.

The attractiveness of the SEQ lifestyle is commonly understood to be one of the main attractants to people moving to the area. Further analysis of what makes people satisfied with urban living has been undertaken within the region.

In determining urban living satisfaction, it has been demonstrated that the most *“favourable attribute of urban living is neighbourhood access to facilities (like shops, schools, health services and recreational facilities), followed by publicly provided neighbourhood services (like parks and gardens, libraries etc.). The least favourably evaluated attribute of urban living is regional transport, followed by neighbourhood crime.”* (McCrea, Stimson and Western, 2005, p 134).

Favourable regional attributes of SEQ differ slightly from the urban living attributes identified above. For the general population the attributes that are important to regional satisfaction include the cost of living and government service provision (McCrea et al., 2005).

Population growth can impact on regional satisfaction. The impact will most likely have a greater affect on government service provision, because the cost of living is relatively independent of changes in the local population. If service provision of outdoor recreation does not match the needs of an increased population, then the overall population will become less satisfied with the region of SEQ. This could happen in a short time frame for some segments of the population.

Other important factors of regional satisfaction for specific age groups include concern about pollution levels for younger people and parents. Improvements to transport systems are important for older generations (McCrea et al, 2005). Both these factors are dependent on how growth is managed in SEQ. Congestion and to a lesser extent pollution from over-stressed transport systems will most likely have an impact on participation rates of outdoor recreation.

This research adds weight to the argument that outdoor recreation is an important issue for many people of SEQ but is secondary to other factors that are currently driving satisfaction with urban living. This situation, however, is not static.

The problems of growth and life satisfaction in SEQ have also been identified by other authors examining the sustainability of growth in SEQ. In SEQ, the *“quality of life is declining due to increased traffic congestion, travel times, crime rates, and loss of open space for recreation and community events.”* (Graymore et al, 2002)

These conclusions are mirrored in the 2001 and the 2007 SEQORDS. In the 2001 SEQORDS it was identified that participants were already experiencing the negative impacts of population growth. This was evidenced in the thematic analysis of focus group responses who participated in that study.

## Section 6

# Literature review: social trends and outdoor recreation cont.

Although no qualitative study was undertaken in 2007 the response from current participants in the 2007 SEQORDS indicated that the problem of 'nowhere to go' had increased since 2001. Thus, there is a reasonable degree of confidence in concluding that the impact of population growth is increasing.

The conclusion from the SEQ's Sustainable Human Carrying Capacity research (Graymore et al.) are pertinent to the argument of ensuring that the impacts of population growth do not become a core issue affecting the liveability of SEQ.

*... it would appear that the current 'sea change' trend to SEQ will only continue to degrade the health of the coastal and inland ecosystems negatively impacting on the sustainability of SEQ unless there are changes in the management of population impacts, such as planning to reduce travel between work, home and other amenities and increasing the number and size of protected areas. (2002, SEQORDS p124)*

The need to maintain the sustainability of our regional ecosystems closely follows the need to focus on maintaining the liveability of the region. Based on the above literature there is a need for government intervention to maintain the current liveability of the region through planning and management efforts targeting key components that influence perceived liveability of east Queensland. The SEQ Regional Framework for Growth Management (Regional Coordination Committee (2000) is an example of measures that can be implemented to address the issues of liveability.

### 6.6 Other outdoor recreation studies

Other outdoor recreation literature has also helped inform possible explanations of the trends identified in the present study. The following list of literature is cited here for further information concerning trends in outdoor recreation in Australia and the USA.

- Review of Recreation Participation and Demand Studies for Trail-based Recreation Activities (2006);
- Participation in exercise recreation and sport, Annual report (2006);
- Senate Enquiry into Women in Sport and Recreation in Australia;
- Outdoor Recreation In America 2003: Recreation's Benefits to Society Challenged by Trends (2004);
- Outdoor Recreation Outlook 2008 Prepared for the 2007 Marketing Outlook Forum. (2007);
- From the USA Outdoor Industry Foundation (OIF):
  - o The Next Generation of Outdoor Participants (2007);
  - o The Active Outdoor Recreation Economy (2007);
  - o Active Outdoor Recreation Participation Study (2005).



# Section 7

## General trends from the 2007 SEQORDS

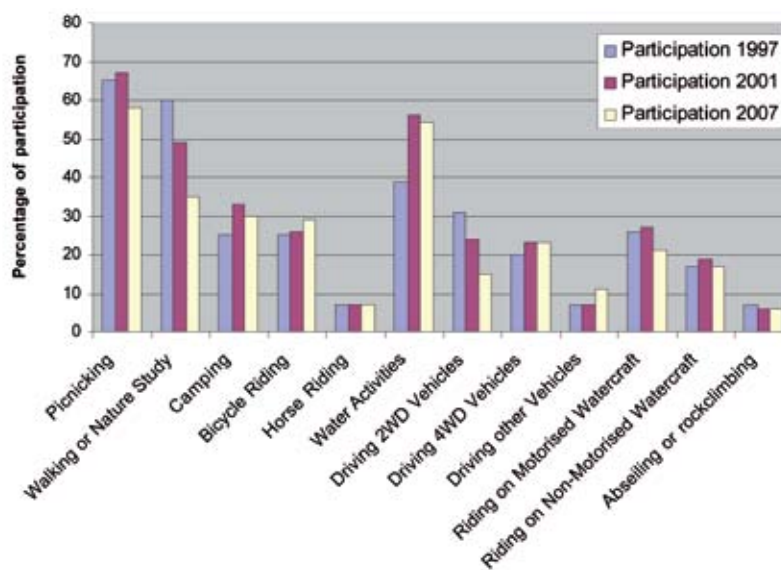
The information presented in this section sets the scene on the trends in participation rates, frequency rates and activity-events as presented in the 2007 SEQORDS. The trends that require more detailed scrutiny are as follows:

- the decrease in participation rates in all activities except bicycle riding and driving other vehicles;
- the decrease in frequency rates in most activities; and
- the corresponding decreases in activity-events across many activities.

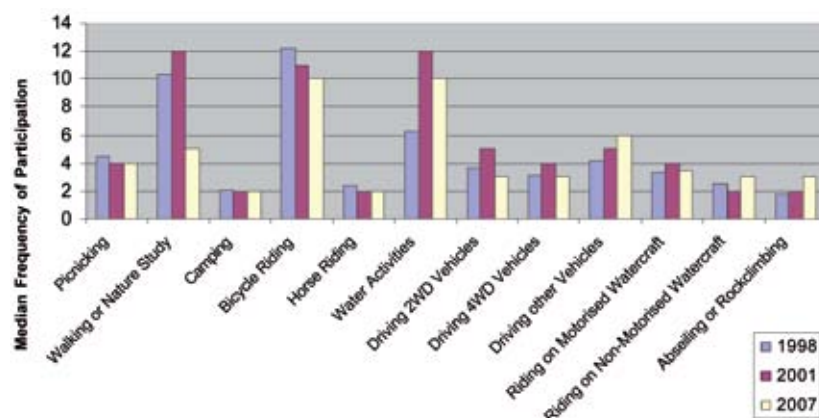
It must be noted that whilst this study explores reason for declines and some increases in activities, the overall participation and frequency rates in outdoor recreation in 2007 remain high compared to previous 2001 and 1997 SEQORDS.

Figures 6, 7 and 8 show the changes in participation rates, frequency rates and the activity-events across the three studies. The participation rates are based on the number of people undertaking the activity proportionate to the SEQ population from the 2005 Australian Bureau of Statistics census on June 30th 2005. More detailed data is presented in the 2007 SEQORDS.

**Figure 6: Participation rates for outdoor recreation activities across the three SEQORDS**



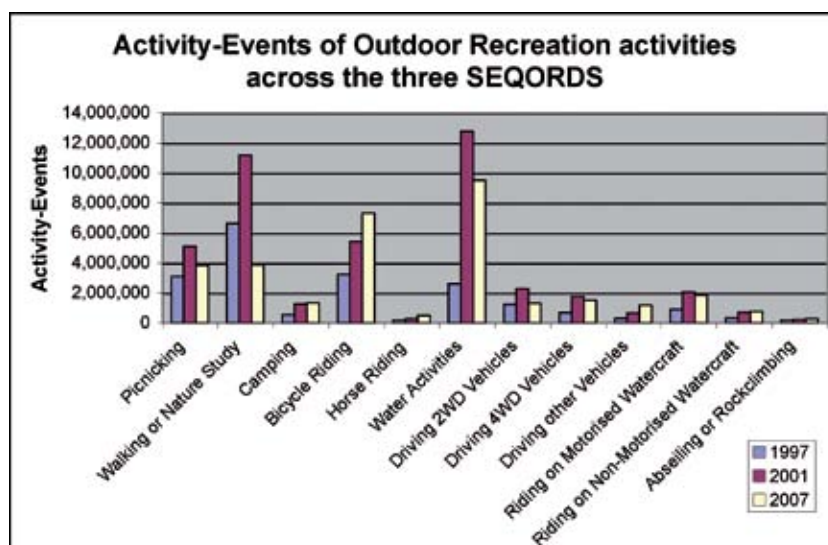
**Figure 7: Frequency of participation for outdoor recreation activities across the three SEQORDS**



# Section 7

## General trends from the 2007 SEQORDS cont.

Figure 8: Activity-events of outdoor recreation activities across the three SEQORDS



Changes to activity-event numbers between the three SEQORDS are also shown in Table 7 below.

Table 7: Changes to activity-events across the three SEQORDS

	1997	2001	2007
Picnicking	3 096 000	5 093 904	3 835 902
Walking or Nature Study	6 622 900	11 176 176	3 857 240
Camping	554 400	1 254 468	1 332 799
Bicycle Riding	3 233 000	5 436 035	7 327 114
Horse Riding	182 400	266 100	482 565
Water Activities	2 608 200	12 772 776	9 506 865
Driving 2WD Vehicles	1 224 700	2 280 850	1 326 234
Driving 4WD Vehicles	672 700	1 748 652	1 516 634
Driving other Vehicles	315 000	665 250	1 165 379
Riding on Motorised Watercraft	894 300	2 052 768	1 851 475
Riding on Non-Motorised Watercraft	333 000	722 270	755 034
Abseiling/Rock-climbing	187 500	228 086	265 903

A notable trend in the figures above that occurred in 2001 is the spike in participation rates, frequency of participation, and activity-events for many of the activities. The activities that show this pattern in the activity-events are: picnicking, walking or nature study, driving 2wd vehicles and to a lesser extent water activities. These changes may be determined by the increase in many constraints (in addition to 'time') in the 2007 SEQORDS.<sup>3</sup>

Changes have also occurred in latent demand as measured through non participants who would like to participate. Figure 9 shows the rates of non participation between 1997, 2001 and 2007 SEQORDS.

The trends between the years are expressed as changes in percentage in Figure 10.

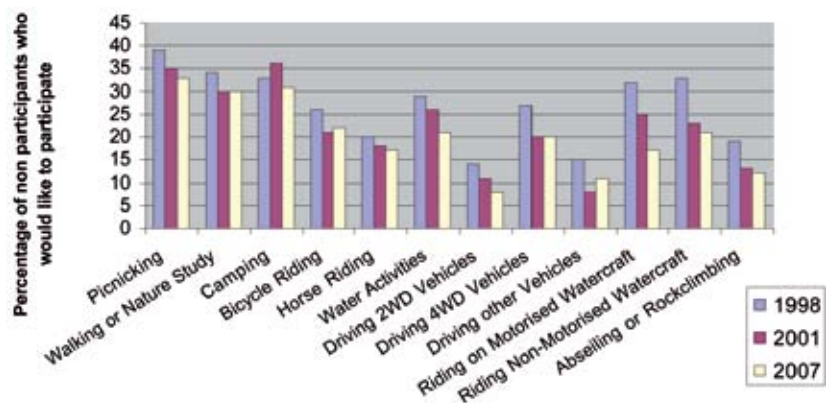
From the two figures it can be concluded that demand is still high but that is decreasing. Two exceptions to the trend were bicycle riding and driving other vehicles. These activities also displayed a rise in activity rates and thus show that latent demand is a reasonable indicator of potential participation in outdoor recreation.

Whilst it is easy to suggest possible explanations for the trend it is difficult to ascribe cause and effect using the research instruments and techniques of the SEQORDS. This difficulty applies to most of the data collected, analysed, and presented in the SEQORDS and the Trends Analysis. However, the qualitative

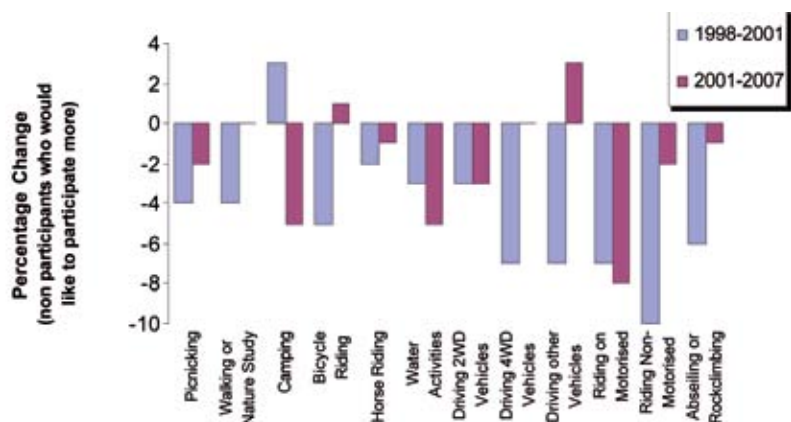
research from the 2001 SEQORDS and recent outdoor recreation literature can be used to make some conservative and qualified explanations for the results of the

2007 SEQORDS. In the following sections the issues identified in the 2007 SEQORDS will be explored.

**Figure 9: Rates of non participants who would like to participate across the three SEQORDS**



**Figure 10: Changes in the rates of non participants who would like to participate across the three SEQORDS**



<sup>3</sup> The changes to participation rates and frequencies trend may also be exacerbated by the sampling issues outlined in section 5: Methodology

# Section 8

## Changing constraints

General changes to constraints over the three studies will be presented first. The findings presented in this section are similar to the 2007 SEQORDS but differ in that aspects that help explain changes in participation rates and frequency rates will be explored. In this section the constraints of 'time', 'nowhere to go', 'family responsibilities', 'cost' and 'equipment' will be examined. The research question for this section is given below. After each constraint has been detailed a discussion of the issues pertaining to the constraint will be undertaken.

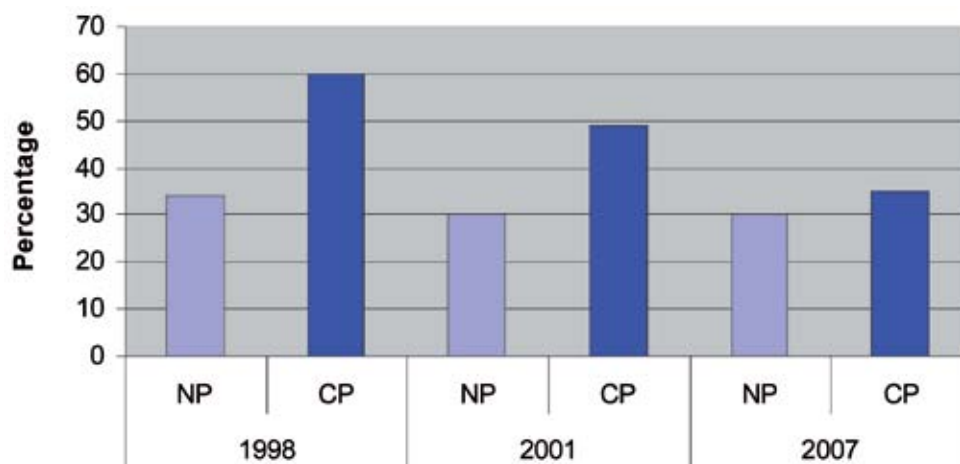
### ***Does the change in certain constraints explain the major changes in participation rates, frequency rates and activity-events in selected activities?***

There are three aspects that need to be explored to be able to answer this question adequately. The first is to determine the extent to which constraints for current participants' impact on observed frequency of participation. Changes to the behaviour of current participants influence the frequency rates of participation.

The second is to determine the extent to which constraints for non-participants may impact on observed decreases or increases in participation rates. Changes in latent demand relate to current participation. The assumption behind this approach is that changes to non-participants' involvement can potentially influence participation rates and frequency rates. For instance if the number of non-participants<sup>4</sup> increases or is stable at the same time as a decrease occurs in the number of current participants, then it can be assumed that some of the current participants have become non-participants. In other words, the constraints for non-participants can be assumed to impact on the rate of current participation where there are declines in participation rates and corresponding changes in non-participation rates.

An example of this can be seen in walking or nature study in Figure 11 below.

**Figure 11: Rates for current participants who would like to participate more and non-participants who would like to participate in walking or nature study across the three SEQORDS. (NP: non participants; CP current participants)**



<sup>4</sup> Non-participants who would like to participate

Figure 11 shows that there is decrease in current participation but there is a relatively stable rate of non-participants reporting that they would like to participate. This indicates that some of the current participants are now non-participants who would like to participate.

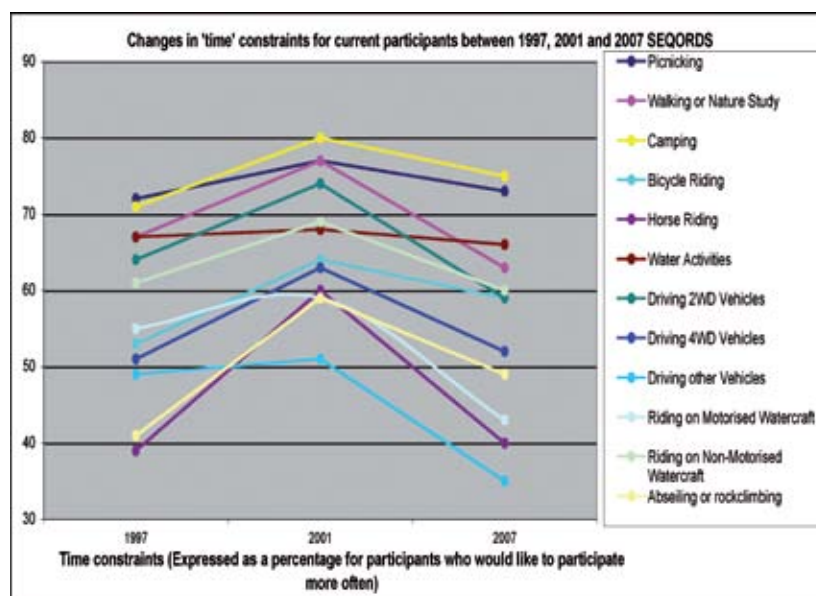
A further important aspect that cannot be examined in the current study is an examination of changes in non-participants who do not want to participate. In other words the characteristics of people who do not participate and have no intention of participating may indicate reasons for observed changes in the SEQORDS. These people may have participated in the past and determining why they currently do not participate is an important aspect to consider in assessing present recreational opportunity and forecasting demand. Unfortunately this aspect cannot be analysed in the SEQORDS or Trends Analysis. This aspect should be included in future research into outdoor recreation demand.

### 8.1 'Time' constraints

Figure 12 shows the changes in 'time' constraints for current participants who would like to participate more often across the three studies.

Figure 12 shows there has been a general increase in the number of people reporting 'time' as a major constraint in the 2001 and the 2007 SEQORDS. However, four activities decreased from 1997 to 2007. These were driving 2wd vehicles, riding motorised and non motorised watercraft and walking or nature

**Figure 12: Changes in 'time' constraints for current participants between 1997, 2001 and 2007 SEQORDS**



study. Thus, in 2007 people involved in these activities generally reported that they are less constrained by 'time' as the primary reason why they could not participate further in the activity compared to 1997. If constraints were the only determinant of the frequency of participation then one would expect there to be an increase in these activities. However this is not the case. Other constraints must therefore be at play because there is decrease in frequency rates for these activities.

For driving 2wd vehicles, riding motorised and non motorised watercraft and walking or nature study, a rise in other constraints can

explain the decrease in frequency of participation. The constraints that have increased for these activities are:

- 'Family constraints' and 'health' (walking or nature study);
- 'Nowhere to go' (driving 2wd vehicles and non motorised watercraft);
- Lack of 'equipment' (motorised watercraft).

In almost all other activities the participants in 2007 indicate that 'time' has increased as a constraint that impedes further participation if 1997 is used as a benchmark. This indicates that 'time' can be used to explain the decreases in frequency rates.

## Section 8

# Changing constraints cont.

Figure 13: Changes in 'time' constraints for non-participants between 1997, 2001 and 2007 SEQORDS

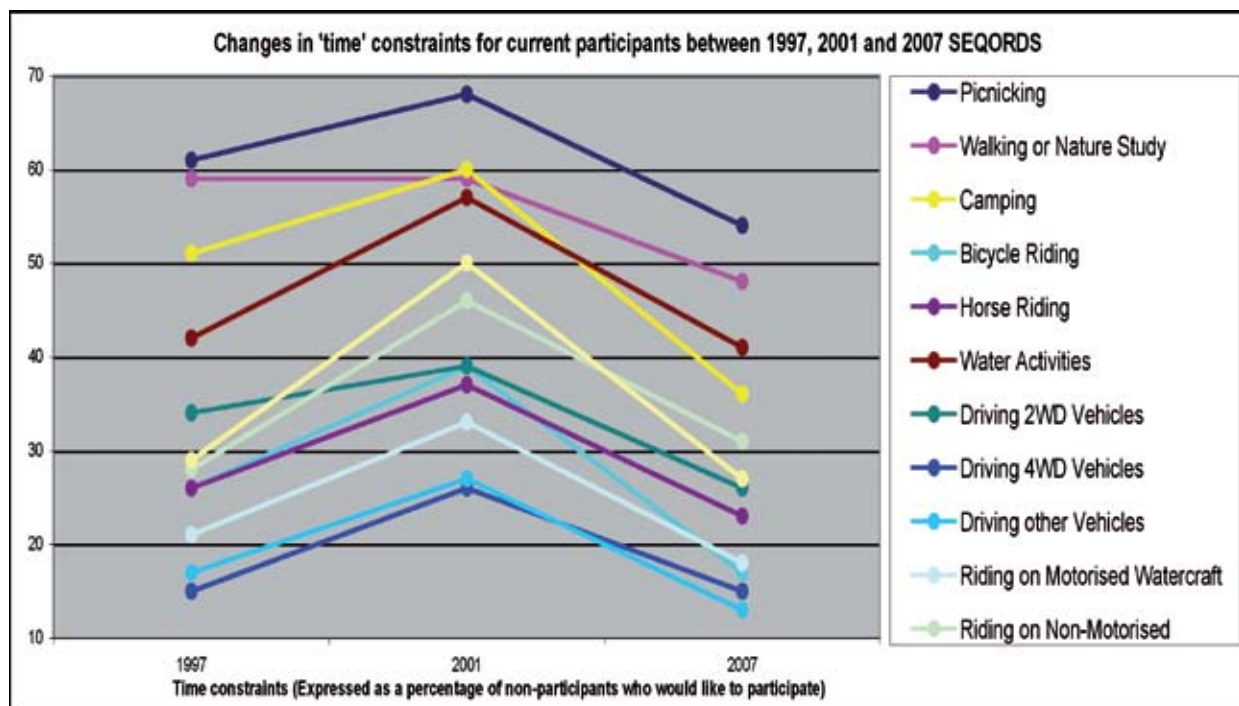


Figure 13 shows that in 2007 the number of non-participants who would like to participate is either less than or the same for all activities (except non motorised water craft which increased). The spike in the number of people reporting 'time' as a major constraint in 2001 can be explained by methodological sampling issues<sup>5</sup> or other factors increasing as a constraint. The major conclusions from the analysis of both types of participants are:

- Current participants find that 'time' plus other contextual issues related to the attributes of the activities are a major constraint to further participation. In other words whilst 'time' is still an important issue, other constraints, particular to the activity have a major impact on frequency of participation;
- Non-participants find that 'time' is still a major constraint to participation;
- There was a slight decrease in the number of non-participants mentioning 'time' as a major issue for many activities;
- 'Time' issues have less of an impact on latent participation than current participation; and
- Other constraints are increasingly more important reasons for non-participation.

<sup>5</sup> The 25–39 and 40–54 age groups were over sampled in 2001 and these groups are the most time poor of all age groups

## 8.2 'Nowhere to go' constraint

In this section the constraint of 'nowhere to go' is described. In the 2007 SEQORDS an increase in this constraint for many activities was noted particularly for current participants. These findings have major implications for planning and management of outdoor recreation opportunities. The changes noted in the SEQORDS are presented graphically below in Figure 14.

There are major changes in the results from the SEQORDS 2007 concerning the constraint – 'nowhere to go' – for participants who would like to participate more often and non-participants who would like to participate. The data that forms Figure 14 is presented in Table 8 below.

Figure 14: 'Nowhere to go' constraint for current participants and non-participants

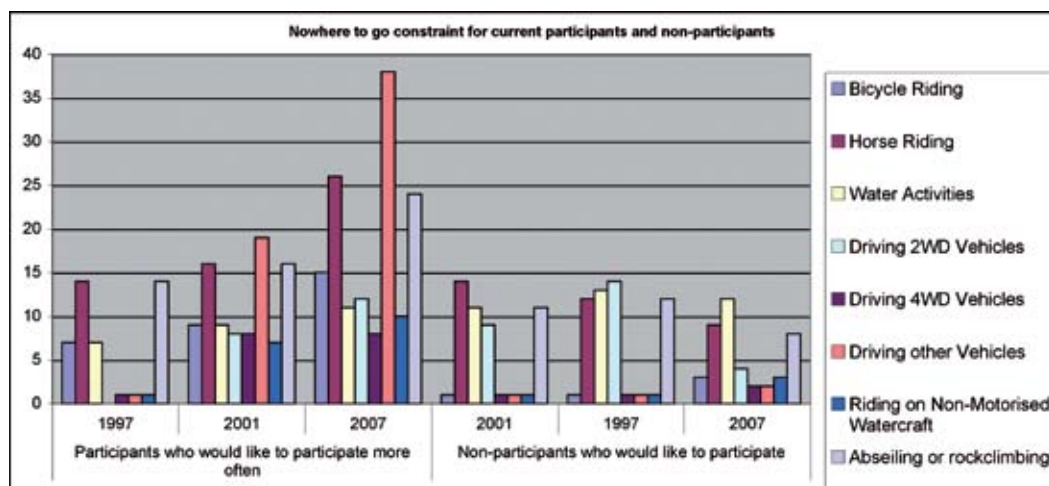


Table 8: Constraint – 'Nowhere to go' – for participants who would like to participate more often and non-participants who would like to participate

	% of participants who would like to participate more often			% of non-participants who would like to participate		
	1997	2001	2007	1997	2001	2007
Bicycle Riding	7	9	15	<1	<1	3
Horse Riding	14	16	26	12	14	9
Water Activities	7	9	11	13	11	12
Driving 2WD Vehicles	<1	8	12	14	9	4
Driving 4WD Vehicles	<1	8	8	<1	<1	2
Driving other Vehicles	<1	19	38	<1	<1	2
Riding on Non-Motorised Watercraft	<1	7	10	<1	<1	3
Abseiling/Rock-climbing	14	16	24	12	11	8

# Section 8

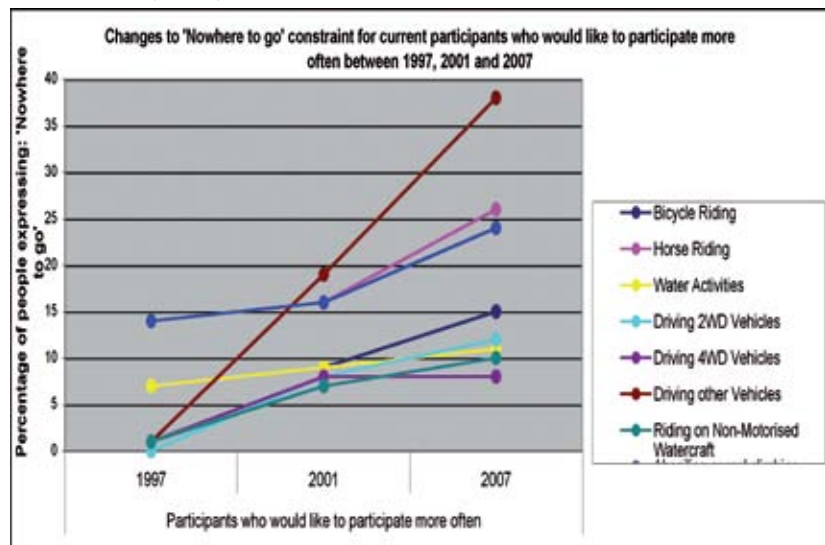
## Changing constraints cont.

From both Figure 14 and Table 8 there are large percentage changes in the constraint of 'nowhere to go' for all activities. To illustrate the changes in more detail the current participants are shown in Figure 15 and the non-participants are displayed in Figure 16.

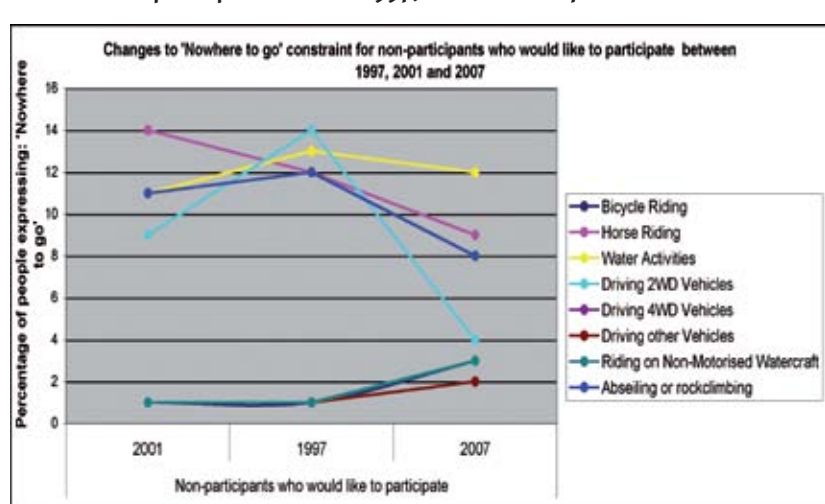
The conclusion for current participants in outdoor recreation is that there is an increasing perception in SEQ of fewer places and opportunities to undertake outdoor recreation activities. This will most likely have impacted on the frequency of participation rates for all activities. The reason for this is that current participants know the constraint from direct experience and adjust their recreation behaviour accordingly. Of particular concern is the increase in other vehicle users expressing there is nowhere to do this activity. Land managers and planners need to pay particular attention to this phenomenon given the increases rates of participation and frequency of participation in this activity.

For non-participants the constraint 'nowhere to go' is either decreasing or stable. The difference between the two types of participants can be explained through the difference in knowledge of constraints. The people who currently participate experience firsthand the lack of places to do the activities. This experiential knowledge would not be apparent to non-participants. This conclusion lends weight to the argument that there is an appearance of ample opportunities for outdoor recreation

**Figure 15: Changes to 'Nowhere to go' constraint for current participants who would like to participate more often between 1997, 2001 and 2007**



**Figure 16: Changes to 'Nowhere to go' constraint for non-participants who would like to participate between 1997, 2001 and 2007**





in SEQ but the reality for people who presently participate is that there are decreasing opportunities to recreate due to lack of places to undertake their activities.

### 8.3 'Family responsibilities' constraint

'Family responsibilities' were identified as an increasing constraint in 2007 SEQORDS. Figure 17 shows the changes in 'family' constraints across the three studies.

The conclusion from these figures is that 'family' constraints for current participants and non-participants are increasing. This indicates that 'family' constraints contribute to the activities that had a decline between 2001-2007 in the frequency of participation and rates of participation.

For both current participants and non-participants who would like to participate more, there are general increases in 'family responsibilities' for all activities between 1997 and 2007. For non-participants there was a decrease in 'family' constraints between 1997 and 2001 for bicycle riding and picnicking, but this decline is reversed in 2007 where there was a substantial increase in both activities.

The notable increases for current participants and non-participants occurred in the activities of walking or nature study, picnicking and camping. It must be noted that on face value this seems contradictory because walking or nature study is an activity that could be seen as

Figure 17: Changes in 'family' constraints for current participants between 1997, 2001 and 2007

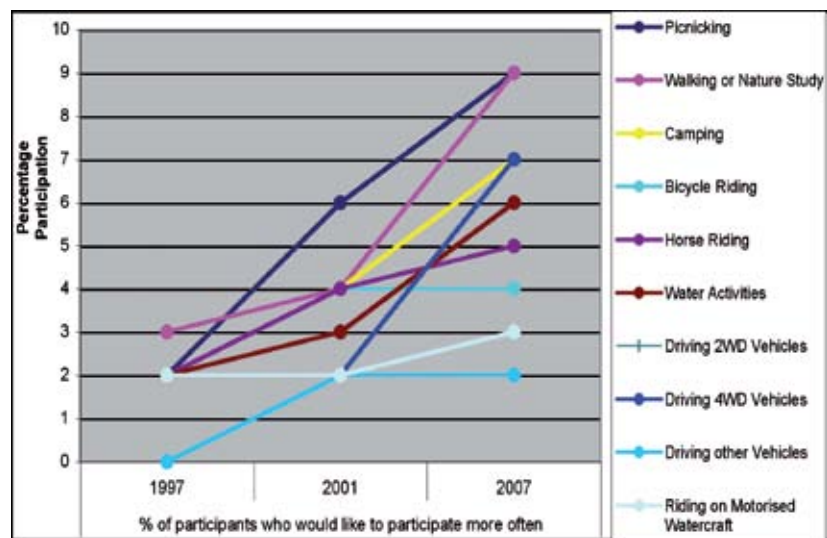
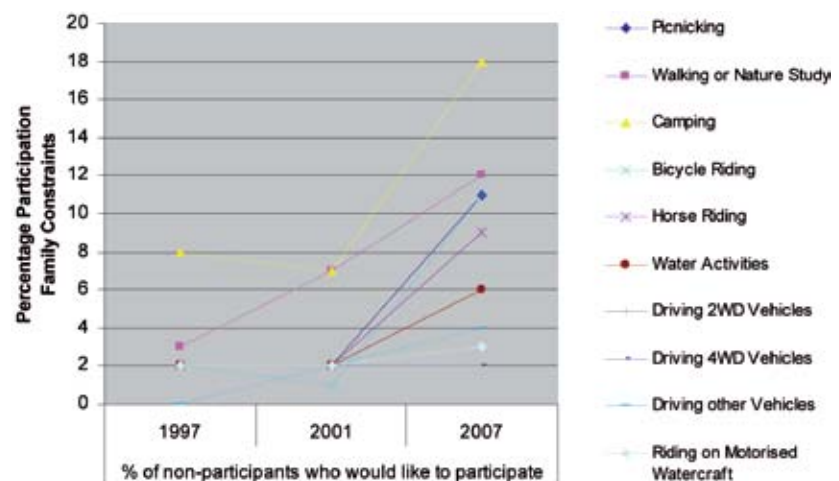


Figure 18: Changes in 'family' constraints for non-participants between 1997, 2001 and 2007



# Section 8

## Changing constraints cont.

inclusive of all age groups in families. However, many respondents said that their interest in these activities changed after their children had grown up or alternatively that their family members were not interested in outdoor activity. Also noted in the constraints statement in the interviews was an increase in home entertainment and computer based leisure within the 2007 SEQORDS. This is most likely to have had a large impact on the way individuals and families engage in leisure pursuits.

### 8.4 'Health' constraint

'Health' constraints were determined from statements made in the interviews. Such statements included: lack of fitness; mobility issues; injury and other chronic ailments. Figures 19 and 20 show the changes in 'health' constraints across the three studies for participants and non-participants respectively.

For both participants who would like to participate more and non-participants who would like to participate there are increases in 'health' constraints. Many people reported they had injury and mobility issues. Lack of fitness as a 'health' constraint seemed to be an issue for a small number of people. These results indicate that the general decreases noted in the 2007 SEQORDS in participation rates and frequency of participation rates can be attributed to rises in health issues for the population of SEQ.

Figure 19: Changes in 'health' constraints for current participants between 1997, 2001 and 2007

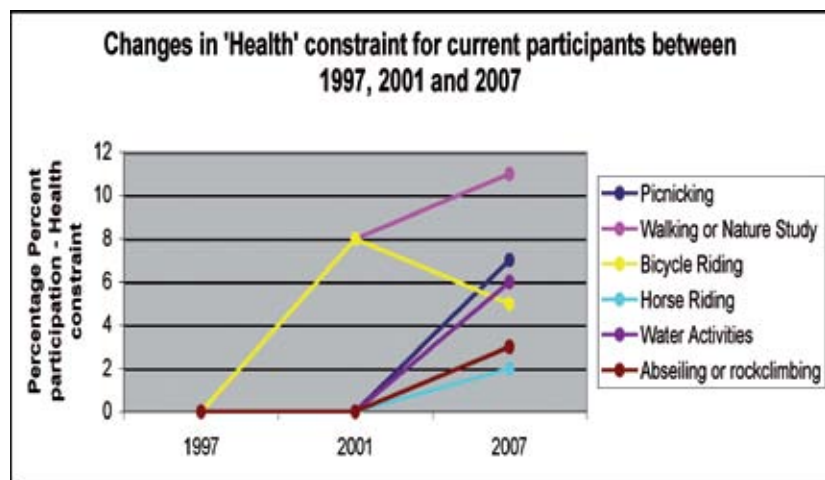
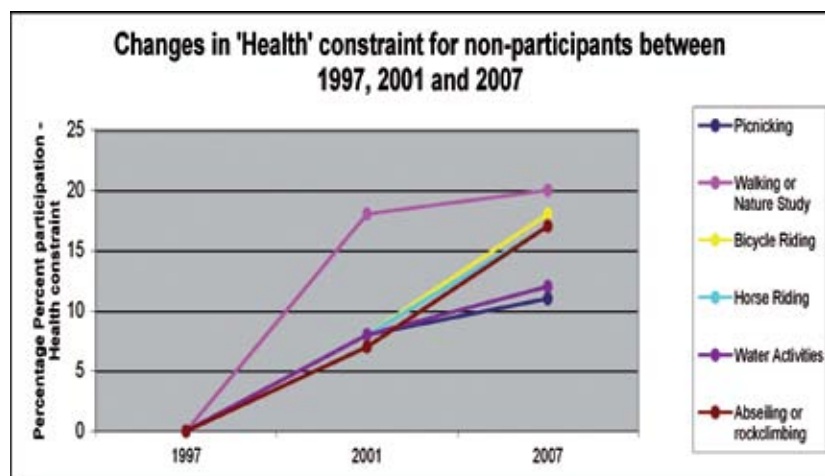


Figure 20: Changes in 'health' constraints for non-participants between 1997, 2001 and 2007



The reason for this is that the decrease in 'time' constraints corresponds to an increase in other constraints such as 'health'. 'Health' constraint have a more enduring effect on frequency of participation of current participants, as well as potential participants' involvement in activities, and thus the increase in reported health issues has a larger impact on participation and frequency rates.

This finding is of concern for the health and well-being of the SEQ population, especially if the decline in physically active forms of outdoor recreation is taken into consideration. (See section 11)

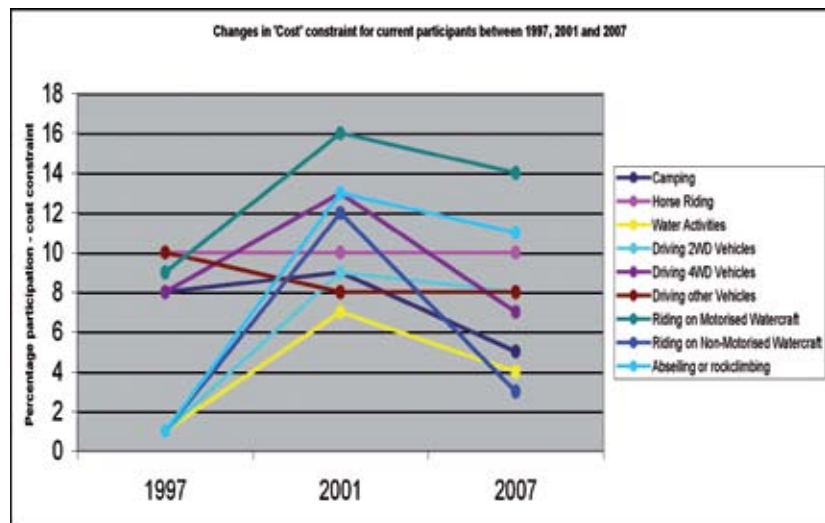
### 8.5 'Cost' constraints

Figure 21 shows the 'cost' constraints for current participants who would like to participate more often. The cost for current participants is mostly 'operational' costs in that the initial purchase of equipment such as a bike for riding bicycles has already occurred.

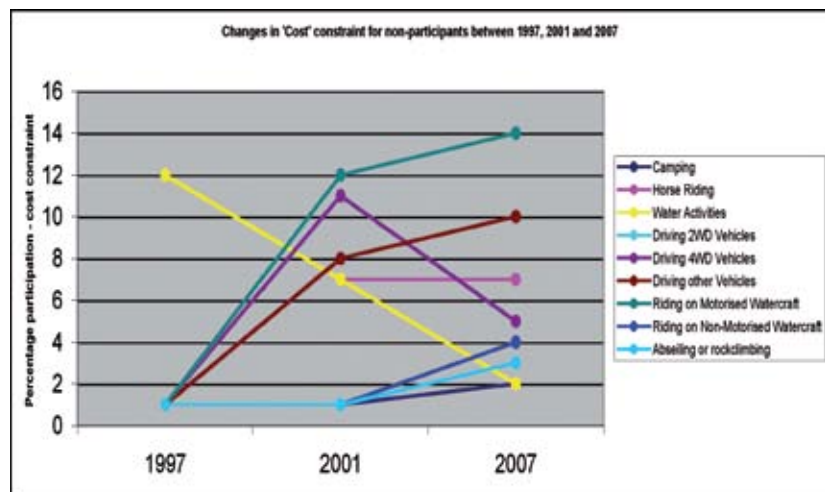
Generally costs have risen as a constraint for all activities. There was a slight decrease in the cost of driving other vehicles and driving 4wd vehicles. The greatest cost for current participants are costs associated with driving to the destination and other fees and equipment usage costs. The rise in cost may have had an impact on frequency of participating for current participants in some activities.

Figure 22 shows changes in 'cost' constraints for non-participants who would like to participate between 1997, 2001 and 2007.

**Figure 21: Changes in 'cost' constraints for current participants between 1997, 2001 and 2007**



**Figure 22: Changes in 'cost' constraints for non-participants between 1997, 2001 and 2007**



# Section 8

## Changing constraints cont.

The figure indicates that apart from water activities there has been an increase in the 'cost' constraint for all activities between 1997 and 2007. There was a decrease in 'cost' constraints in driving 4wd vehicles between 2001 and 2007 but the 'cost' constraint is still higher than the 1997 level. Increases in driving 4wd vehicles may reflect the larger range of smaller more affordable 4wd vehicles now available. From the data it is apparent that cost is an issue that can help explain the decrease in participation rates and frequency as noted between the 2001 and 2007 SEQORDS.

The conclusion from these figures is that for current participants cost is a small but increasing issue constraining further participation. For non-participants there are more people reporting 'cost' as a constraint to participation. This may explain the decrease in participation rates of some activities. This is especially so for those activities with high 'start up' costs and perceived high operational costs.

### 8.6 'Equipment' constraints

Figure 23 shows the changes in 'equipment' constraints for non-participants who would like to participate more.

The impact from 'equipment' constraints of people who would like to participate more on frequency of participation is mixed. In some cases there is an increase in constraints which would lead to a decrease in frequency, whereas in other cases there is a decrease in constraints which would lead to current participants not being constrained by 'equipment' issues. However, for non-participants who would like to participate it is a different story.

Figure 23: Changes in 'equipment' constraints for current participants between 1997, 2001 and 2007

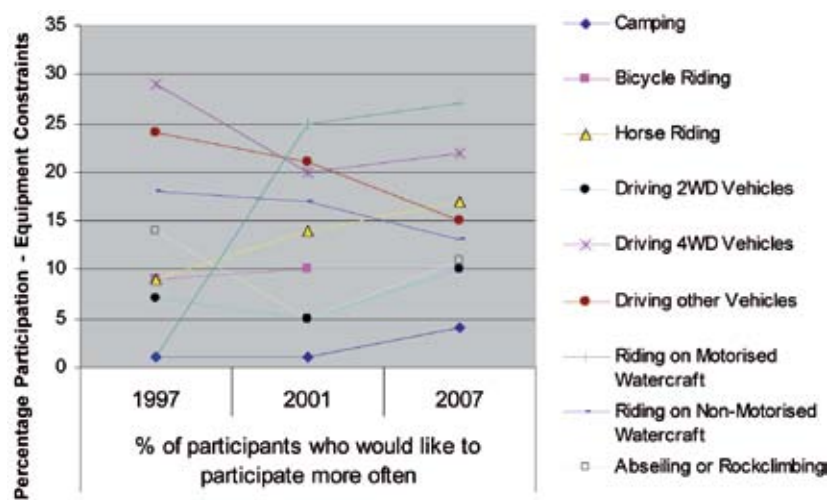
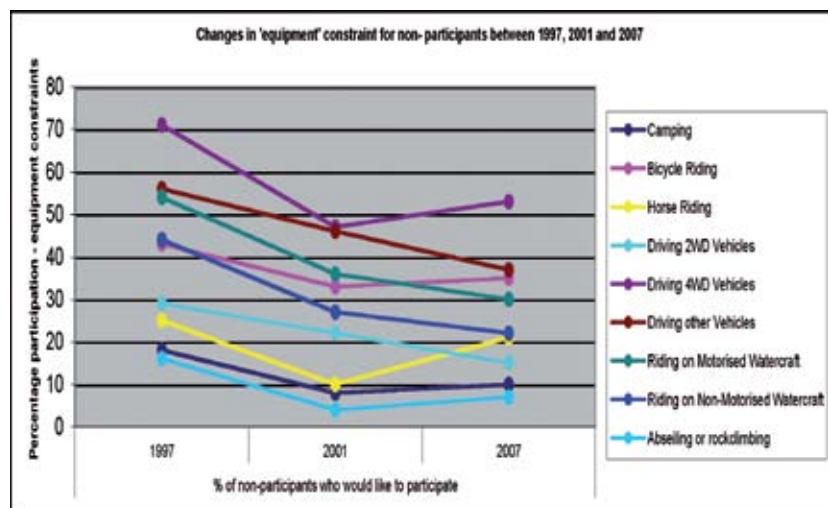


Figure 24: Changes in 'equipment' constraints for non-participants between 1997, 2001 and 2007



**Table 9: Other constraints that influenced the decrease in participation rates and frequency of participation.**  
 (Note: 'Time' is still the dominant constraint but changes to other constraints may reveal reasons for observed changes)

	Contributed to decline	Did not contribute to decline
Reasons for decline in frequency related to <b>current participants</b>	<ul style="list-style-type: none"> <li>• Nowhere to go</li> <li>• Family</li> <li>• Health</li> <li>• Equipment constraints</li> </ul>	<ul style="list-style-type: none"> <li>• Cost</li> </ul>
Reasons for decline in participation (and frequency) related to constraints of <b>non-participants</b>	<ul style="list-style-type: none"> <li>• Family</li> <li>• Health</li> <li>• Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Nowhere to go</li> <li>• Equipment constraints</li> </ul>

For non-participants in all activities there has been a trend of 'equipment' constraints decreasing between 1997 and 2007. This indicates that increasingly other constraints are perceived to be more of an issue for people who do not participate in outdoor recreation. It also indicates that a decrease in equipment does not lead to an increase in participation rates and frequency rates. Other factors are more relevant in explaining the decrease in participation rates and frequency of participation for many of the activities over the period of the three studies.

### 8.7 Summary of constraints

A summary of the constraints that explain the general trend of declining rates of participation and frequency of participation is given here. For specific changes within individual activities and the reasons for these changes please refer to Section 12: Changes in Selected Outdoor Recreation Activities.

#### Current Participants and Impacts on Frequency of Participation

Changes in constraints that **contributed** to a decreased frequency of participation were:

- 'Nowhere to go';
- 'Family';
- 'Health'; and
- 'Equipment' constraints.

(Note: these constraints are most relevant for current participants who would like to participate more)

Changes in constraints that **did not contribute** to a major decrease in frequency of participation were:

- 'Cost'.

(Note: This constraint is for current participants who would like to participate more)

#### Non-participants and Impacts on Participation Rates

The following constraints are for non-participants who would like to participate but were constrained in some way. An increase in the number of people reporting these constraints has an impact on activities that experienced a decrease in participation rates. An increase in non-participants corresponds to a decrease in current participant rates of participation.

Changes in constraints that **contributed** to a decrease in participation rates and possibly frequency of participation were:

- 'Family';
- 'Health'; and
- 'Cost'.

Changes in constraints that **did not contribute** to decreased participation rates and possibly frequency of participation were:

- 'Nowhere to go'; and
- 'Equipment' constraints.

Table 9 displays the summary of constraints that have impacted on the observed decline in participation rates and frequency of participation between 2001 and 2007.

The findings presented above must be viewed within the limitations of a constraints approach to understanding general activity participation. This approach is useful if constraints are the only limiting feature contributing to the observed changes in participation and frequency of participation.

The constraints approach does not explore how individual desires or socially constructed preferences lead to engagement in different forms of leisure and the competing decisions individuals must make within limited time budgets.

# Section 9

## Recreation setting trends

In the 2007 SEQORDS it was identified that a large proportion of outdoor recreation participants expressed a preference for recreation settings which are more *natural* than the places currently being used. In this section this trend will be examined in more detail across the three SEQORDS.

The research question in this section is:

***What are the factors that explain the continuing trends and new developments in outdoor recreation setting use and preference in SEQ?***

To answer this question, first, the changes in recreation settings trends need to be examined across the three studies.

### 9.1 Changes in recreation settings

In the 2007 SEQORDS it was noted that a significant proportion of current participants in all activities would prefer to recreate in settings which are more *natural* than the places where they currently recreate. However, it was suggested that the results should be re-interpreted in many activities as a preference for settings that people perceive to be more *natural* than the settings they currently use while still allowing motorised vehicles or vessels to be part of the setting. It was also suggested that there may be some inconsistent interpretation of the concept of “naturalness” as used in the three SEQORDS. Notwithstanding these inconsistencies there is merit in examining the changes that have occurred between the three surveys.

The apparent preference for recreation settings which are more *natural* than the places currently being used by a large proportion of outdoor recreation participants has been maintained in all three SEQORDS. There have also been changes in usage and preference for *somewhat natural settings*. These changes need further description and analysis. The 1997, 2001 and 2007 data on changes in setting use and preference for current participants is examined below.

Figure 25 shows the setting use and preference for current participants. The data is presented as an average of the aggregated rates of all activities. This will show general trends in use and recreation setting preference for all activities.

**Figure 25: Average of current and preferred settings for all activities from the 1997 SEQORDS**

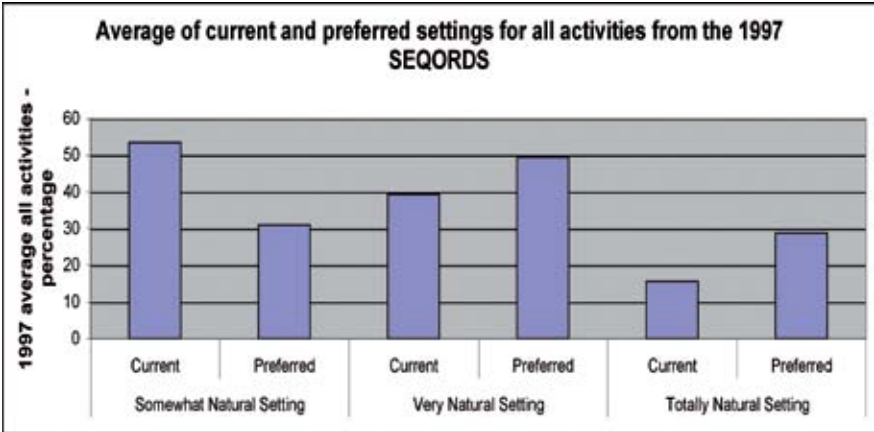
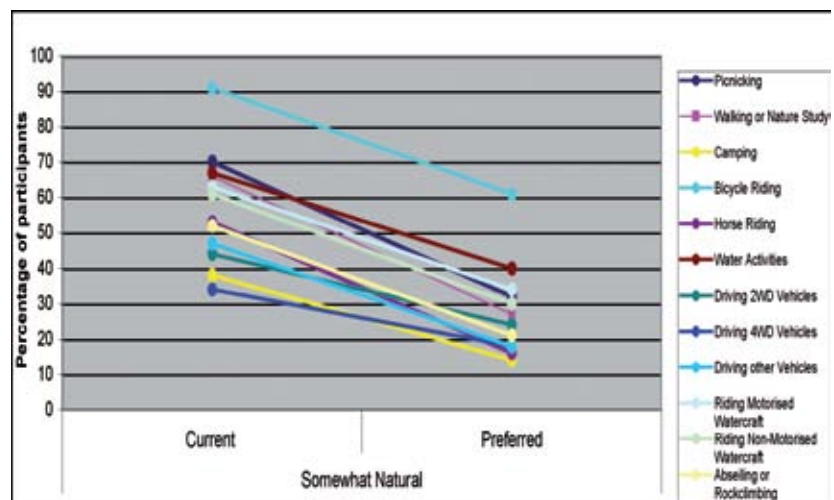


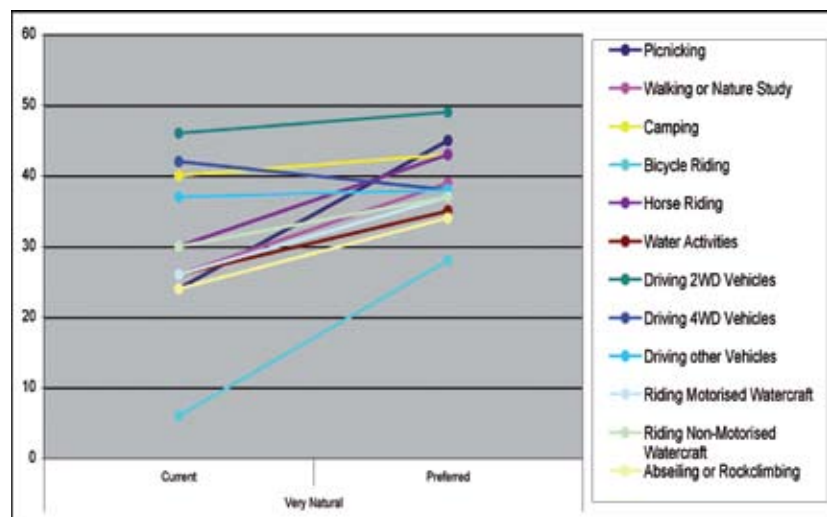
Figure 25 shows that when all the activities are averaged, current participants who use *somewhat natural* settings display less preference for participating in *somewhat natural* setting (if they had a chance to participate more in the activity). If participants thought that this setting was adequate for their purpose of outdoor recreation there should at least be some similarity in the averaged score for *somewhat natural* use and preference.

For *very natural* and *totally natural* settings, the preference is for more *natural* settings (if given the chance to participate more in the activity). Figures 26, 27 and 28 show the differences between current and preferred use of the three different recreation settings for all activities in 1997, 2001 and 2007.

**Figure 26: 1997 current and preferred *somewhat natural* setting use for all activities**



**Figure 27: 1997 current and preferred *very natural* setting use for all activities**



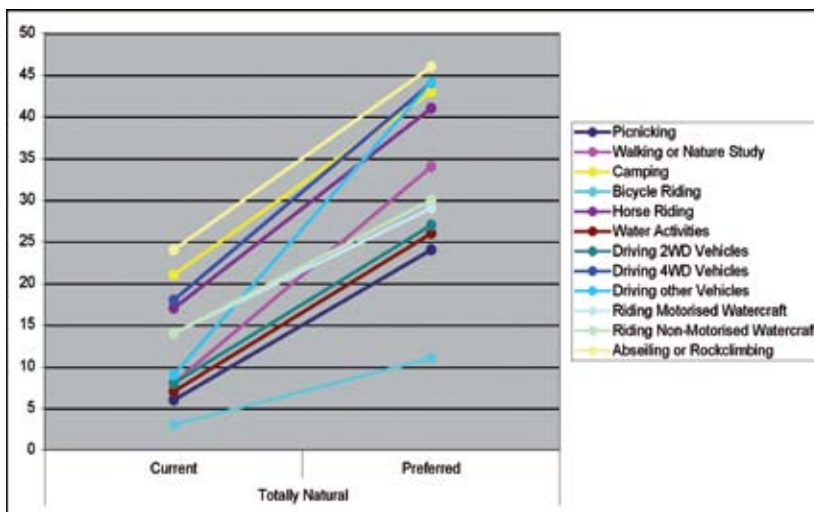
# Section 9

## Recreation setting trends cont.

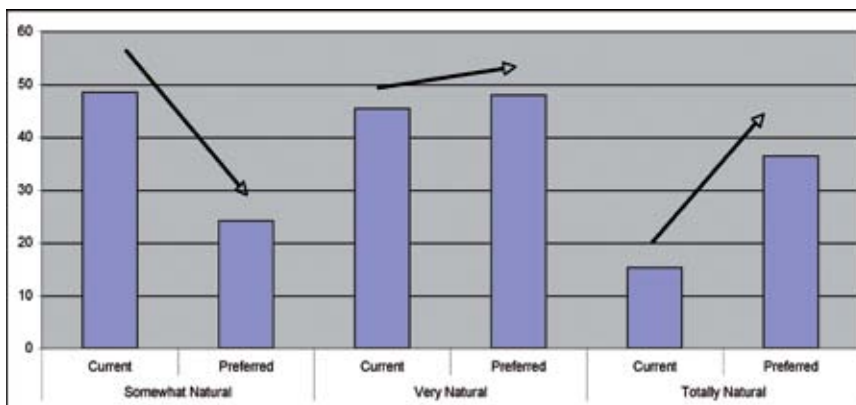
Figure 29 shows that when all the activities are averaged (for the 2001 SEQORDS) that the use and preference of current participants display similar characteristics to the 1997 data.

People generally prefer more *natural* settings than those they currently use. This is despite the largest use of setting occurring in the *somewhat natural* setting. It is interesting to note that the *very natural* setting has the least difference between use and preference, indication that more people using *very natural* settings are satisfied with this setting for their current activity. The following figures display the data that led to the above averaged changes.

**Figure 28: 1997 current and preferred *totally natural* setting use for all activities**



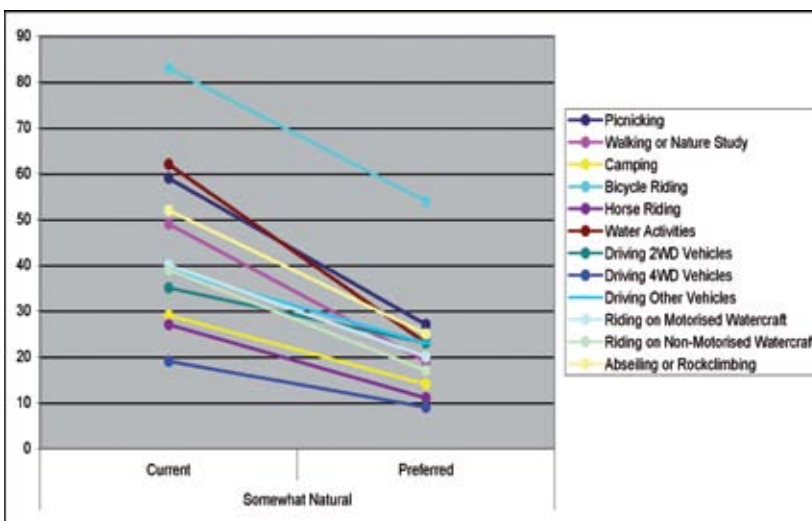
**Figure 29: Average of current and preferred settings for all activities from the 2001 SEQORDS**



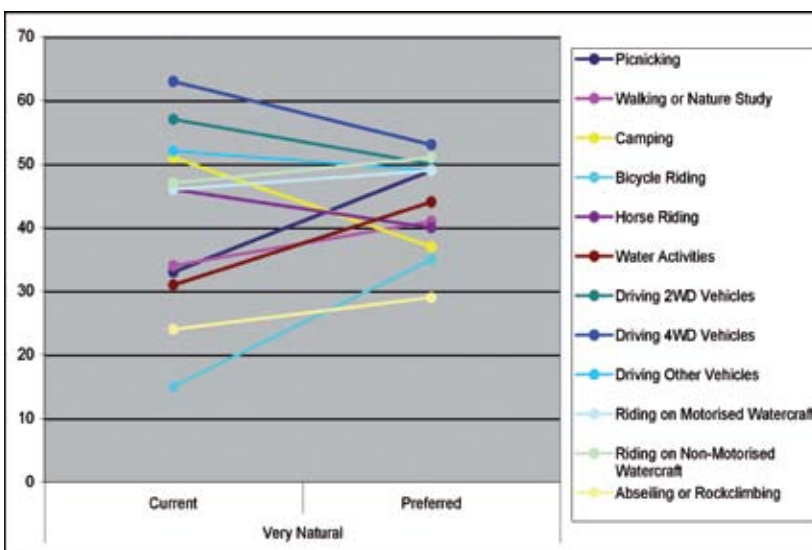


Figures 30, 31 and 32 show the differences between current and preferred use of settings for each activity in 2001.

**Figure 30: 2001 current and preferred *somewhat natural* setting use for all activities**



**Figure 31: 2001 current and preferred *very natural* setting use for all activities**



# Section 9

## Recreation setting trends cont.

Figure 32: 2001 current and preferred *totally natural* setting use for all activities

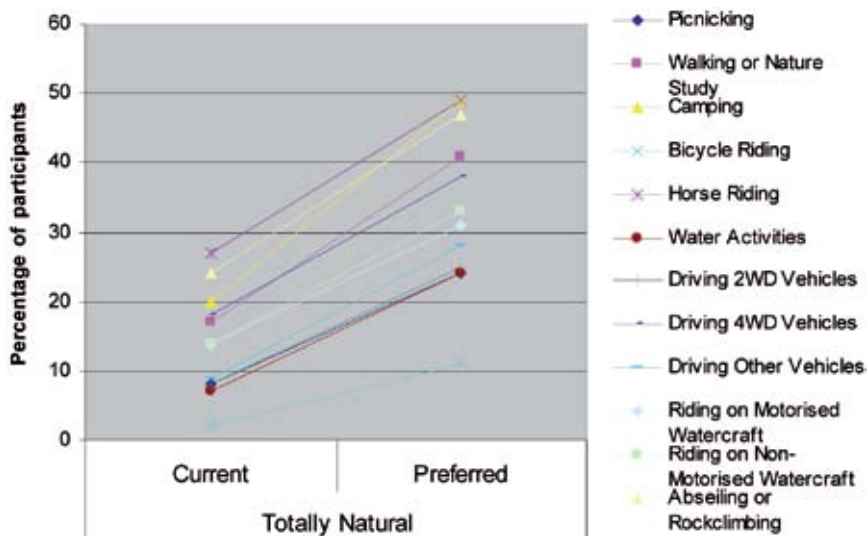
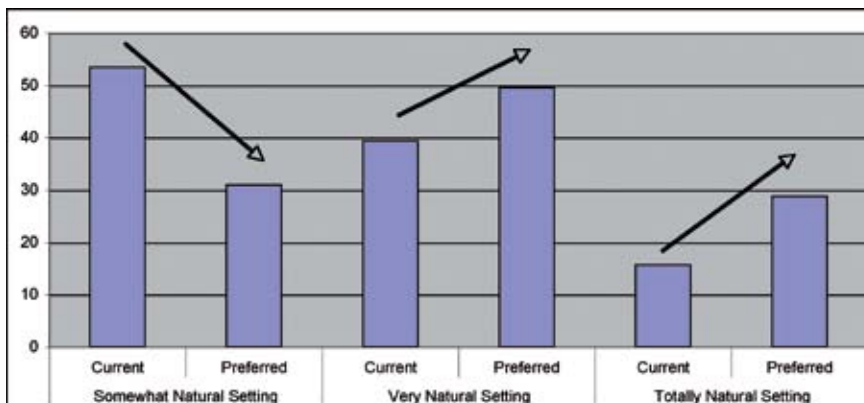


Figure 33 shows that when all the activities are averaged (for the 2007 SEQORDS) that the use and preference of current participants display changes to current and preferred settings compared to 2001 and 1997.

Figure 33 shows that the trend in use and preference is similar to the 1997 and 2001 findings. However, the differences are that *somewhat natural* settings are now preferred more than *totally natural* settings and the current use of *very natural* settings is lower than in 2001.

Figure 33: Average of current and preferred settings for all activities from the 2007 SEQORDS



The following figures display the data that led to the above averaged changes.

Figure 34: 2007 current and preferred *somewhat natural* setting use for all activities

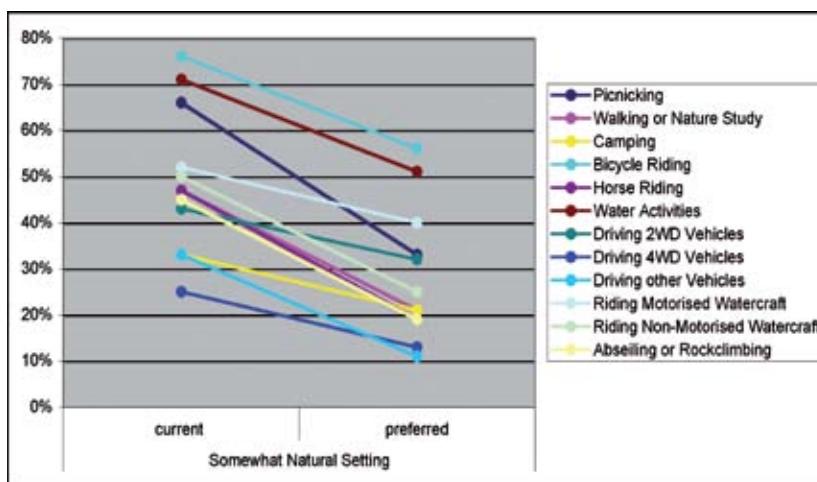
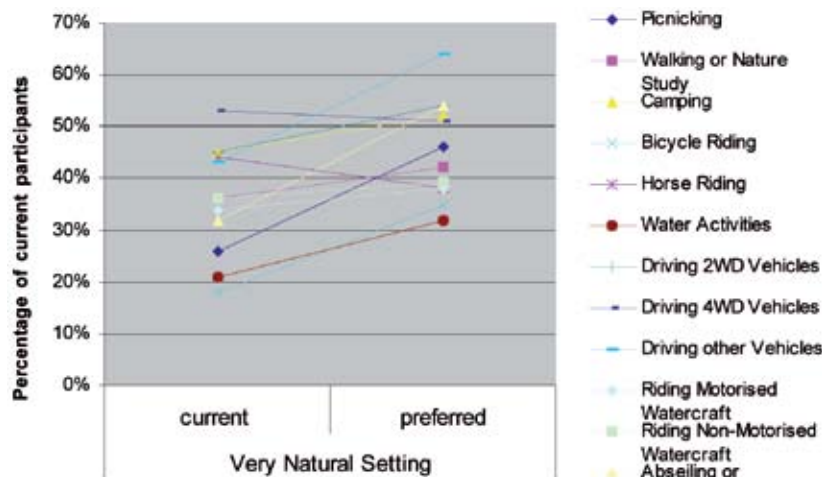


Figure 35: 2007 current and preferred *very natural* setting use for all activities



## Section 9

# Recreation setting trends cont.

To demonstrate the change more graphically the average of the settings over the three SEQORDS are presented in Figures 37 to 39. Figure 37 shows the average of all activities for *somewhat natural* settings over the three studies.

These results indicate a trend towards an increase in the preference for *somewhat natural* settings. The reason for the rise can be attributed to a number of possible factors. The factors relate to the changes in other setting use and preference results.

These factors may include:

- People now acknowledge that *somewhat natural* settings are increasingly acceptable places for certain outdoor recreation activities;
- Increased constraints ('nowhere to go' and 'cost') lead to *somewhat natural* settings becoming an easier setting to access;
- People now accept that *totally natural* settings have more constraints associated with the use of that setting compared to *somewhat natural*. This may link to changes in the level of acceptance for *somewhat natural* settings for certain outdoor recreation activities.

Figure 36: 2007 current and preferred 3 setting use for all activities

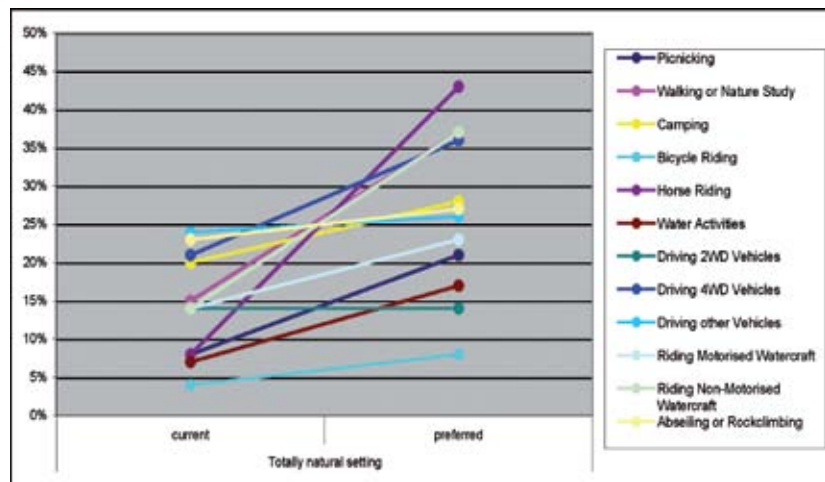
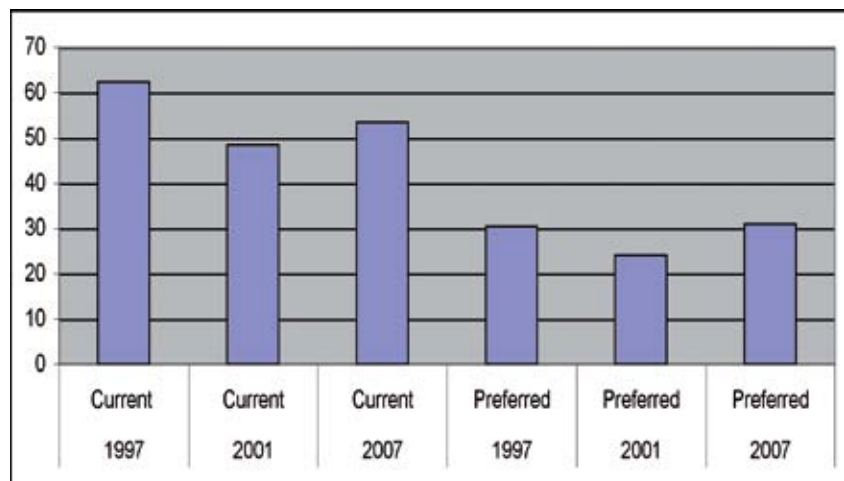


Figure 37: The average of all activities for *somewhat natural* settings over the three studies



The average of all activities for *very natural* settings over the three studies is shown in Figure 38.

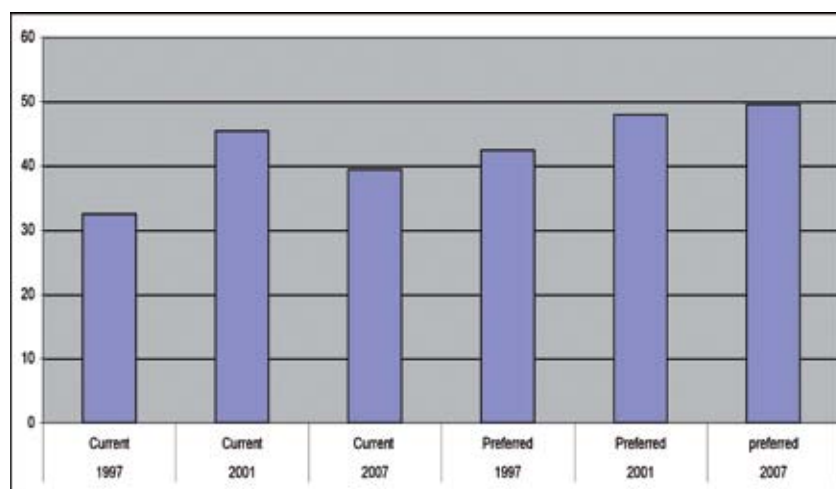
Figure 38 shows that use of *very natural* settings has increased between 1997 and 2007 and there has also been an increase in preference for this setting. The reason for this rise in preference for current participants can be attributed to a number of possible factors. The factors may relate to the changes in other setting use and preference results.

These factors may include:

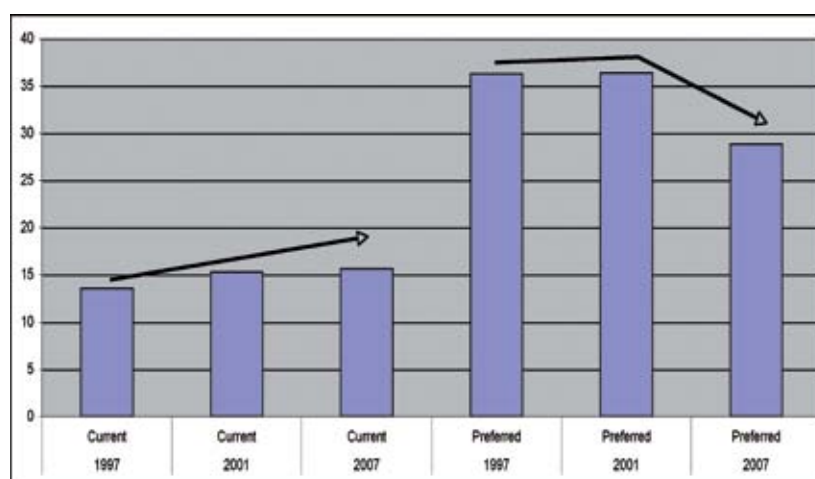
- People who once used *very natural* settings now use *somewhat natural* settings. This is evident in the decrease between 2001 and 2007 for *very natural* settings and the rise between 2001 and 2007 in *somewhat natural* settings;
- Interestingly, the rise in preference of current participants for *very natural* settings infers that the smaller number of people who now use *very natural* settings would like to undertake their activities in more *natural* settings;
- There has been a shift in users of *very natural* to *somewhat natural* settings.

The average of all activities for *totally natural* settings over the three studies is shown in Figure 39.

**Figure 38: The average of all activities for *very natural* settings over the three studies**



**Figure 39: The average of all activities for *totally natural* settings over the three studies**



## Section 9

# Recreation setting trends cont.

Figure 39 indicates that whilst use of *totally natural* settings has increased slightly there is a small decrease in preference for this setting. The reason for the rise in use and decrease in preference for current participants can be attributed to a number of possible factors. The factors may relate to the changes in other setting use and preference results.

These factors may include:

- People who have changed in their preference from *totally natural* settings may now accept that *very natural* and possibly *somewhat natural* settings are settings that are suitable for their outdoor recreation activities.

To summarise the above results the increase in use of *totally natural* settings and increased preference of *very natural* settings is an indication

that despite the impact of constraints on outdoor recreation there is a continued desire for settings that are more natural settings. The changes for current participants in use and preference for *somewhat natural* settings is an issue that warrants further investigation. Many of the people in this category once preferred *very natural* settings but now accept *somewhat natural* settings as places in which to undertake their activities. The exact causes of the changes and the probable link to the constraints of 'cost' and 'nowhere to go' need to be examined in light of the future challenges caused by population growth in SEQ.



# Section 10

## 'Nowhere to go' and recreation settings

In this section the constraint of 'nowhere to go' will be examined in the light of recreation settings. The aim of this is to determine whether there are particular constraints that have certain impacts on recreation settings. Current participants and non participants will be examined.

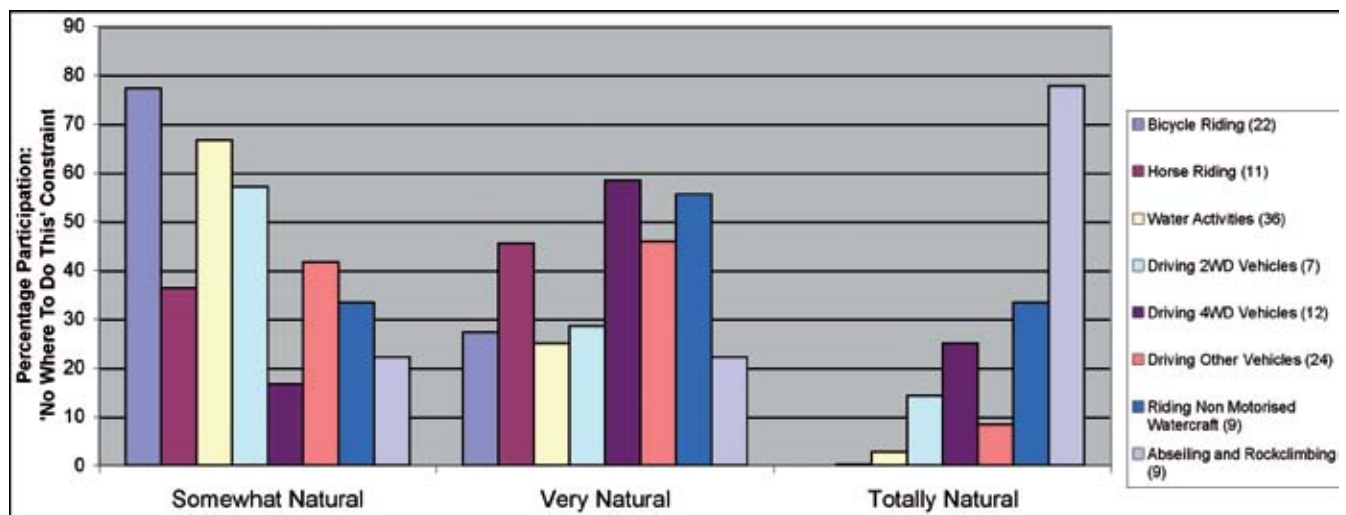
### 10.1 Current participants: 'nowhere to go' and settings for 2007

In this section the relationship between the constraint 'nowhere to go' and the setting in which the activity has taken place is analysed. The research question posed for this topic is:

**Determine the setting preferences of people who currently participate and stated 'nowhere to go' as a major constraint to further participation?**

The rationale for choosing to examine this aspect in more detail stems from the impacts of growth in SEQ. The impacts of population growth on opportunities for outdoor recreation are evident in findings of changes in setting preference that correspond to 'nowhere to go'. Figure 40 shows the participation rate within the settings for people in the various activities who stated 'nowhere to go' as a major constraint to further participation.

**Figure 40: Rates of current participation for the constraint 'nowhere to go' in the different recreation settings (Number of respondents noted in brackets)**



(Note: There is less than 1% for bicycle riding and horse riding *totally natural* settings)

This figure shows the rates of current participation for the constraint 'nowhere to go' in the different recreation settings. The major conclusion that can be drawn from this data is that the *very natural* setting has a large proportion of participants in all activities stating that they are constrained by 'nowhere to go' in this setting. Five out of the eight activities had higher constraint scores in *very natural* settings compared to *somewhat natural* or *totally natural*.

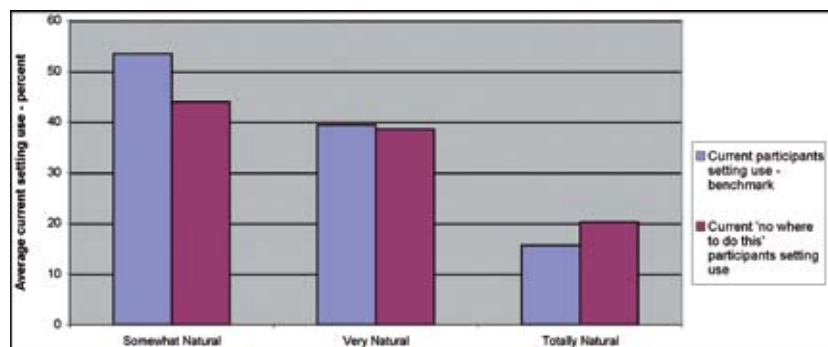
## Section 10

# 'Nowhere to go' and recreation settings cont.

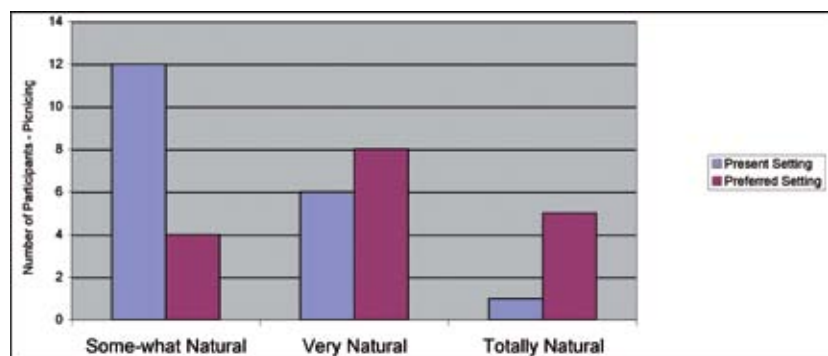
A further issue to analyse is whether or not the constraint of 'nowhere to go' differs to the 'average' participation rates in these settings. The current participation rate in the three settings can be used as a benchmark to examine if the participation of those mentioning this constraint in each of the settings is different. Figure 41 shows the difference between current participants' use of a particular setting compared to the use of the different settings by current participants who stated that the major constraint to doing the activity more was the 'nowhere to go' constraint.

Figure 41 shows that participants who undertook activities in the *somewhat natural* setting were less likely to state the 'nowhere to go' constraint as a reason for not participating more. However, people who used *totally natural* settings were more likely to state that 'nowhere to do this' was a major reason that hindered further participation. In other words, the more natural the setting, the more likelihood that people would be constrained by not having the opportunity or the place in which to undertake the given activity. However, it must be noted that this conclusion is based on averaged data. Individual analysis of activities would need to verify this conclusion about a particular activity.

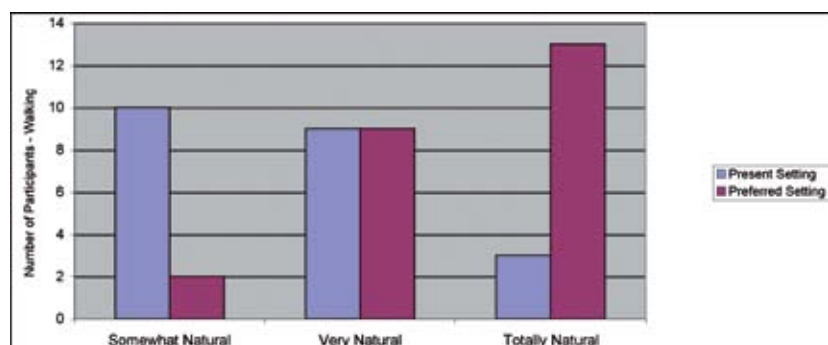
**Figure 41: The difference between current participants setting use compared with current participants use who stated the constraint 'where to go'**



**Figure 42: Number of current participants in picnicking who expressed 'nowhere to go' and their use and preference of settings in 2007**



**Figure 43: Number of current participants in picnicking who expressed 'nowhere to go' and their use and preference of settings in 2007**





## 10.2 Selected activities, setting and the constraint 'nowhere to go'

The following data presents selected activities for the constraint 'nowhere to go' and the setting of the activity. The aim of presenting this data is to examine what type of setting is becoming more difficult for people to use and to see what setting preference these people have. The activities of picnicking, walking or nature study as well as camping have been chosen.

### 10.2.1 Picnicking, 'nowhere to go' and settings for 2007

Figure 42 shows how the constraint 'nowhere to go' relates to the recreation setting for picnicking 2007.

A list of constraints that people stated in the interviews are presented to aid in interpretation of the problems people face in accessing the different settings:

- The crowds where we tend to go / it is too crowded – and therefore the facilities are inadequate;
- Lack of access – I live on the Gold Coast and it's difficult to get out to decent countryside;
- Access to very natural areas is unavailable;
- There is really nowhere around here to do it;
- We have two little dogs that we like to take with us and it is difficult to find places that let you take dogs;
- Hard to get out places;
- Limited availability of sites

where we can combine motocross and picnicking;

- Not many areas available or around for that;
- Not enough locations convenient for me;
- Not being able to access places easily;
- There is not that much around the local area to go to;
- Well I live at Kelvin Grove and I run 6 kms every night/the oval has been cut in half and made it a carpark/so there is virtually nothing left/they have knocked down a lot of the natural trees;
- The lack of knowledge of the kind of country we would like to picnic in without travelling considerable distances;
- I would need more disabled car parks to access some areas;
- Not many places that have natural settings within 4 hours drive; and
- Distance.

### 10.2.2 Walking and nature study, 'nowhere to go' and settings for 2007

Figure 43 shows how the constraint 'nowhere to go' relates to the recreation setting for walking or nature study 2007.

A list of constraints that people stated in the interviews are presented to aid in interpretation of the problems people face in accessing the different settings:

- Need permit to go into Nature Reserve;
- Used to live in Victoria and find that Qld has less access to good areas – State forests

etc. You have to pay to go to a lot of places here;

- Distance to areas (Mt Warning);
- There is not much bush where I live;
- Nice to be able to walk closer to home;
- Not close enough to location;
- I am not near a beach;
- We live in urban area and there is not much to explore;
- Lack of access to very natural areas;
- Lack of places of go to do it;
- There is no nature walks around here;
- That the trails aren't closer to me;
- Do not drive so none close by to me;
- Can't take dog into nature reserves;
- Access/lack of access to natural areas;
- Not enough of the areas around that are close by without driving – that are totally natural;
- We like to take the dogs with us and there is a lack of places where we can take them;
- We have a dog which limits where we can go;
- Distance to travel;
- Would like to do more walking in totally natural environment but it is difficult to get away that far and that often;
- Travel distances/time; and
- There aren't many nature reserves left around my area that are still preserved.

## Section 10

# 'Nowhere to go' and recreation settings cont.

### 10.2.3 Camping, 'nowhere to go' and settings for 2007

Figure 44 shows how the constraint 'nowhere to go' relates to the recreation setting for camping in 2007.

A list of constraints that people stated in the interviews are presented to aid in interpretation of the problems people face in accessing the different settings:

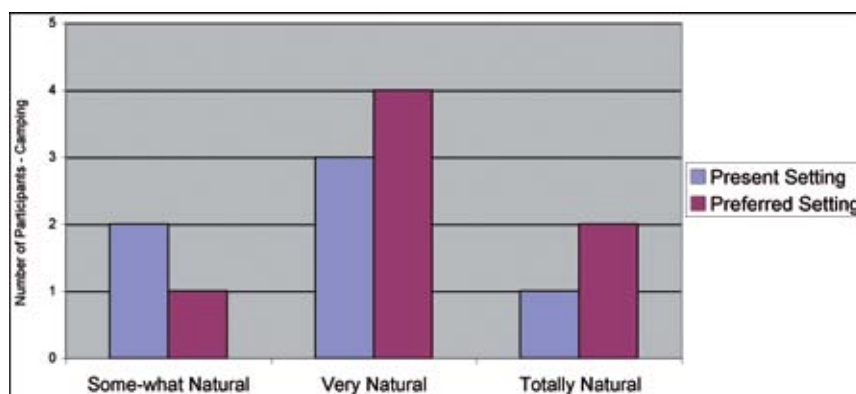
- Lack of interesting places to go where you can get away, lack of wilderness;
- There are lot of people around whenever we go camping here in Qld;
- Lack of assessable sights;
- Forestry areas banned for camping;
- Places to go and distance to travel to get to places; and
- The place I like going to camp is too far.

### 10.2.4 Non-participants, constraint 'nowhere to go' and setting

An analysis was undertaken to examine non-participants who reported there was nowhere to go in particular settings. However, due to low sample sizes the presentation of data is not possible.

However some observations can be made on the data in the three activities that had this constraint above 5% of the sample population. Riding bicycles, horse riding and

Figure 44: Number of current participants in camping who expressed 'nowhere to go' and their use and preference of settings in 2007



abseiling/rock-climbing had reported percentage constraints for 'nowhere to go' over 5% in 2007. Each of these will be described below.

For bicycle riding the setting in which the majority of the participants reported the constraint 'nowhere to go' was in the *somewhat natural* setting. The comments reflected the lack of bikeways or safe roads.

For horse riding the constraint of 'nowhere to go' was more relevant for people who preferred to undertake horse riding in *very natural* settings. The second most common setting preference for non-participants who expressed the constraint 'nowhere to go' was the *totally natural* setting.

For non-participants who would like to participate in abseiling/rock-climbing but were constrained by the constraint 'nowhere to go' there was a slight preference to undertake this activity in *totally natural* settings.

It must be noted that the constraint 'nowhere to go' for non-participants is considerably less than for current participants. It should also be noted that the 'nowhere to go' constraint is either stable or decreasing for the majority of activities for non-participants. These results indicate that people who do not undertake the activity do not know about the issues related to 'nowhere to go'. Current participants are more likely to report 'nowhere to go' as a constraint to further participation.

### 10.3 Summary of settings and the constraint 'nowhere to go'

Conclusions concerning setting use and preference, and the constraint 'nowhere to go' are as follows:

- People who used *totally natural* settings were more likely to state that 'nowhere to do this' was a major reason that hindered further participation;
- Participants who undertook activities in the *somewhat natural* setting were less likely to state the 'nowhere to go' constraint as a reason for not participating more;
- In other words, the more natural the setting, the more likelihood that people would be constrained by not having the opportunity or the place in which to undertake the given activity;
- Activities like camping and picnicking there is a greater preference for more natural settings compared walking or nature study; and
- People who do not undertake a particular activity do not know about the issues related to 'nowhere to go'. Current participants are more likely to report 'nowhere to go' as a constraint to further participation.



## Section 11

# Trends in physically active forms of outdoor recreation

In this section the outdoor recreation activities that involve significant physical activity are analysed. The research question posed for this section is:

***Determine the changes to activities across the three studies that indicate a change in the benefits to participants from engagement in physical activity.***

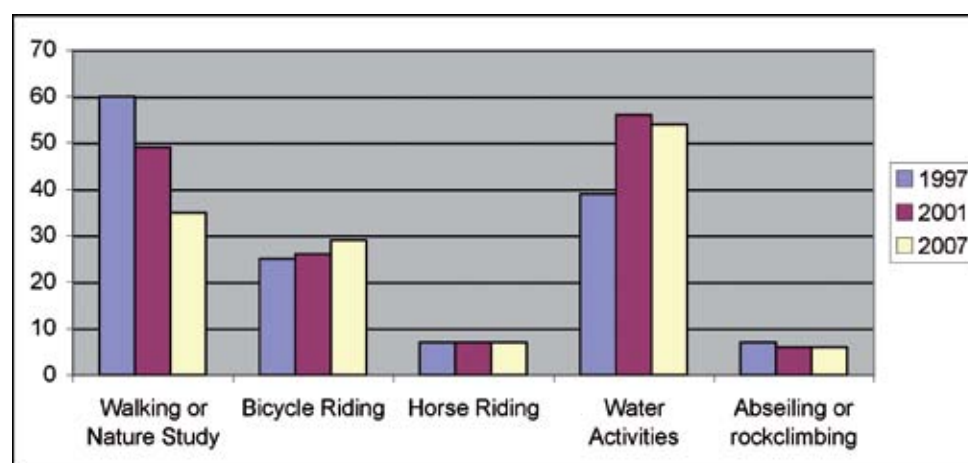
There are a number of indicators of engagement in physical activity in outdoor recreation activities within the three SEQORDS. These include the rates of participation and frequency of participation in key activities as well as the motivation for participation.

Participation and frequency rates for selected physically active forms of outdoor recreation will be analysed first. Analysis of motivation style and the implications of change in selected activities will then be undertaken.

### 11.1 Changes to physically active forms of outdoor recreation

The activities of walking or nature study, bicycle riding, horse riding, water activities and abseiling/rock-climbing can involve significant physical exercise.<sup>6</sup> Therefore a greater understanding of changes to variables that indicate greater or lesser involvement in these activities can explain changes in physical activity of participants. Figure 45 below indicates the changes to physically active forms of outdoor recreation across the three SEQORDS.

**Figure 45: Changes in participation rates for selected physically active forms of outdoor recreation activities across the three SEQORDS**



The figure shows that bicycle riding is the only activity that has consistently increased during the study period. Water activities have increased from 1997 to 2001 but there was a slight decrease between 2001 and 2007<sup>7</sup>.

<sup>6</sup> Non-motorised watercraft can include paddling canoes etc which is a physically active activity. However, because non-motorised watercraft also involves sailing it was not included in the physically active forms of outdoor recreation classification in this study.

<sup>7</sup> As mentioned in the methodology section overestimation of general participation rates may have occurred in 2001.

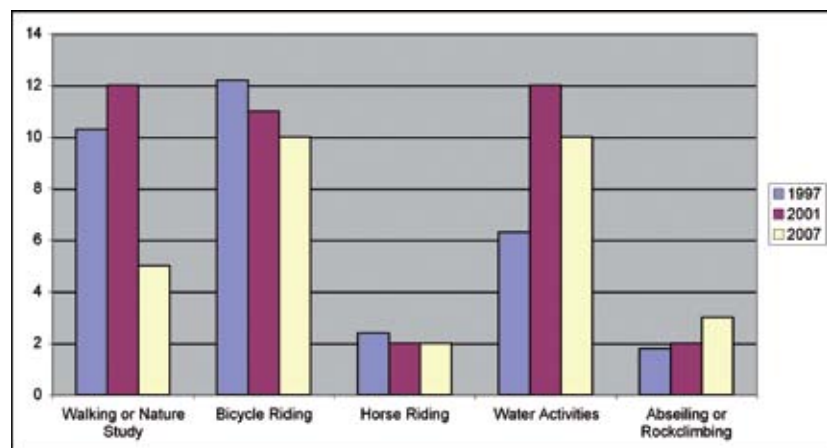
Figure 46 shows the changes in frequency of participation for selected physically active forms of outdoor recreation across the three SEQRDS.

For all the activities selected there was a decrease in frequency of participation except abseiling/rock-climbing. The median frequency rate increased slightly over the study period for this activity. Water activities did increase if 1997 is used as the point of comparison for the 2007 result. When the participation rates and frequency rates of the selected activities are aggregated a greater understanding of general changes to physically active forms of outdoor recreation can be realised. Figure 47 shows changes to averaged frequency and participation rates for selected activities across the three SEQRDS.

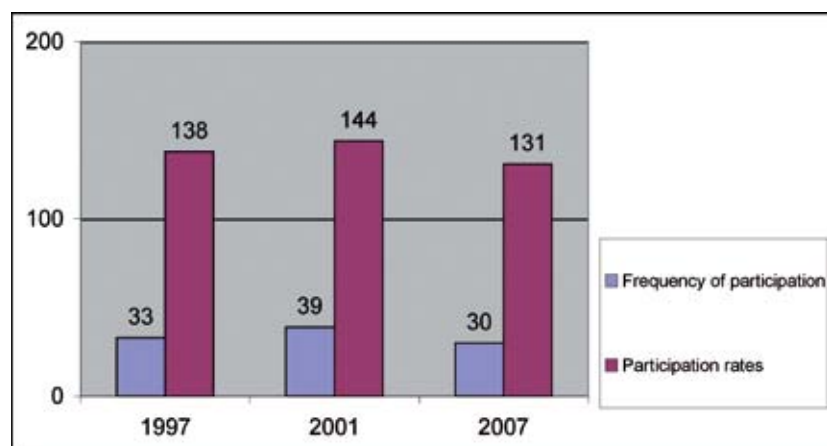
The results indicate that there has been an overall decline in activity rates in terms of participation and frequency of participation between 1997 and 2007. There was a rise in rates in 2001 but this trend did not continue to 2007. The changes are highlighted in Figure 48.

As previously described in the constraints section, the factors of *'nowhere to go'*, increased *'family'* commitments, *'health'* constraints and *'equipment'* restrictions for some activities all contributed to the general decline in frequency rates and participation rates.

**Figure 46: Changes in frequency of participation for selected physically active forms of outdoor recreation across the three SEQRDS**



**Figure 47: Changes to averaged frequency and participation rates for selected activities across the three SEQRDS.**



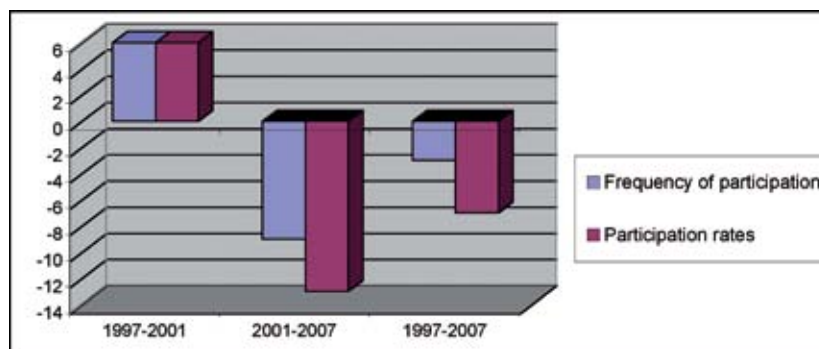
## Section 11

# Trends in physically active forms of outdoor recreation cont.

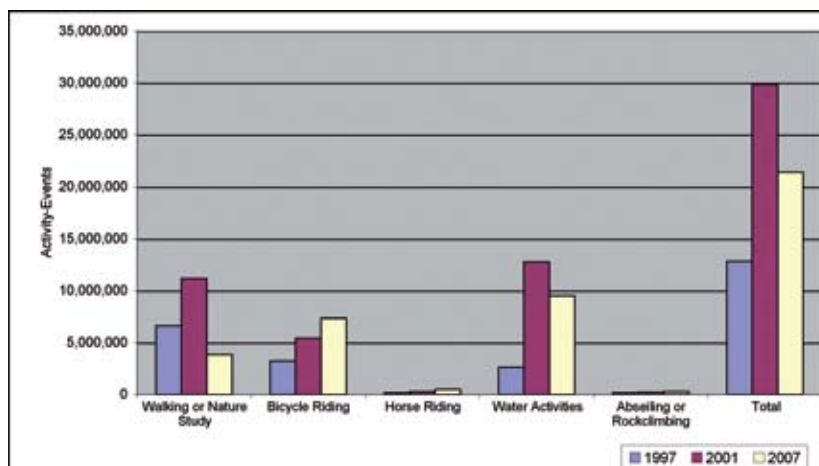
These changes have impacted on the aggregated activity-event results. These are shown in Figure 49.

Figure 49 shows that the total activity-event rate decreased from 2001 to 2007 but there is still an increase from the 1997 survey. Whilst there has been a decrease for particular outdoor recreation activity rates of participation and frequency the overall physical activity change is not as great as one might expect. This is because of the rise in activity-events of bicycling and also because there was only a slight decrease in water activities<sup>8</sup> which had proportionately high rates of participation and frequency of participation than other activities.

**Figure 48: Highlighted changes to averaged frequency and participation rates for selected activities across the three SEQRS**



**Figure 49: activity-events for selected physically active forms of outdoor recreation.**



<sup>8</sup> The 1997 figure would have been much higher if the 2001 classification was used. The figures were low in 1997 because water activities only meant swimming. This means that the decrease noted in 2007 is actually a large decrease.

## 11.2 Gender and physically active forms of outdoor recreation

Outdoor recreation activity data reveals an unequal participation of males and females in many outdoor recreation activities. There are distinct preferences for different outdoor recreation activities that can be determined by gendered ways of engaging in activities. In the 2007 SEQORDS there were differences between males and females in terms of participation. The differences can be seen in Figure 50 and 51.

Figure 50: Women's participation in outdoor activities 1997-2007

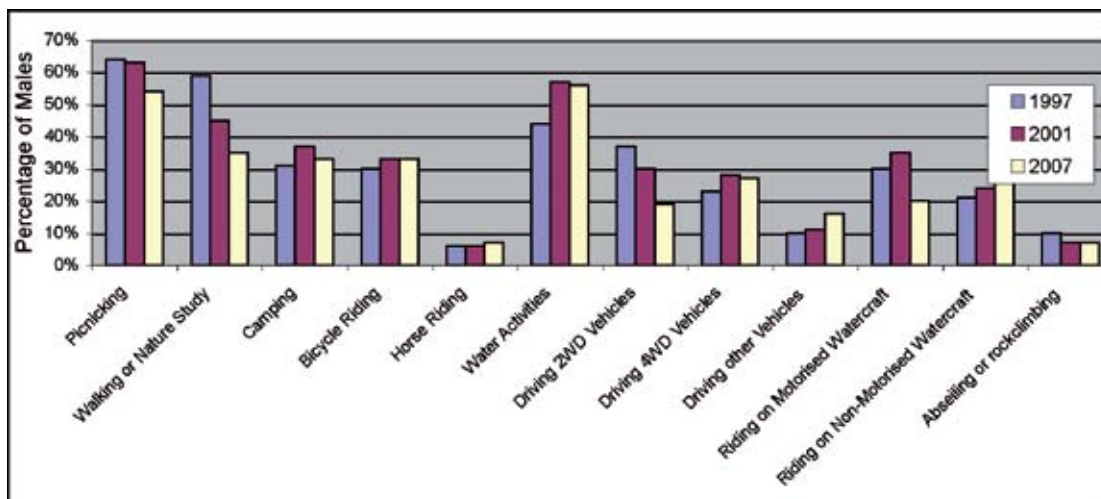
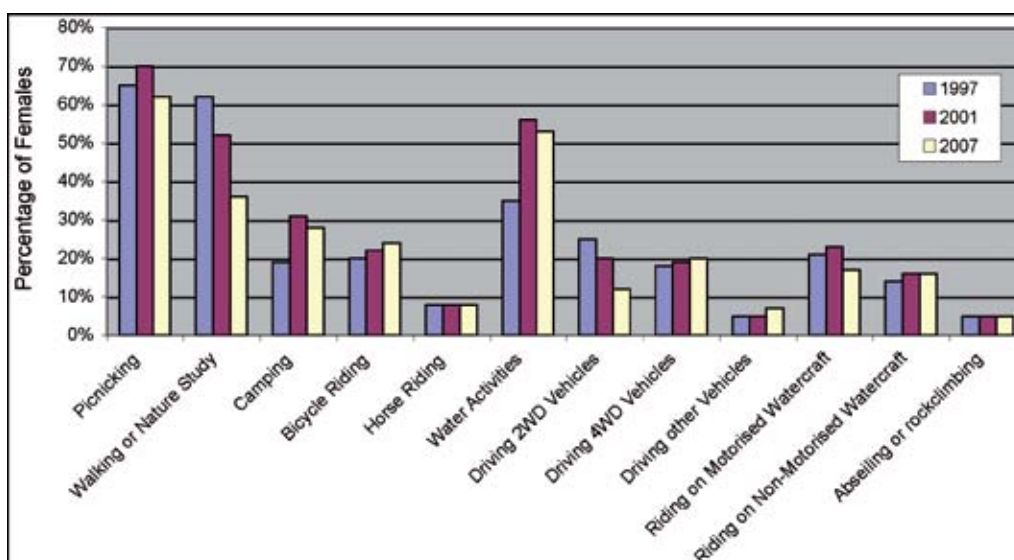


Figure 51: Men's participation in outdoor activities 1997-2007



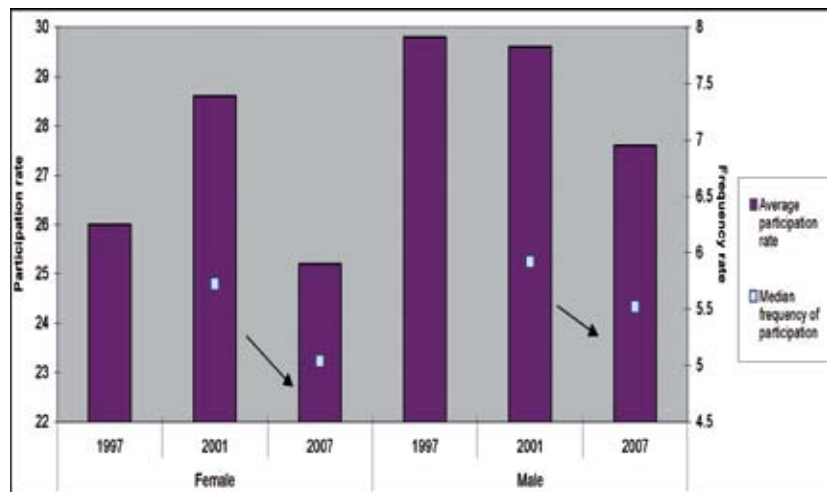
# Section 11

## Trends in physically active forms of outdoor recreation cont.

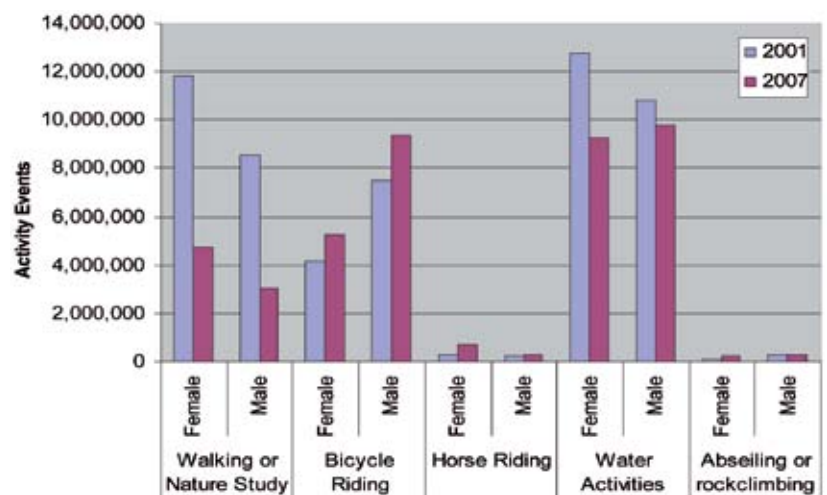
In the 2007 SEQORDS it was found that participation according to gendered preferences shows a clear pattern over the years, in that males are more likely to be involved in camping, bicycle riding, and all types of driving, riding on motorised or non-motorised watercraft, and abseiling/rock-climbing. Females are more likely to be involved in picnicking, walking or nature study, and horse riding. The fact that women's participation in a large number of activities seems to be constrained is a matter of some concern. Of more concern is the fact that walking or nature study, one of the few activities favoured by women, is showing decline in numbers across the three studies. How these differences are defined in terms of physical activity is described below. Figure 52 shows the average participation rate and frequency of participation for the activities of walking or nature study, bicycle riding, horse riding, water activities and abseiling/rock-climbing.

This figure shows that women's participation rates and frequency of participation are lower than males for physically active forms of active outdoor recreation measured over the three SEQORDS. Also of concern is that frequency rates are decreasing at a greater rate for women than for men. How this affects activity-events is shown in Figure 53. Table 10 also shows the values of the percentage change in activity-events between 2001 and 2007 as shown in Figure 53.

**Figure 52: Women's participation rates and frequency of participation for selected physically active forms of outdoor recreation.**



**Figure 53: Percentage change in activity-events between 2001 and 2007**





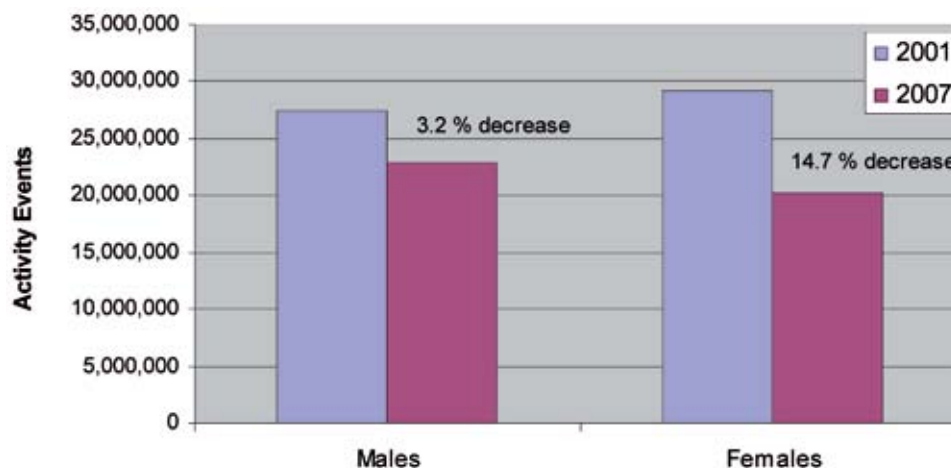
**Table 10: Percentage change in activity-events between 2001 and 2007**

Walking or Nature Study		Bicycle Riding		Horse Riding		Water Activities		Abseiling/Rock-climbing	
Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
-60%	-64%	26%	25%	130%	34%	-27%	-9%	130%	15%

The data indicates that there is a uniform decline for males and females in walking or nature study. Although males show a greater decline in terms of percentage, it is worth mentioning that females show a much greater decline in terms of actual activity-event numbers – from just fewer than 12 million to just fewer than 5 million.

Bicycling has a uniform increase with no difference between males and females. Increasingly there are more activity-events for females than males in horse riding as well as abseiling/rock-climbing. Considerable decline in activity-events has occurred in water activities for females compared to males. Total activity-events for these selected activities are

**Figure 54: Total activity-events for males and females in the selected activities**



presented below in Figure 54.

Overall there has been a decrease in female activity-events compared to males. This was due to the decline in female participation and frequency of participation in water activities. The loss of 7 million walking events would have made a large contribution to the decline also.

It is interesting to note that the increases in female activity-events for horse riding as well as abseiling/rock-climbing were not sufficient to counter the trend in decreasing female water activity-events. This is due to the small activity-event totals for horse riding as well as abseiling/rock-climbing. From this analysis it can be concluded that overall for females there is a decrease in active outdoor recreation but that there are increases to particular activities. Further research is needed to determine the exact reasons for the decline in female participation and frequency of participation in water activities.

## Section 11

# Trends in physically active forms of outdoor recreation cont.

### 11.3 Other physically active forms of outdoor recreation

Data from other outdoor recreation activities can be used to help build a picture of changes in physical activity in outdoor recreation. Other walking, exercise, other outdoor recreation, running and gardening have been cited by participants in the SEQORDS interviews as additional outdoor recreation activities. The changes between the 2001-2007 SEQORDS are presented in Table 11 and this is presented graphically in Figure 55.

The data shows that there has been a similar declining trend in the participation rates of 'other walking' compared to walking or nature study. Other outdoor recreation has also declined. A major decline has been gardening which might be attributed to the water restrictions because of the current drought. The slight increase in running might reflect the rise in popularity of adventure racing since 2001. However, this rise is small and amounts to less than one percent. Gardening is the largest change and represents a 4% change in participation rates.

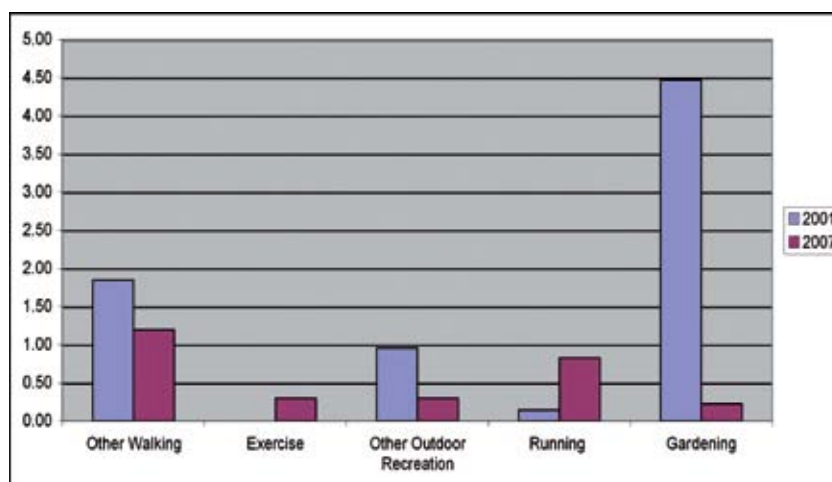
### 11.4 Motivational style and physically active forms of outdoor recreation

The style of outdoor recreation activity will influence the amount of physical activity undertaken during the activity. The types of motivational style as defined in the SEQORDS are shown in Table 12. These are useful in helping to determine the amount of physical activity within an activity, and the changes over time can be charted.

**Table 11: Changes to participation rates of additional physically active forms of outdoor recreation between 2001 and 2007**

	2001	2007
Other Walking	1.84	1.20
Exercise	0.00	0.30
Other Outdoor Recreation	0.96	0.30
Running	0.14	0.82
Gardening	4.47	0.22

**Figure 55: Changes to participation rates of additional physically active forms of outdoor recreation between 2001 and 2007**

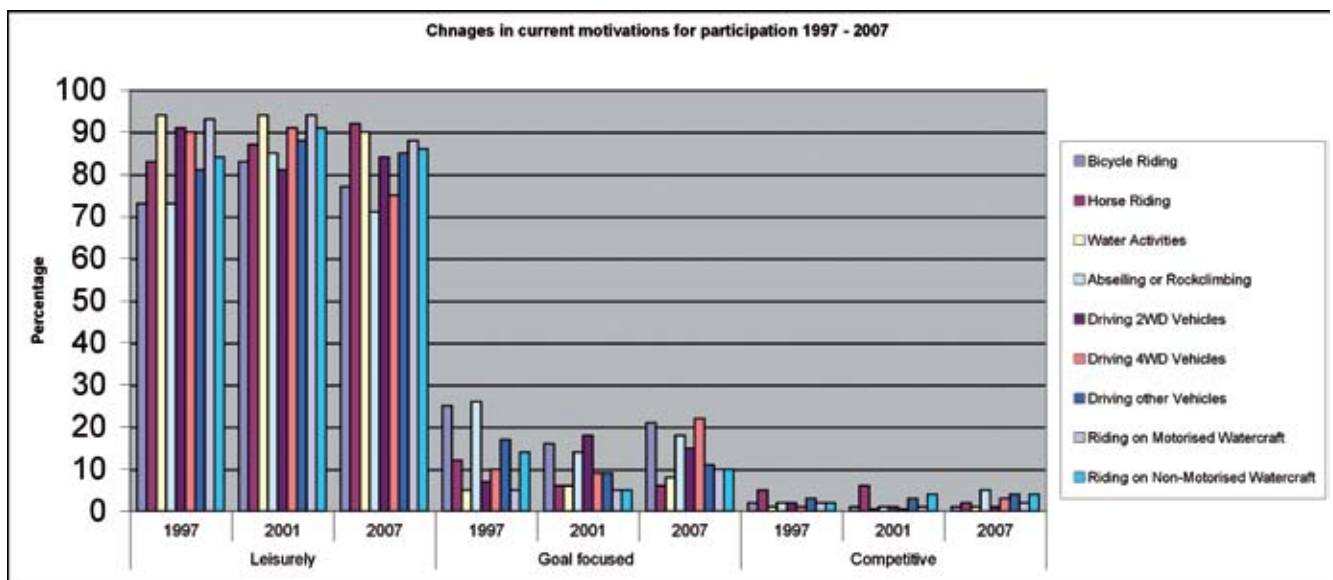


**Table 12: Definitions of Motivational Style Used in all three SEQORDS**

<b>Leisurely</b>	Sightseeing, looking, learning, unwinding, escaping, relaxing, experiencing peace and quiet (but may still involve hard exertion)
<b>Goal focused</b>	Fitness, skills improvement, test equipment, challenge, conquering nature
<b>Competitively</b>	Maximum distance, minimum time, fastest, most accurate, most difficult, training for competition

Based on these definitions the style in which participants undertook the activities were recorded. The results from the 2007 SEQORDS are given again below.

**Figure 56: Changes in current motivations for participation 1997–2007**



(Note: The number of participant motivated by each style is expressed as a percentage of the total number of participants in the activity within the relevant year)

The overwhelming response of participants to the questions about their motivation for outdoor recreation was one of leisure. The figure shows that there is a dominance of leisurely style of motivation for all activities.

A leisurely style of activity may have less physical activity than goal-focused and competitive styles. However, many physical benefits can accrue from participation undertaking a leisurely style. The restorative aspects of the leisurely activity coupled with the fact that the majority of people participated in settings that were *very natural* or *totally natural* means that there would be considerable benefits in terms of wellbeing. There is evidence to suggest that there are considerable health benefits gained from engagement with nature in non-physically active ways. For a review of the relationship between nature and participation in activities in nature see Brown (2005).

An additional feature to the overwhelming result in the figure is that there appears to be some smaller changes.

# Section 11

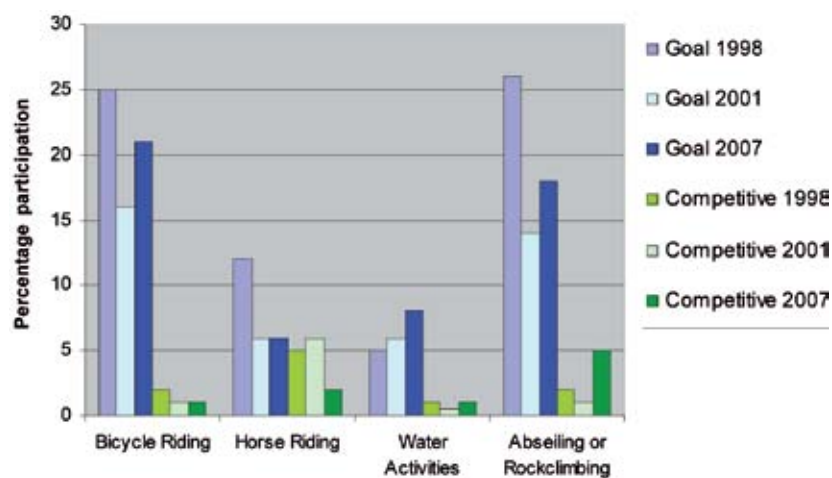
## Trends in physically active forms of outdoor recreation cont.

A comparison between participation rates within each setting with motivational style was undertaken for selected activities. These activities: bicycle riding, horse riding, abseiling/rock-climbing, and water activities have been presented in Figure 57 (Note: walking or nature study and picnicking were not included because they cannot be described under the motivational style categories.)

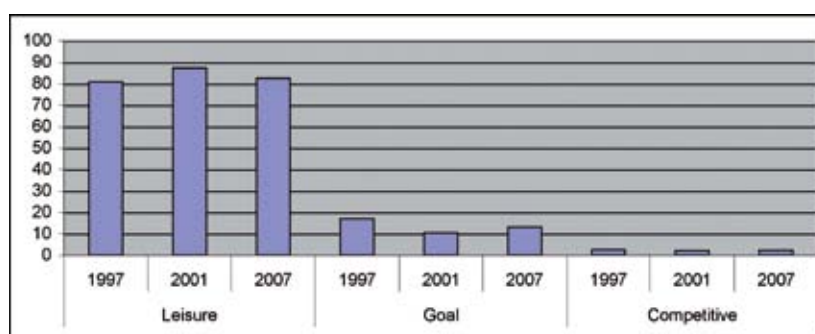
The figure shows that there are some changes in physically active forms of outdoor recreation if style is used as a differentiating agent. Increases in activities are noted in the goal-focused motivational style for water activities and competitive motivational style in abseiling/rock-climbing. This is offset by the decrease in goal-focused motivation in abseiling/rock-climbing. There is a slight overall decrease (1997-2007) in bicycle riding in goal-focused motivational styles of participation. However this may not be significant because of the fluctuating nature of the rates over time. To gain a picture of general changes to physical activity aggregated results are presented below. Figure 58 shows the aggregated percentages of the different style of motivation across the three SEQORDS.

Figure 58 presents the changes in motivation style of the selected activities that indicates changes to overall physical activity. In terms of goal oriented there was a decrease in activity between 1997 and 2007. However there has been a slight increase since 2001.

**Figure 57: Goal-focused and competitive motivational style for selected physically active forms of outdoor recreation across the three SEQORDS**



**Figure 58: Averaged percentages of the different style of motivation across the three SEQORDS**



This indicates that although exercise and fitness as forms of activity within the selected activities has decreased, people in 2007 have been undertaking slightly more active form of activities than in 2001. The slight decrease between 2001 and 2007 for leisurely motivation style corresponds to the slight increase in goal oriented style in 2007. Competitive orientated activities did not change over the period of the three studies.

### 11.5 Summary of changes to physically active forms of outdoor recreation

The aim of this section was to determine whether participants had become more physically active over the study period. The following points summarise the changes that have occurred in physically active forms of outdoor recreation over the three SEQORDS:

- As measured by motivation, physical activity in the selected activities is down from the 1997 SEQORDS but has increased since the 2001 study. Bicycle riding activity-events was the only activity to show sustained increases between 1997 and 2007; and
- Female participation, as measured in activity-events for physically active forms of outdoor recreation, declined at a greater rate than male between 2001 and 2007. There was a slight increase in exercise and running in the outdoors, but a marked decrease in gardening.



## Section 12

# Changes in selected outdoor recreation activities

In this section trends in each of the activities will be presented in detail. The research question for this section is:

***What factors can explain the observed changes in participation rates, frequency of participation and activity-events for each activity across the three SEQORDS.***

Some of the data presented in the sections below was previously presented in the 2007 SEQORDS as well as other sections within this report. A more extensive analysis of the data is presented here to help answer the research question that is particular to each activity. Care should be taken extrapolating findings for the management of the activities in particular regions because the findings are of a general nature.

The major findings that are revealed in this section are:

- The peak noted in 2001 for picnicking activity-events is similar to the activity-events trends for walking or nature study, water activities, and driving 2wd and 4wd vehicles;
- This peak may be explained by declining participation rate in the 25-39 and to a lesser extent the 40-54 age group as a consequence of the increasing 'family' constraints. These age groups have the highest rates of participation but also the largest changes in rates of participation. Another explanation could be the introduction of Sunday retail trading and the preference of many families to frequent shopping centres as a social activity. Other social trends are discussed;
- Camping activity-events have increased because frequency of participation is increasing. This is despite a small decrease in participation rates<sup>9</sup>. A peak in participation rates also occurred in 2001 – similar to picnicking, walking or nature study, water activities, and driving 2wd and 4wd vehicles;
- 'Nowhere to go' was a major constraint for bicycle riding, horse riding water activities, driving 2wd vehicles, driving other vehicles, riding on non-motorised watercraft and abseiling/rock-climbing; and
- Bicycle riding has reported an increase in activity-events. This finding coupled with the finding that more participants are expressing that there is nowhere to do this activity has major implications for outdoor recreation planning.

Further discussion surrounding the reasons for changes in each activity is given in each section below.

### 12.1 Picnicking

Picnicking participation and frequency of participation has remained fairly stable over the study period. Table 13 shows the participation rates, frequency of participation and activity-events for picnicking over the three studies.

**Table 13: Current participants' involvement in picnicking across the three SEQORDS**

Picnicking	1997	2001	2007
Participation Rate	65	67	58
Frequency of Participation	4.5	4	4
Activity-Events	3096000	5093904	3835902

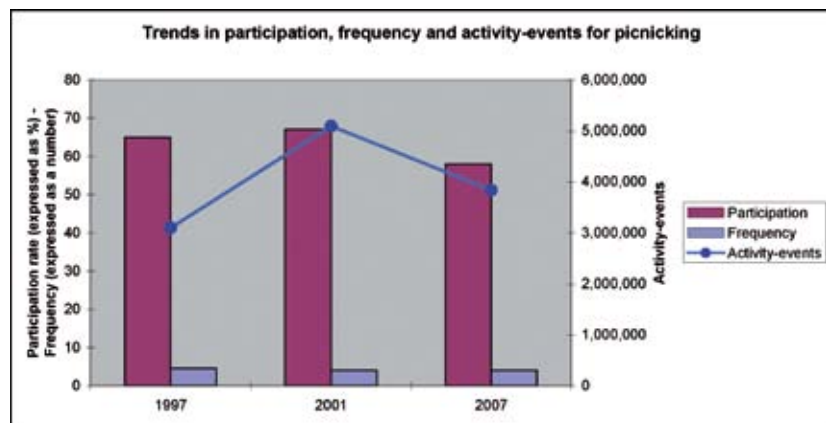
<sup>9</sup> Activity-events are calculated by multiplying the median rate of participation by the frequency of participation. Therefore a small increase in frequency can have a large impact on activity-events.

The slight changes to the number of participants and frequency of participation have led to changes in activity-events. This led to a peak in activity rates in 2001 with a decline in 2007. This data is presented graphically in Figure 59.

The peak noted in picnicking activity-events is similar to the activity-events trends for walking or nature study, water activities, and driving 2wd and 4wd vehicles. Reasons for the decline can be determined, in part, through the analysis of data presented in Figures 60 and 61. Figure 60 shows trends in participation and frequency rates within age groups for picnicking and Figure 61 shows changes in constraints of current and non participants for picnicking.

A possible explanation for the changes in participation, frequency and activity-events for picnicking is as follows. Declining participation rate in the 25-39 (and to a lesser extent the 40-54) age group is a consequence of the increasing 'family' constraints. These age groups have the highest rates of participation but also the largest changes in rates of participation. As mentioned previously forms of family leisure may have changed in ways that mean going outside and having family picnics is less important to all family members. Thus 'family' constraints may be an explanation for the decline in participation rates. Another explanation could be the introduction of Sunday retail trading and the preference of many families to frequent shopping centres as a social activity.

Figure 59: Trends in participation, frequency and activity-events for picnicking



Note: activity-events are shown as points on the line

Figure 60: Trends in participation and frequency rates within age groups for picnicking

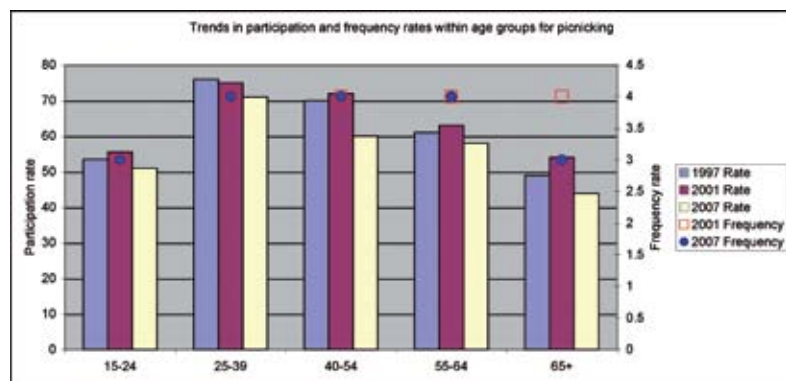
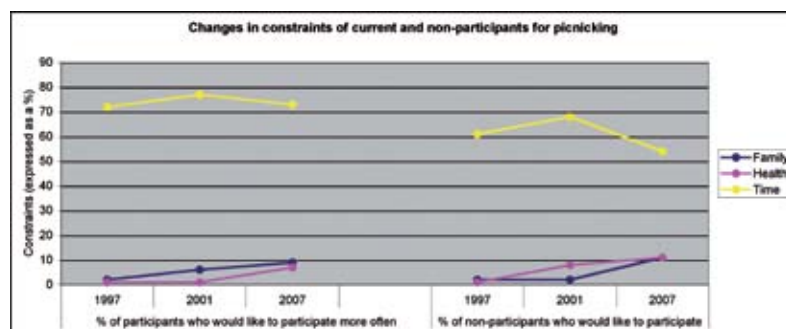


Figure 61: Changes in constraints of current and non-participants for picnicking



## Section 12

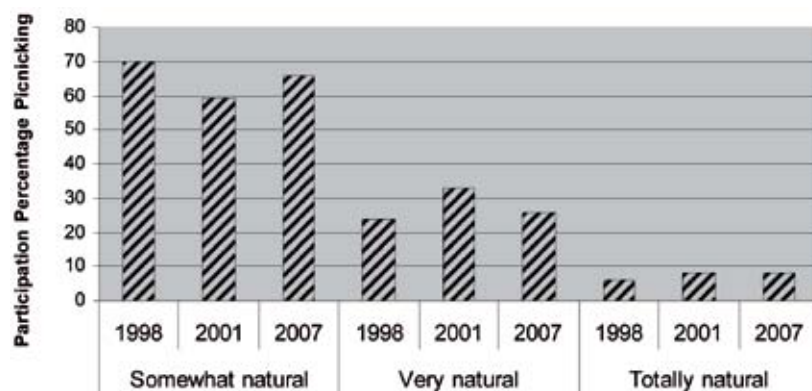
# Changes in selected outdoor recreation activities cont.

The contribution of 'health' constraints could also help explain the decrease, particularly for older age groups. However, this effect is a minor determinant compared to changes in family leisure.

Data on changes to the setting in which people are undertaking picnicking are shown in Figure 62. This figure shows trends in current participation rates across the three settings for picnicking.

From Figure 62 it is apparent that people are switching use of settings from *very natural* to *somewhat natural*. To a small extent some people increasingly used *totally natural* settings for picnicking. Given that 'family' and 'health' constraints for current participants have increased, the change in use from *very natural* to *somewhat natural* indicates that setting use is affected by these constraints. People may find more opportunities to picnic in *somewhat natural* settings compared to *very natural* settings. It can therefore be assumed that the constraints of 'family' and 'health' impact on how and where people participate in picnicking. Coupling this finding with the general preference for more natural settings means that management of *somewhat natural* settings to increase notions of naturalness is of importance for this activity.

Figure 62: Trends in current participation rates across the three settings for picnicking



### 12.2 Walking and nature study

Walking or nature study has shown a decline in participation, frequency and activity-events rates from the 1997 to the 2007 SEQORDS. Table 14 shows the participation rates, frequency of participation and activity-events for walking or nature study over the three studies.

Table 14: Current participants' involvement in walking or nature study across the three SEQORDS

Walking or Nature Study	1997	2001	2007
Participation Rate	60	49	35
Frequency of Participation	10.3	12	5
Activity-Events	6622900	11176176	3857240

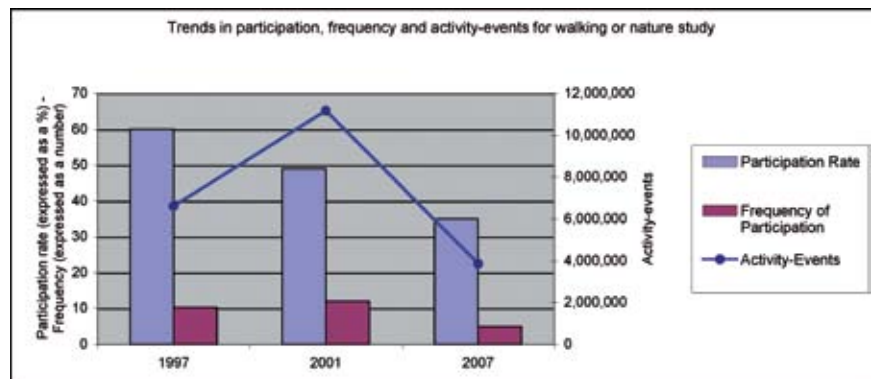


Activity-events peaked in 2001 but have declined considerably in 2007 to below the numbers recorded in 1997. The changes have been graphically expressed in Figure 63.

The peak in activity rates in 2001 can be attributed to the rise in frequency rates of current participants in 2001 despite the decrease in participation rates. This occurred because the calculation of activity-events is done by multiplying the number of participants undertaking the activity by the frequency of participation. Thus a small rise in frequency will have a large impact on event numbers. The large rate of frequency of participation in some age groups can also explain the peak in activity-events. Figure 64 shows the trends in participation and frequency rates within age groups for walking or nature study.

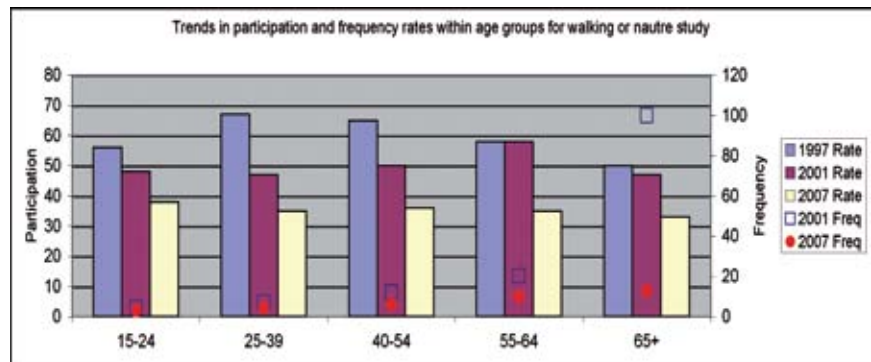
Figure 64 shows that for 2007 there is still a trend of increasing frequency of participation in the older age groups. However compared to 2001, there was a lower frequency of participation in 2007. In other words people in older age groups that currently participate go walking less often compared to 2001. Some of the reason can be explained through constraints data shown in Figure 65.

**Figure 63: Trends in participation, frequency and activity-events for walking or nature study**

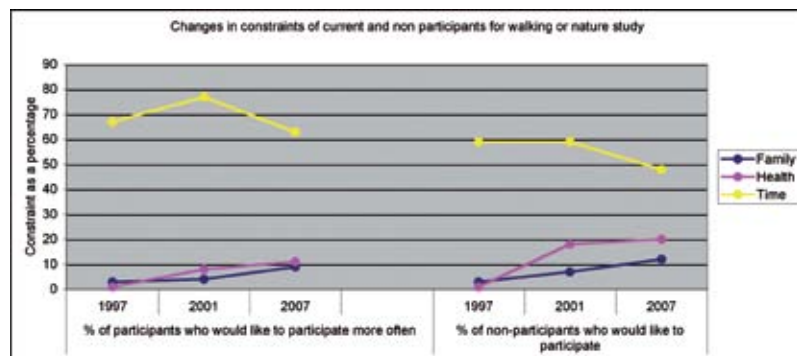


Note: activity-events are shown as points on the line

**Figure 64: Trends in participation and frequency rates within age groups for walking or nature study**



**Figure 65: Changes in constraints of current and non participants for walking or nature study**



## Section 12

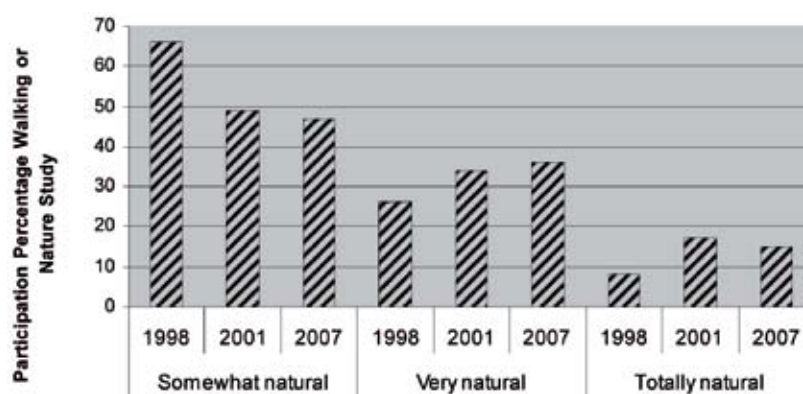
# Changes in selected outdoor recreation activities cont.

'Time' constraint is still the largest reported constraint. However, there was a change in this constraint which may indicate some changes to how people engage in leisure pursuits. Walking or nature study, as well as picnicking, have been impacted by increasing 'family' constraints and 'health' constraints.

These constraints have a different effect on participation and frequency compared to 'time' constraints. 'Family' constraints and 'health' would tend to impact more on the rate of participation and the frequency of participation compared to 'time' constraints. 'Time' is a variable constraint and may be experienced at a lesser or greater extent throughout the year depending on weekly time budgets. It is possible for a 'time' constrained family to participate in the activity once a year, causing the participation rate to rise.

'Family' and 'health' constraints are more enduring across a given year and thus have greater impacts on participation rates and frequency rates. A small increase in 'family' constraints impacts on participation rates for people who do not currently participate and an increase in family constraints will also impact on the frequency rates of current participants who would like to participate more. This is particularly the case for walking or nature study and picnicking because these two activities are not 'equipment' or 'cost' constrained.

**Figure 66: Trends in current participation rates across the three settings for walking or nature study**



**Table 15: Current participants' involvement in camping across the three SEQORDS**

Camping	1997	2001	2007
Participation Rate	25	33	30
Frequency of Participation	2	2	2
Activity-Events	554 400	1 254 468	1 332 799

Note: frequency rates have been rounded and thus are only an approximate guide to the calculation of activity-event results which are based on the actual frequency rates.

How these changes have related to the settings in which people walk and undertake nature study is shown in Figure 66. This figure shows trends in current participation rates across the three settings for walking or nature study.

Figure 66 demonstrates that current participants are increasingly using *very natural* settings as opposed to

*somewhat natural* setting. Linking this finding with the conclusions from Section 10.2.2 on '*nowhere to go*' indicates that people in SEQ are seeking more natural places, but find this difficult due to constraints of 'family', 'health' and increasingly by the constraint of '*nowhere to go*'.

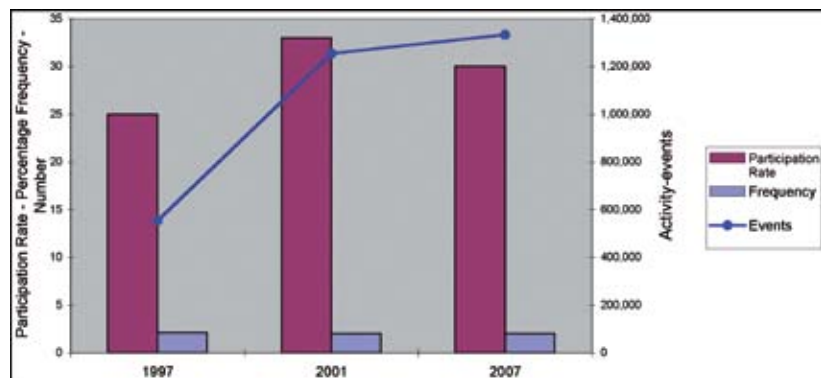
### 12.3 Camping

Camping has had a fluctuating rate of participation and a stable frequency of participation rate. The activity-event rate has increased over the three SEQORDS. This contrasts with the trend for walking or nature study and also picnicking. Table 15 and Figures 67, 68 and 69, show the activity trends and constraints for camping over the three studies.

Some characteristics noted in the figures are as follows:

- People from younger age groups are continuing to go camping in 2007 at the same rate as 2001;
- Rates of participation for all age groups are higher in 2007 than for 1997. Thus more people are participating now than in 1997;
- *'Time'* constraints for non-participants who would like to participate more are declining. This indicates that *'time'* is not a major issue in stopping more people from participating. This feature impacts on the participation rate in that if non-participants are less constrained then there is likely to be an increase in the number of people participating. However this is offset by increases in *'family'* constraints;
- *'Family'* constraints have increased since 2001 but have not been high enough to impact negatively on participation rates; and
- The relatively stable rates of constraints for current participants correlate to the stable frequency of participation across the three SEQORDS.

Figure 67: Trends in participation, frequency and activity-events for camping



Note: activity-events are shown as points on the line

Figure 68: Trends in participation and frequency rates within age groups for camping

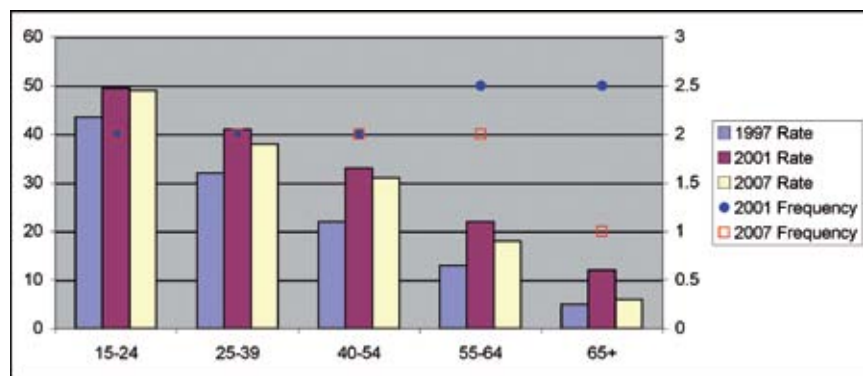
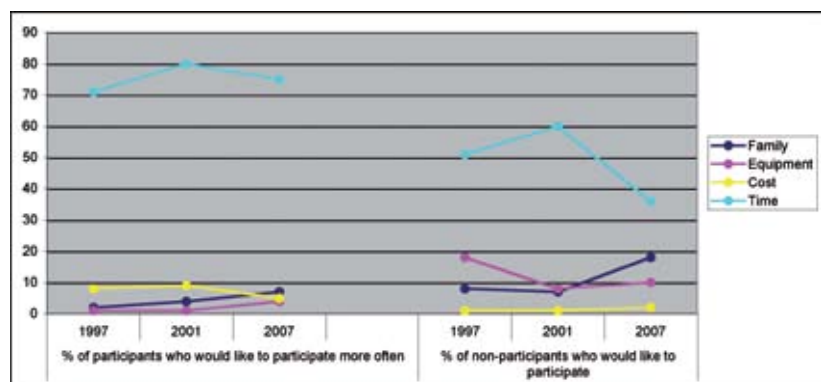


Figure 69: Changes in constraints of current and non participants for camping



## Section 12

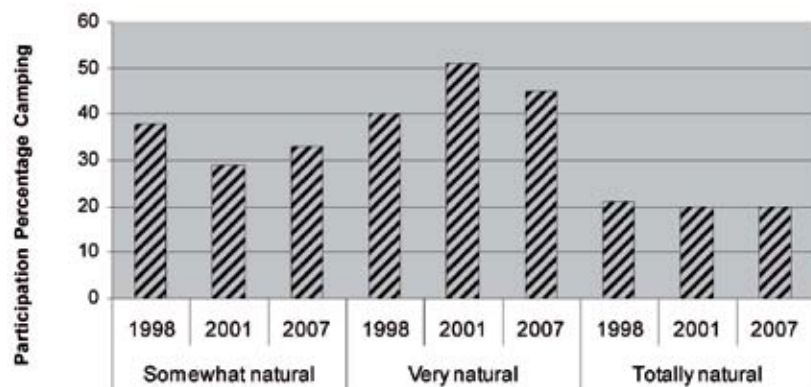
# Changes in selected outdoor recreation activities cont.

How these changes have related to the settings in which people go camping is shown in Figure 70. This figure shows trends in current participation rates across the three settings for camping.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in the figure above are as follows:

- The use of *totally natural* settings is stable;
- More people use *very natural* settings for camping than any other setting;
- There is a slight change towards *somewhat natural* settings;
- This change is occurring despite the increase in preference for more natural settings (see section 10.2.3);
- This change could be a result of an increase in the 'family' constraints translating to an increase in *somewhat natural* setting. (assuming families want more facilities);
- An increase in the constraint 'nowhere to go' also means that people are forced to use *somewhat natural* settings; and
- It is possible that people who used *very natural* settings no longer participate in 2007 which translates to a larger rate of *somewhat natural*.

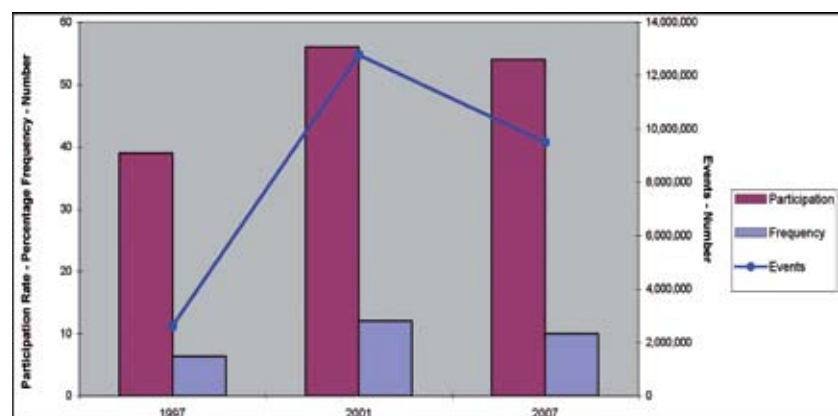
**Figure 70: Trends in current participation rates across the three settings for camping**



**Table 16: Current participants' involvement in water activities across the three SEQORDS**

Water Activities	1997	2001	2007
Participation	39	56	54
Frequency	6.3	12	10
Activity-Events	2 608 200	12 772 776	9 506 865

**Figure 71: Trends in participation, frequency and activity-events for water activities**



Note: activity-events are shown as points on the line

## 12.4 Water activities

Water activity trends are difficult to interpret because there were changes to the classification between 1997 and 2001. Table 16 and Figures 71, 72, and 73 demonstrates the activity trends and constraints for water activities over the three studies.

The rate of participation for water activities has generally increased since 1997. So too has frequency of participation. However, the change is difficult to interpret because the water activities classification has changed since 1997 when it only meant swimming – now it includes snorkelling and scuba. How demographic profile and the constraints have led to the changes can be examined through Figure 72.

Figures 72 and 73 show that the decrease in frequency of participation has had an effect on activity-events. The frequency of participation in 2007 for the age groups 40-54 and 55-64 declined compared to the 2001 SEQORDS. The greatest source of impact on frequency rates comes from current participants who are constrained in some way.

For current participants the increasing constraints of *'nowhere to go'* and *'health'* are significant contributors to the decline in activity-events. The rise of the constraint – *'nowhere to go'* – for current participants may be linked to the drought and the resultant decrease in opportunities to undertake water activities in some water bodies. *'Cost'* is a minor issue but still contributes to the decline in activity-events.

Figure 72: Trends in participation and frequency rates within age groups for water activities

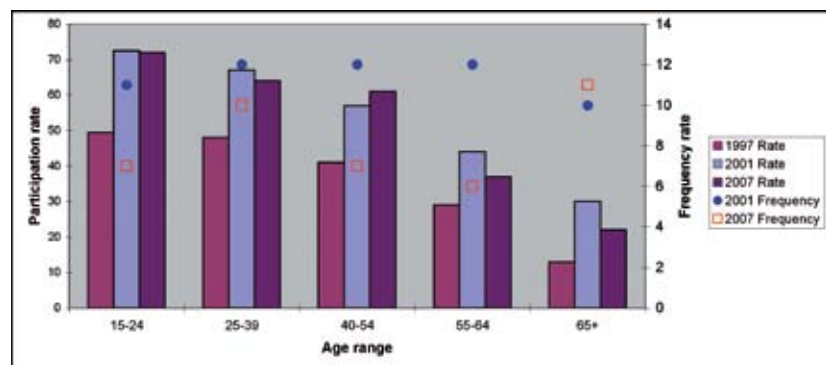
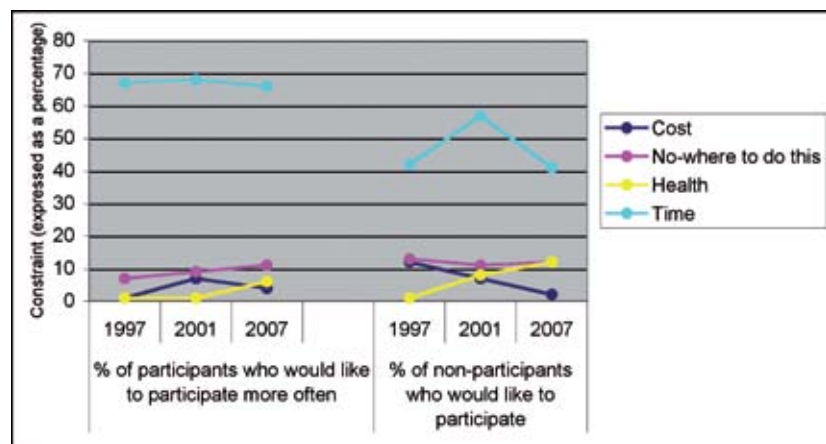


Figure 73: Changes in constraints of current and non participants for water activities



## Section 12

# Changes in selected outdoor recreation activities cont.

It must be noted also that the constraints of 'health' and 'nowhere to go' are higher for people who do not presently undertake this activity. This is most likely to have contributed to the decrease in participation rates and frequency rates between 2001 and 2007.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in the figure above are as follows:

- *Very natural* settings have declined in use;
- *Somewhat natural* settings have increased;
- 'Nowhere to go' has impacted on rates of participation and frequency;
- 'Nowhere to go' is a likely cause for the small change in use to *somewhat natural* from *very natural* settings; and
- This is despite a general preference for more natural settings.

### 12.5 Bicycle riding

Bicycle riding showed increases in participation rates and activity-events but a decline in frequency of participation. Table 17 and Figures 75, 76 and 77 show the activity trends and constraints for riding bicycles over the three studies.

Figure 74: Trends in current participation rates across the three settings for water activities

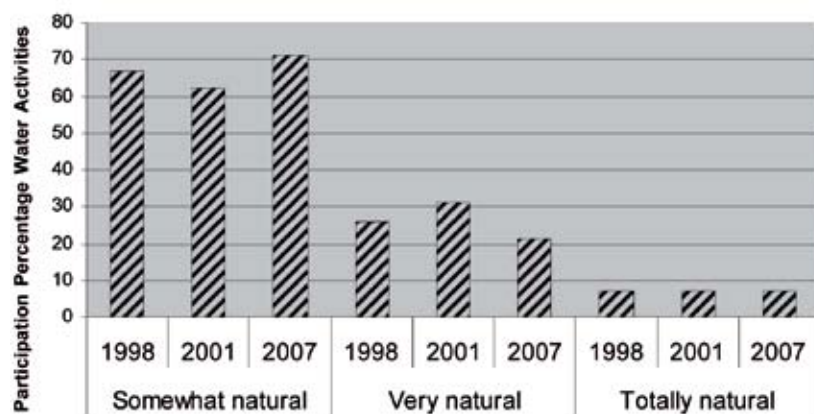
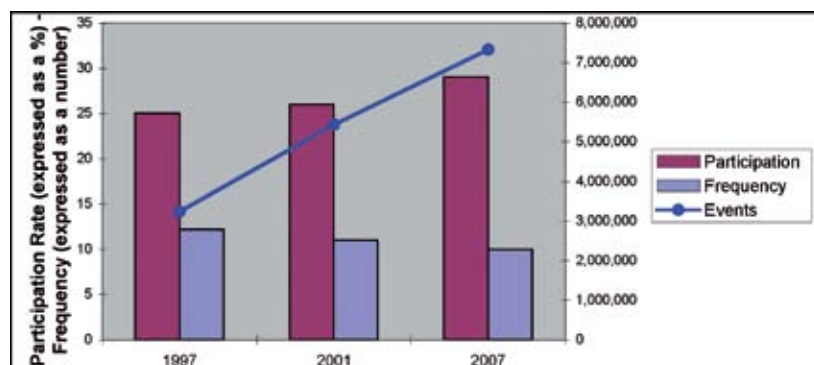


Table 17: Current participants' involvement in bicycle riding across the three SEQORDS

Bicycling	1997	2001	2007
Participation	25	26	29
Frequency	12.2	11	10
Activity-Events	3 233 000	5 436 035	7 327 114

Figure 75: Trends in participation, frequency and activity-events for riding bicycles



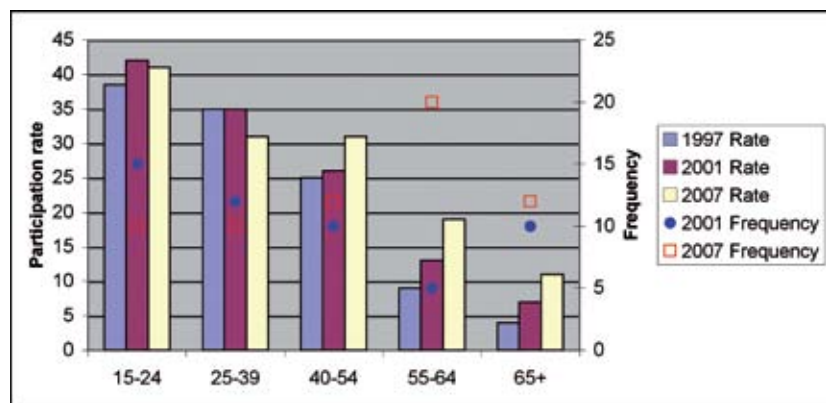
Note: activity-events are shown as points on the line

Of major significance is the increase in participation rate and the frequency of participation within the 40-54, 55-64 and the 65+ age groups. This is the main reason for the rise in participation rates and activity-events rates. Older age groups seem to be shifting their activity preference to riding bicycles. This may account for some of the decrease in walking or nature study (assuming the same people did both activities).

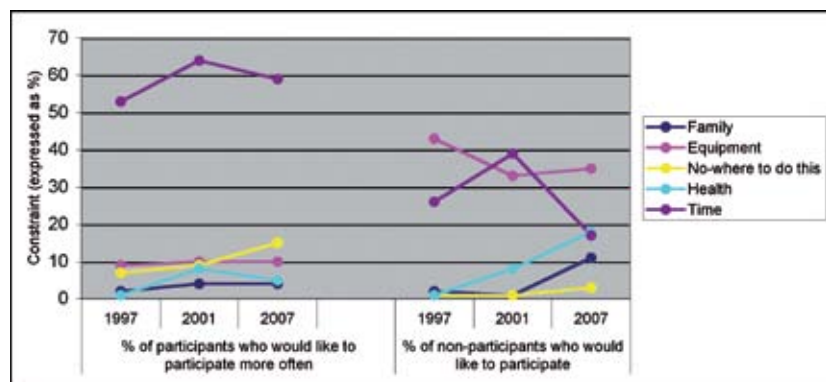
For bicycle riding the increase in activity-events can also be explained by the constraints data. Despite a decrease in frequency the increase in activity-events was due to an increase in participation rates. 'Equipment' and 'cost' are not a major factor for either current participants (frequency of participation) or non-participants (participation rate). The cost of entry into bicycle riding is low due to the relatively low cost of bicycles. This is indicated in the decrease in 'equipment' constraint and the very low 'cost' constraint for both participants and non-participants. It is interesting to note that 'family' constraints and 'nowhere to go' constraint, although increasing over time, has not impacted on participation rates.

Also of significance is the decrease in participation rate of the 25-39 age group. The constraints of families in the 25-39 age group could explain the decrease in participation rate. It should also be noted that in the 25-39 age group there is a general decrease in participation rates in almost all activities (except water activities). It is also the age group that report major 'time' constraints.

**Figure 76: Trends in participation and frequency rates within age groups for riding bicycles**



**Figure 77: Changes in constraints of current and non participants for riding bicycles**



## Section 12

# Changes in selected outdoor recreation activities cont.

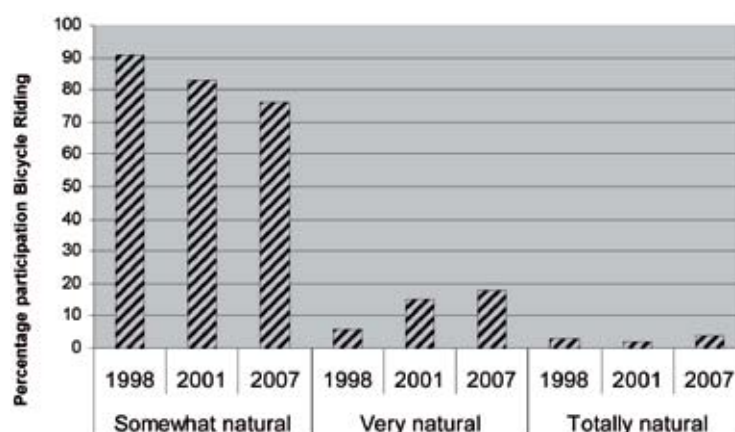
For bicycling the constraint of 'time' was very high for current participants. This impacts on the frequency of participation and, coupled with other constraints, explains the decrease in frequency.

The constraint 'nowhere to go' increased for current participants. This may have impacted on the frequency of participation. Despite the large number of bikeways constructed in many urban and semi rural areas there appears to be a perception that there are limited opportunities for more regular riding. Safety was a particular concern for many people despite the increased provision of bike lanes and bikeways. How these factors relate to setting is discussed below.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 78 are as follows:

- There is a decline in the use of the *somewhat natural* setting for cyclists;
- There is an increase in the usage of *very natural* settings; and
- Combining these two findings with the general preference for more natural settings and the increasing constraint of 'nowhere to go' points towards the need for increased provision of safe bicycling opportunities in more natural settings. This is particularly so for current participants.

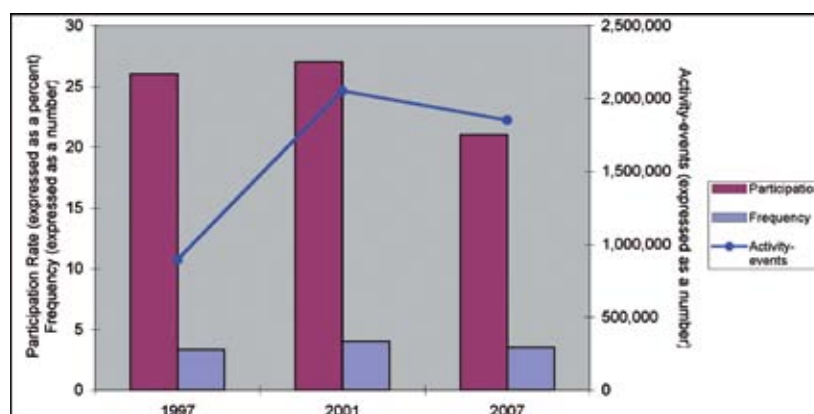
**Figure 78: Trends in current participation rates across the three settings for riding bicycles**



**Table 18: Current participants' involvement in motorised watercraft across the three SEQORDS**

Motorised Watercraft	1997	2001	2007
Participation	26	27	21
Frequency	3.3	4	3.5
Activity-Events	894 300	2 052 768	1 851 475

**Figure 79: Trends in participation, frequency and activity-events for motorised watercraft**



Note: activity-events are shown as points on the line



## 12.6 Motorised watercraft

From the data presented below it appears that this is predominantly an activity for younger age groups. Table 18 and Figures 79, 80, and 81 show the activity trends and constraints for motorised watercraft over the three studies.

Characteristics of and possible explanations for the changes noted in the figures are as follows:

- There is a large decrease in participation rates in the older age groups. Proportionately there were fewer people engaging in motorised water activities in the 55-64 and the 65+ age groups than within the younger age groups;
- 'Cost' for non-participants was an increasing constraint;
- Frequency declined slightly over time and this may be caused by current participants reporting higher 'cost' constraints over 'time'. This was particularly so for younger age groups;
- 'Time' was less of an issue for non-participants, thus emphasising the importance of 'cost' as a constraint that may have led to the decrease in participation rates; and
- 'Equipment' was less of a constraint for non-participants but was a relatively stable constraint for current participants.

Figure 80: Trends in participation and frequency rates within age groups for motorised watercraft

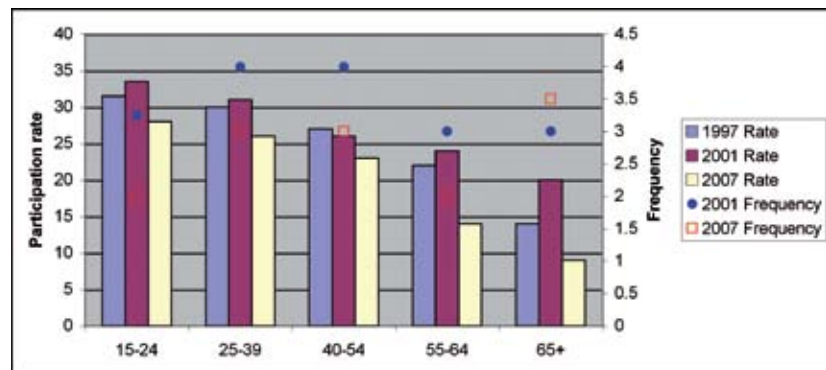
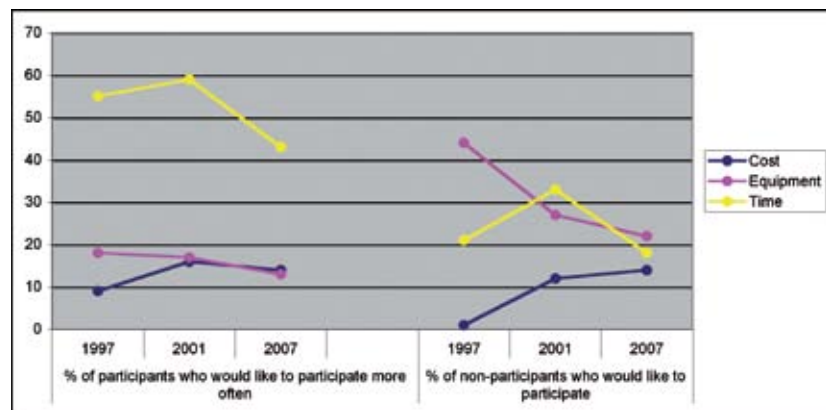


Figure 81: Changes in constraints of current and non participants for motorised watercraft



## Section 12

# Changes in selected outdoor recreation activities cont.

The constraint of 'nowhere to go' was not a significant issue for motorised watercraft, indicating that 'cost', 'time' and 'equipment' drive participation rates and frequency of participation – most likely in that order. How these factors relate to setting is discussed below.

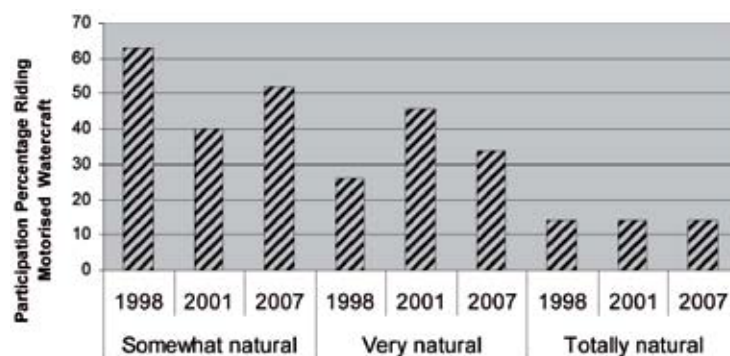
Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 82 are as follows:

- Motorised watercraft use in *totally natural* settings is stable;
- There was a peak in *very natural* settings in 2001 and a corresponding trough for *somewhat natural* setting in 2001;
- Based on 1997 and 2007 data there is an increase in the use of *very natural* settings and a decrease in the use of *somewhat natural* settings;
- Younger people in 2007 are using more natural setting than in 1997; and
- Based on the data, setting use appears to be unrelated to constraints.

### 12.7 Non-motorised watercraft

From the data presented it appears that increased frequency and participation rates in some age groups have given rise to the increase in activity-events. Table 19 and Figures 83, 84, and 85 shows the activity trends and constraints for non-motorised water craft over the three studies.

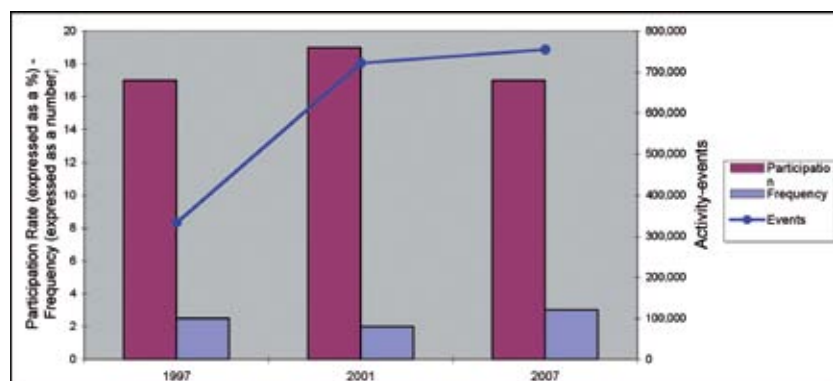
**Figure 82: Trends in current participation rates across the three settings for motorised water craft**



**Table 19: Participation rates, frequency of participation and activity-events for non-motorised watercraft over the three studies.**

Non-motorised watercraft	1997	2001	2007
Participation	17	19	17
Frequency	2.5	2	3
Activity-Events	333 000	722 270	755 034

**Figure 83: Trends in participation, frequency and activity-events for non-motorised watercraft**

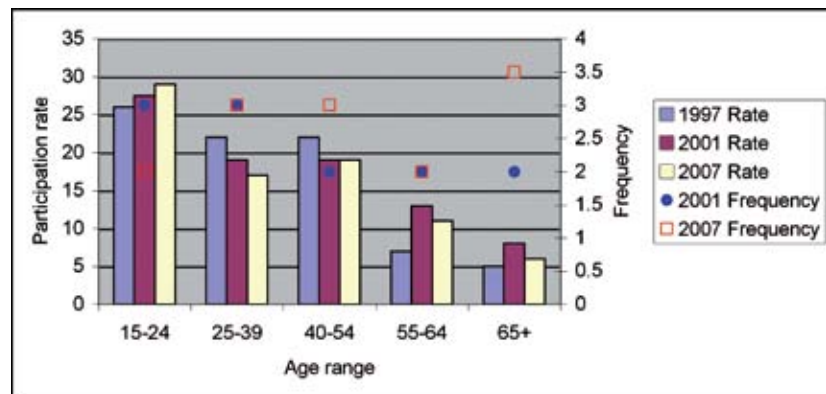


Note: activity-events are shown as points on the line

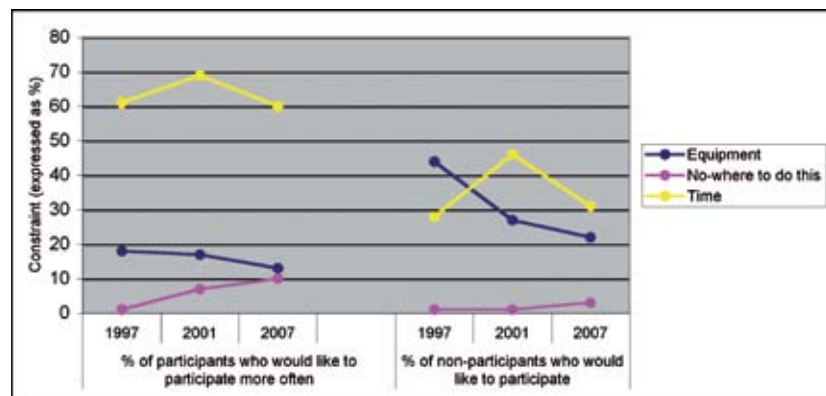
Characteristics of, and possible explanations for the changes to rates noted in the figure and tables are as follows:

- There is a large decrease in participation rates in the 25-39 year age group;
- There is a large increase in participation rates in the 15-24 year age group;
- 'Nowhere to go' increased as a constraint for current participants but it appears that this did not impact on the frequency rates. Frequency rates increased over the three SEQORDS;
- Participation rates decreased slightly. There was a slight increase in 'nowhere to go' constraint for non-participants which may be a cause for the decline in participation rates; and
- The perception that equipment costs have greatly decreased has not led to an increase in participation rates, although this may have led some non-participants to become involved in the activity.

**Figure 84: Trends in participation and frequency rates within age groups for non-motorised watercraft**



**Figure 85: Changes in constraints of current and non participants for non-motorised watercraft**



# Section 12

## Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 86 are as follows:

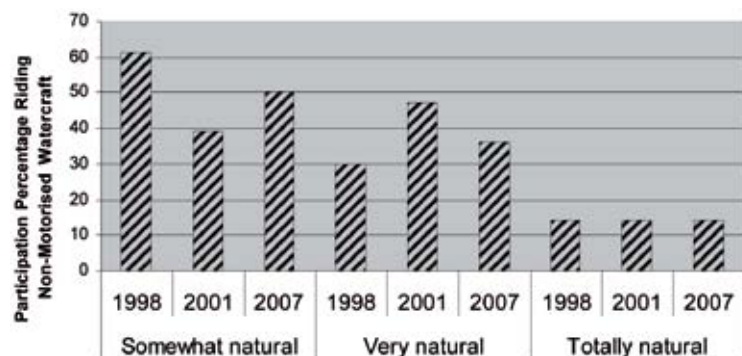
- Motorised watercraft setting use is similar to non-motorised setting use;
- The participation rate in *totally natural* settings is stable;
- Based on 1997 and 2007 data, there is an increase in the use of *very natural* settings and a decrease in the use of *somewhat natural* settings;
- Younger people in 2007 are using more natural setting than in 1997; and
- Based on the data, setting use appears to be unrelated to constraints.

### 12.8 Horse riding

Table 20 and Figure 87 show the participation rates, frequency of participation and activity trends for horse riding over the three studies.

From the data presented it appears that increased frequency and participation rates in some age groups have given rise to the increase in activity-events. The frequency rates in 2007 have increased from both the 1997 and 2001 study. Possible reasons for the trends can be gained from analysing the following figures.

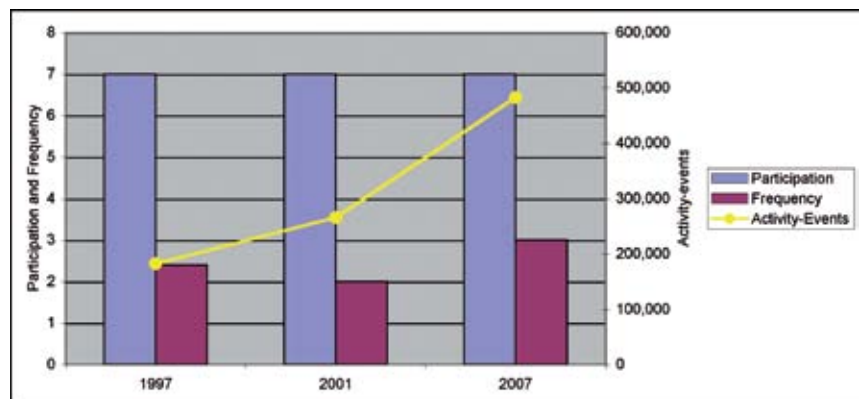
**Figure 86: Trends in current participation rates across the three settings for non-motorised watercraft**



**Table 20: Participation rates, frequency of participation and activity-events for horse riding over the three studies**

Horse Riding	1997	2001	2007
Participation	7	7	7
Frequency	2.4	2	3
Activity-Events	182 400	266 100	482 565

**Figure 87: Trends in participation, frequency and activity-events for horse riding**

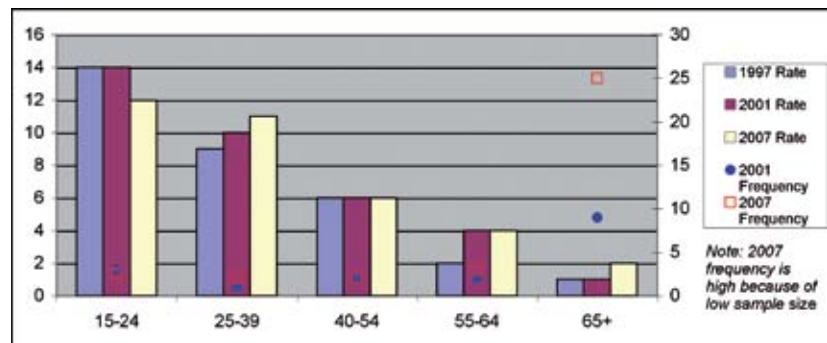


Note: activity-events are shown as points on the line.

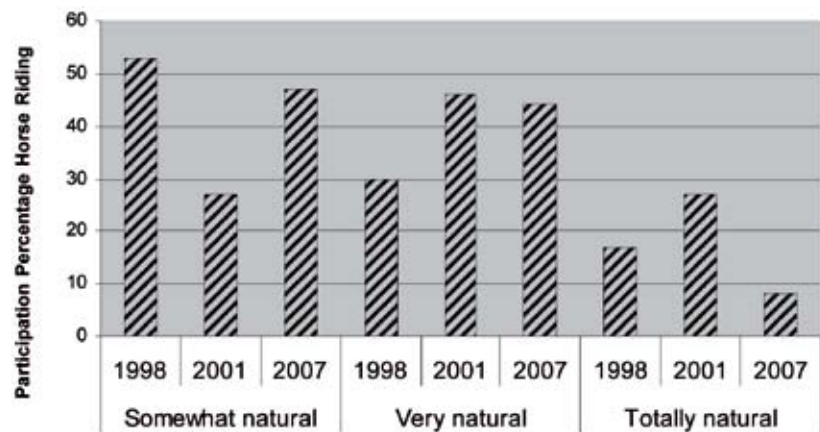
The reasons for the changes noted in horse riding are complex. The following points are offered:

- 'Time' constraints have generally decreased for non-participants and current participants;
- Participation rates have dropped in the 15-24 age group but have been balanced by an increase in older age groups;
- Other constraints have increased slightly but have not had a major negative impact on participation rates and frequency rates; and
- 'Nowhere to go' constraint increased markedly for current participants but there appears to be no decrease in frequency rates. This indicates that participants still went horse riding but were limited to a smaller number of places where they could ride.

**Figure 88: Trends in participation and frequency rates within age groups for horse riding**



**Figure 89: Changes in constraints of current and non-participants for horse riding**



# Section 12

## Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 90 are as follows:

- Horse riders continue to use *very natural* settings;
- *Totally natural* settings decreased in proportion to the increase in *somewhat natural* setting use; and
- Changes to the constraint 'nowhere to go' has had a major impact on the setting use of horse riders.

### 12.9 Driving two wheel drive vehicles

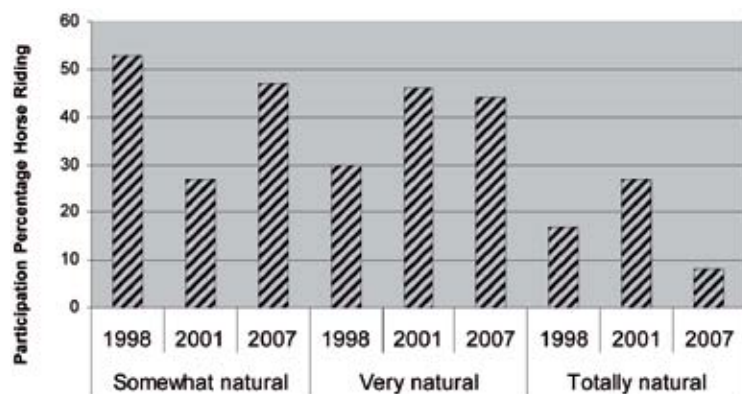
Table 21 and Figures 91, 92 and 93 show the activity trends and constraints for driving 2wd vehicles over the three SEQORDS.

From the data presented below it appears that there is a peak in frequency of participation and thus a peak in activity-events in 2001. However the general trend is of a decline in participation but a stable rate of activity-events. For an understanding of the recent changes, the following demographic and constraints data is presented below.

Comments on, and possible explanations for the changes noted in driving 2wd vehicles are as follows:

- The age groups of 25-39 and 40-54 show a large decrease in participation rates;
- The 65+ age group proportionately had a smaller decrease than the other age groups. In this age group the frequency of participation

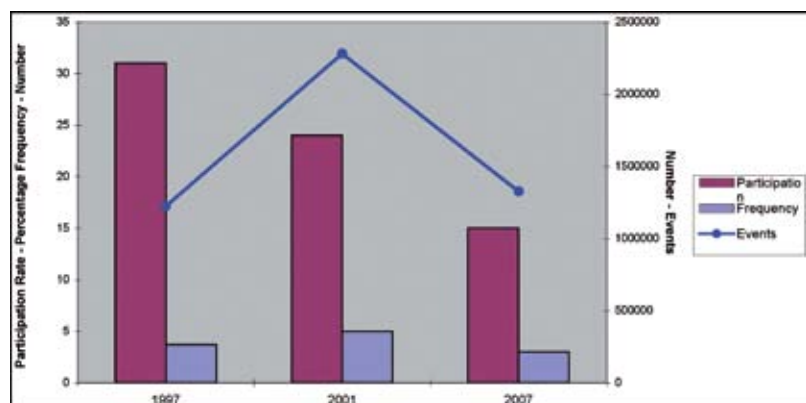
**Figure 90: Trends in current participation rates across the three settings for horse riding**



**Table 21: Participation rates, frequency of participation and activity-events for driving two wheel drive vehicles over the three studies**

Driving two wheel drive vehicles	1997	2001	2007
Participation	31	24	15
Frequency	3.7	5	3
Events	1 224 700	2 280 850	1 326 234

**Figure 91: Trends in participation, frequency and activity-events for driving 2wd vehicles**

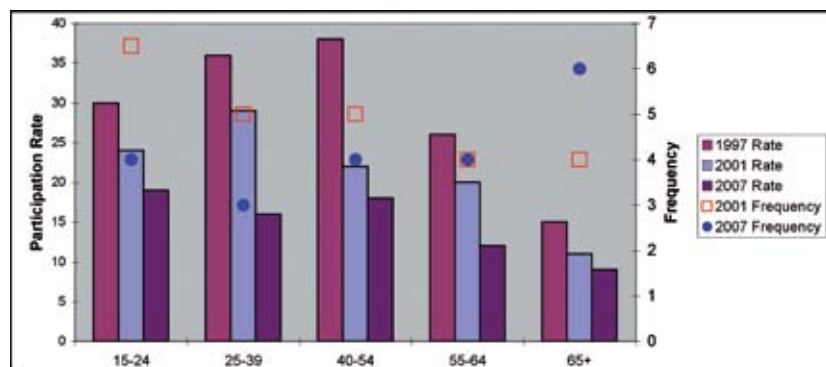


Note: activity-events are shown as points on the line

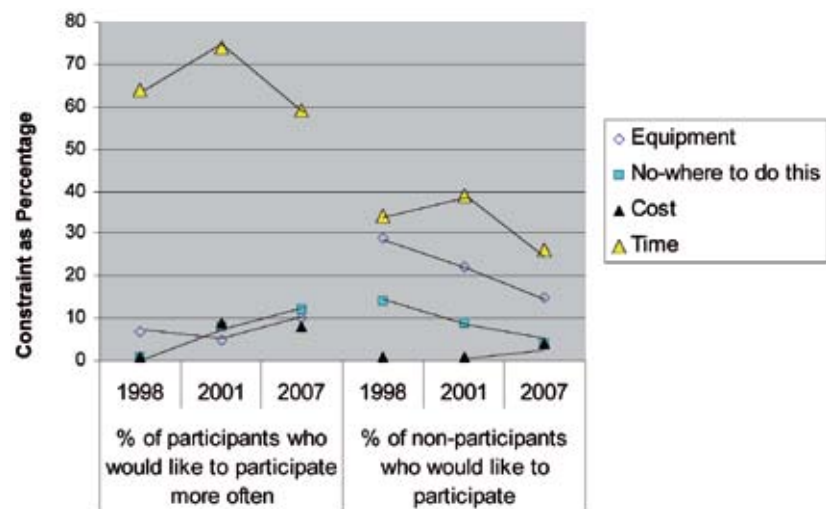
also increased. This was the only age group to increase in frequency in 2007;

- 'Cost' constraints for non-participants are increasing;
- It is reasonable to assume that the 25-39 and 40-54 age groups have less disposable income for driving given the rise in fuel prices and other economic concerns;
- 'Nowhere to go' also increased for current participants. This may be the result of increased perception of congestion in SEQ road systems. Coupled with 'cost' constraint this will have a large effect on participation and frequency rates;
- 'Time' is less of an issue for non-participants than for current participants;
- For both current and non-participants 'time' has decreased as a constraint for further participation;
- It must be noted that this mirrors ABS data on vehicular trends. The average annual number of kilometres travelled per passenger vehicle dropped from 15,500 during the year ended 30 September 1985 to 14,100 during the year ended 31 October 2005; and
- It appears to be reasonable to conclude that here is a positive correlation between the trend noted for driving 2wd vehicles and other activities dependent on 2wd vehicles. Walking or nature study and picnicking may be similarly constrained by increased fuel prices and other vehicular expenses.

**Figure 92: Trends in participation and frequency rates within age groups for driving 2wd vehicles**



**Figure 93: Changes in constraints of current and non-participants for Driving 2wd vehicles**



## Section 12

# Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 94 are as follows:

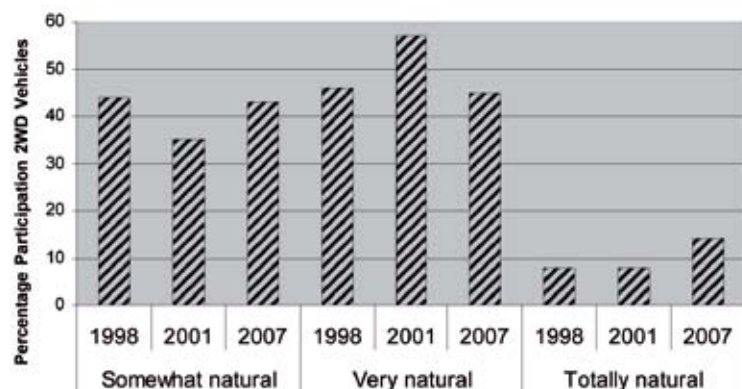
- *Totally natural* setting use increased in 2007;
- *Very natural* setting use in 2007 reverted back to the 1997 levels;
- It appears that people switched use from *very natural* settings to *somewhat natural* setting between 2001-2007; and
- The cost and congestion indicated above appear to be having an effect on *very natural setting* use but not *totally natural* setting use.

### 12.10 Driving 4WD vehicles

Table 22 and Figures 95, 96, and 97 show the activity trends and constraints for driving 4wd vehicles over the three SEQORDS.

The data presented shows a peak in frequency of participation and thus a peak in activity-events in 2001.

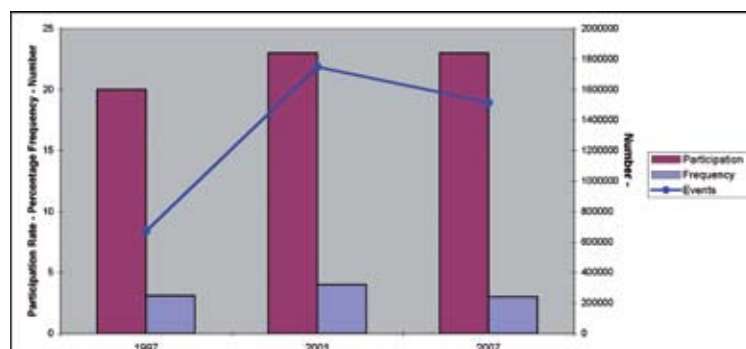
**Figure 94: Trends in current participation rates across the three settings for driving 2wd vehicles**



**Table 22: Participation rates, frequency of participation and activity-events for driving 4wd vehicles over the three SEQORDS**

Driving 4wd vehicles	1997	2001	2007
Participation	20	23	23
Frequency	3.1	4	3
Activity-Events	672 700	1 748 652	1 516 634

**Figure 95: Trends in participation, frequency and activity-events for driving 4wd vehicles**



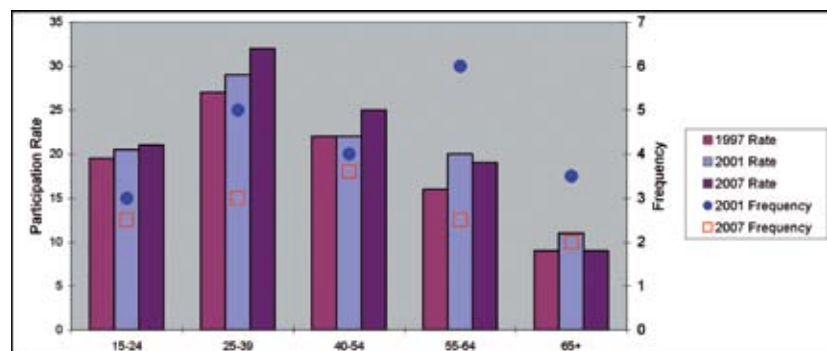
Note: activity-events are shown as points on the line



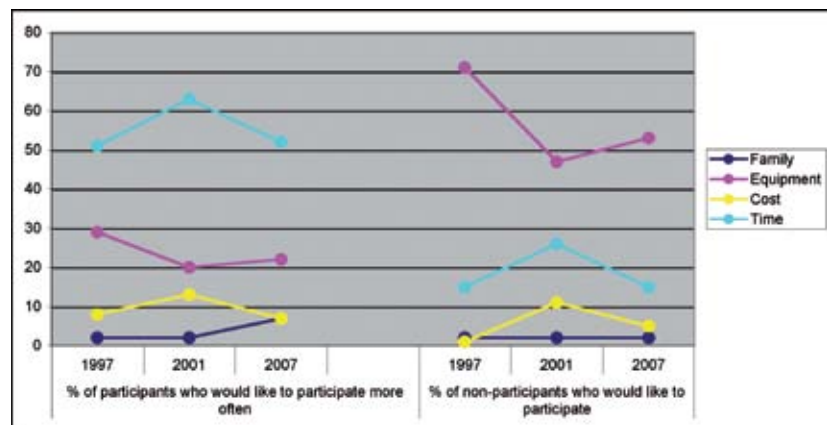
Comments on, and possible reasons for the changes noted in driving 4wd vehicles are as follows:

- There is a large increase in the number of participants in the 25-39 age group; Also there are increases in the age groups just younger and older than the 25-39 age group;
- 'Cost' has decreased for non-participants and current participants. This may reflect the increase in the number of smaller 'car like' 4wd is now being purchased by urban dwellers. This can explain the stable rate of participation in this activity;
- The decline in frequency can be explained by a rise in 'family' constraints and the still relatively high 'time' constraint for non-participants but more so for current participants; and
- The constraints of driving 2wd vehicles appear to be different to 4wd vehicles. 'Cost' does not play as significant role in 4wd vehicle constraints.

**Figure 96: Trends in participation and frequency rates within age groups for driving 4wd vehicles**



**Figure 97: Changes in constraints of current and non-participants for driving 4wd vehicles**



## Section 12

# Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 98 are as follows:

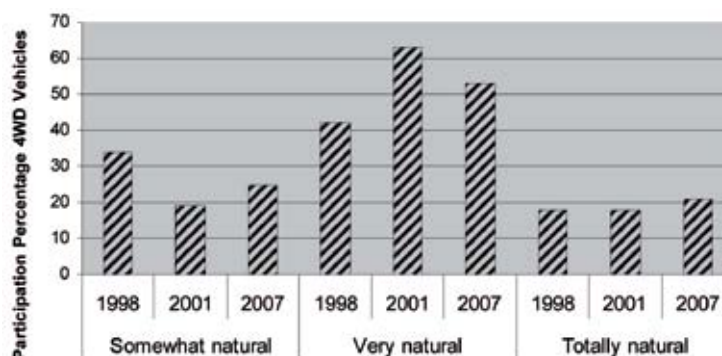
- There is a slight increase in the use of *totally natural* settings;
- Generally there has been an increase in *very natural* settings and general decrease in *somewhat natural* settings between 1997 and 2007; and
- It appears that use of a particular setting is not dependent on the 'nowhere to go' and 'cost' constraint because these aspects did not play a large part in the constraints of this activity.

### 12.11 Other vehicles

Table 23 and Figures 99, 100, and 101 show the activity trends and constraints for driving other vehicles over the three SEQORDS.

Table 23 and Figure 99 show that there is a dramatic rise in participation rates, frequency of participation and thus activity-events in 2007.

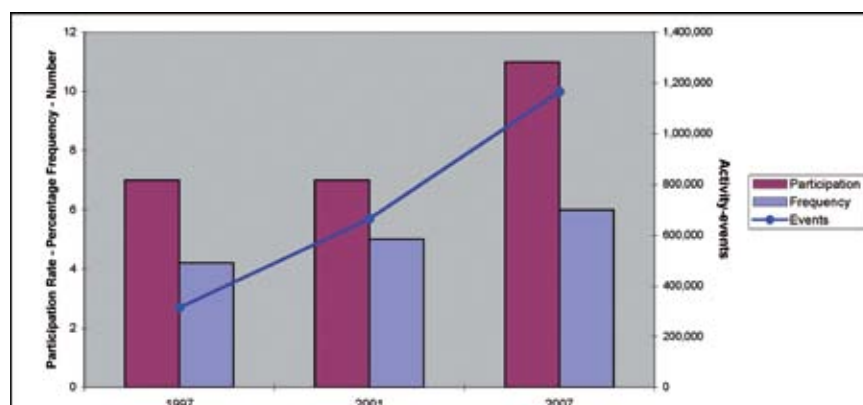
**Figure 98: Trends in current participation rates across the three settings for driving 4wd vehicles**



**Table 23: Participation rates, frequency of participation and activity-events for driving other vehicles over the three the three SEQORDS**

Driving other vehicles	1997	2001	2007
Participation	7	7	11
Frequency	4.2	5	6
Activity-Events	315000	665250	1165379

**Figure 99: Trends in participation, frequency and activity-events for driving other vehicles**

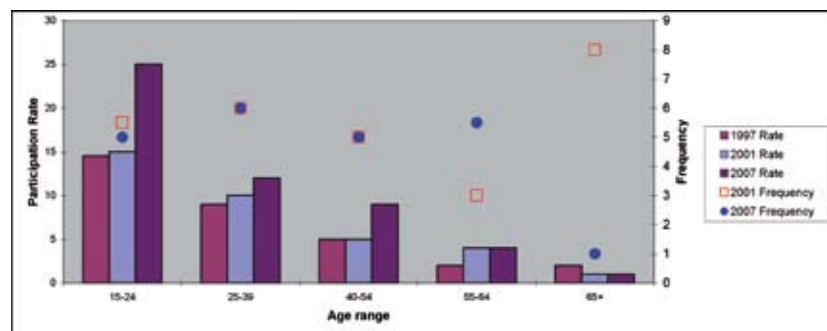


Note: activity-events are shown as points on the line

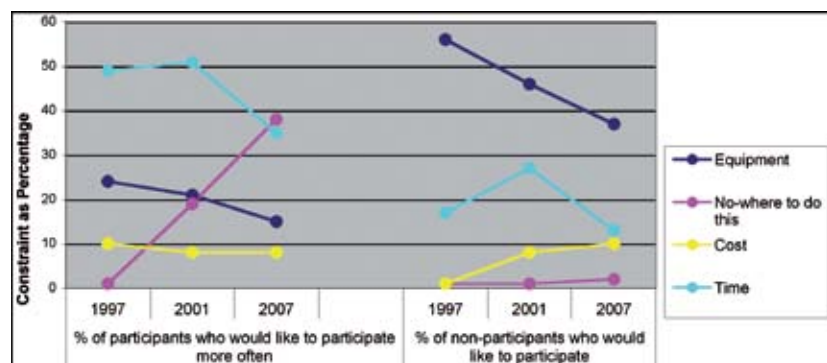
Comments on, and possible explanations for the changes noted in driving other vehicles are as follows:

- There is approximately a 65% increase in participation rates in the 15-24 age group from 2001 to 2007;
- All other age groups have risen (except 65+) from 1997 to 2007;
- 'Cost' constraints have increased for non-participants but equipment constraints have decreased dramatically;
- 'Time' is an issue for current participants but that is becoming less of a constraint. This can help explain increases in frequencies;
- 'Nowhere to go' is an increasing constraint for current participants but it has not deterred current participants from participating more frequently than in the past; and
- For those people who currently participate 'cost' is a decreasing constraint.

**Figure 100: Trends in participation and frequency rates within age groups for driving other vehicles**



**Figure 101: Changes in constraints of current and non-participants for driving other vehicles**



## Section 12

# Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 102 are as follows:

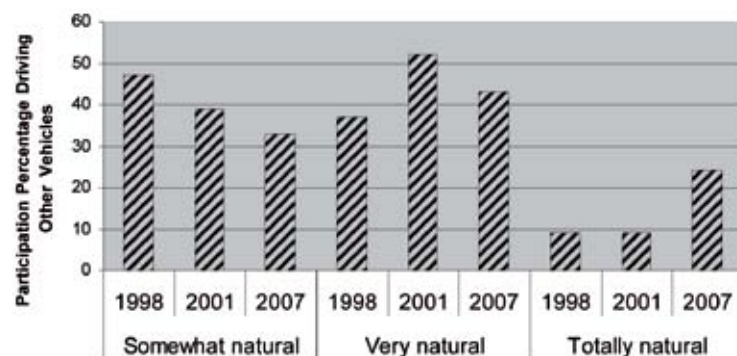
- There is an increase in use of more natural settings despite the increasing constraint of 'nowhere to go';
- The 'cost' of accessing more natural settings does not appear to be a limiting factor for current participants; and
- These trends are of concern because of possible conflicts with other outdoor recreation users as well as other land management issues.

### 12.12 Abseiling/rock-climbing

Abseiling/rock-climbing activity trends are analysed in this section. Table 24 and Figures 103, 104, and 105 shows the activity trends and constraints for abseiling/rock climbing over the three SEQORDS.

Table 24 and Figure 103 show a rise in frequency of participation but a decrease in participation rates. This still led to an increase in activity-events in 2007.

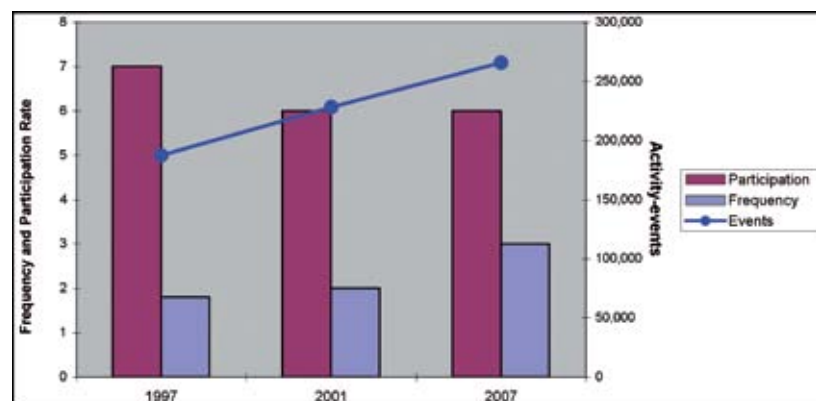
**Figure 102: Trends in current participation rates across the three settings for driving other vehicles**



**Table 24: Participation rates, frequency of participation and activity-events for abseiling/rock-climbing over the three SEQORDS**

Abseiling/rock-climbing	1997	2001	2007
Participation	7	6	6
Frequency	1.8	2	3
Activity-Events	187500	228086	265903.3

**Figure 103: Trends in participation, frequency and activity-events for abseiling/rock-climbing**

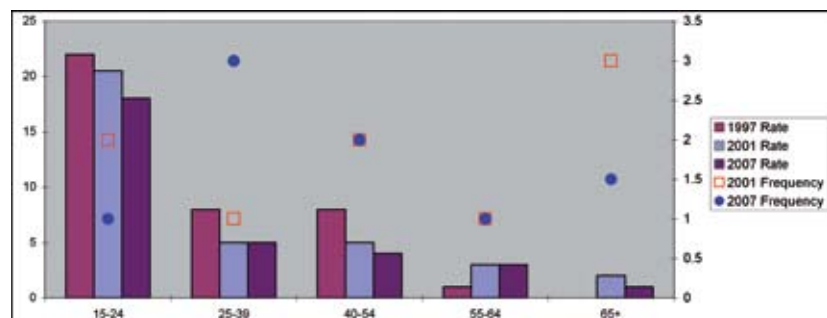


Note: activity-events are shown as points on the line

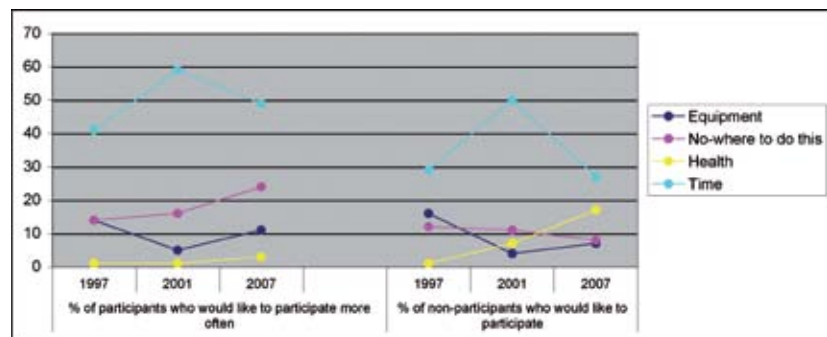
Comments on, and possible explanations for the changes noted in abseiling/rock-climbing are as follows:

- All younger age groups saw a decline in participation rates;
- As a percentage, the overall decline in participation rates was not large;
- The 25-39 age group went against the trend and increased in frequency of participation. In this age group the participation rate was stable between 2001 and 2007. This contributed to the increase in frequency of participation overall from 1997 to 2007. It also contributed to the increase in activity-events;
- For non-participants 'health' was an increasing constraint; and
- The increasing constraint of 'nowhere to go' for current participants did not factor into a decrease in frequency. However, this constraint indicates a latent demand for this activity.

**Figure 104: Trends in participation and frequency rates within age groups for abseiling/rock-climbing**



**Figure 105: Changes in constraints of current and non-participants for abseiling/rock-climbing**



## Section 12

# Changes in selected outdoor recreation activities cont.

Comments on trends and possible explanations for the changes noted in trends in current participation rates across the three settings in Figure 106 are as follows:

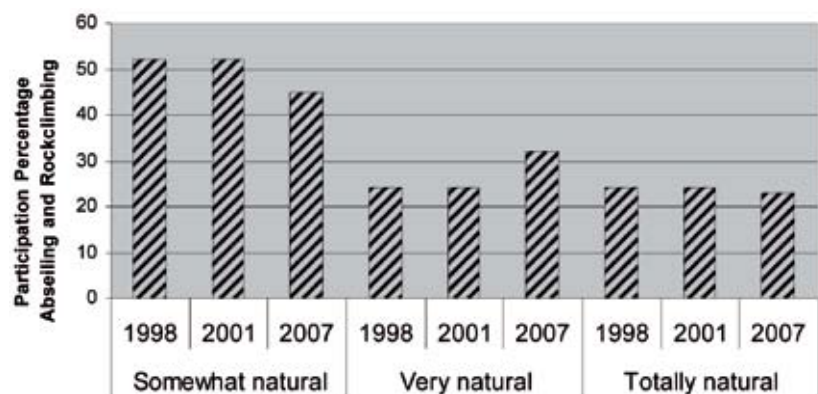
- *Somewhat natural* setting remains the dominant setting used by abseilers and rock climbers;
- There was a slight increase in the use of natural settings;
- This corresponded to a decrease in the use of *somewhat natural* settings;
- Abseilers and rock climbers use of *totally natural* settings was stable; and
- Although a more natural setting is increasingly being used for the activity the recent development of sports climbing<sup>10</sup> may conflict with this trend and may ultimately change the setting.

### 12.13 Fishing

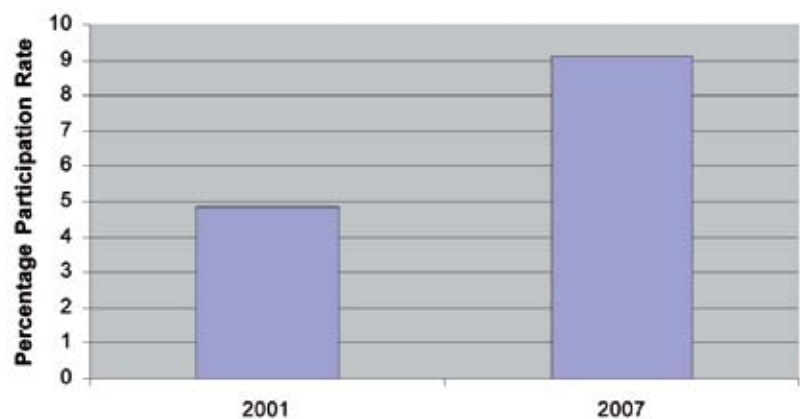
Fishing was not analysed in the SEQORDS. It is presented here because of the rise in participation rates between 2001 and 2007. Figure 107 shows the changes in participation rates for fishing between 2001 and 2007 SEQORDS.

Based on the SEQORDS data above there is almost a one hundred percent increase in the participation rate. Given that this was not a direct question in the SEQORDS interviews it is highly likely that rate of participation for fishing is an underestimation of the number of people engaged in this activity. No frequency data is available so a calculation of activity-events is not possible.

**Figure 106: Trends in current participation rates across the three settings for abseiling/rock-climbing**



**Figure 107: Trends in participation rates for fishing between 2001 and 2007 SEQORDS**



<sup>10</sup> Sports climbing uses artificial anchors (bolts) to ensure the safe passage of climbers. The installation of these anchors by climbers means that climbing becomes popular compared to previous more traditional approaches

# Section 13

## Future research

### 13.1 Future demand studies

The SEQORDS should be repeated in the next 5-7 years. The SEQORDS survey instrument should remain the same. Particular aspects need to be noted to ensure the continued or improved reliability of the survey. These include:

1. The survey question format should mirror the 2007 survey format.
2. Survey questions in the next SEQORDS should be exactly the same as previous studies.
3. Age groups should conform to the 1997 and 2001 SEQORDS.
4. The confidence interval for the whole sample of the next SEQORDS should not exceed the value obtained in 2007 survey.
5. The inclusion of mobile phone numbers within the next SEQORDS is needed.
6. Within the SEQORDS survey questions maintain the descriptions of settings to ensure validity between the SEQORDS.
7. Include a question on the interviewees' socio-economic status.
8. Inclusion of a question to determine the reasons for non-participation of those people who do not want to participate in outdoor recreation is needed.

### 13.2 Other research

There are a number of other research questions that have come to light during the course of the Trends Analysis. These include:

1. How will climate change impact on outdoor recreation activities in SEQ?
2. How does socio economic status relate to participation within the additional variables of gender, age, constraints, settings and motivation (climate change?)
3. How do participants' locations of outdoor recreation activity relate to formal recreation settings and landscape settings classification schemes?
4. How does different land tenure spatially relate to formal recreation settings and landscape settings classification schemes?
5. How does outdoor recreation fit within the weekly, monthly, and yearly time budgets of participants' leisure?
6. How are participation rates and frequency of participation affected by the combination of increasing fuel prices, congestion and diminishing opportunities to undertake recreation due to urban development?
7. How have changes in outdoor recreation participation affected the health of the population in SEQ?
8. What are the reasons participants give that explains the increases or decreases in certain activities as identified in the SEQORDS?
9. What is the difference between resident verses tourist participation in outdoor activities?
10. What effects do unregulated outdoor recreation activities have on the social and natural environment?
11. How important is driving within a participant's outdoor recreation activity in relation to participation and frequency rates, setting use and preference.
12. What mechanisms exist for the management of new and evolving technologically based outdoor recreation activities in various land tenures (for example jet skis, kite surfing, trail-bike riding, mountain biking, sport climbing etc).

# Section 14

## Conclusion

In this study a detailed examination of trends noted in the 2007 SEQORDS has been conducted. The aspects of constraints, settings, physical activity and changes to twelve outdoor recreation activities were analysed in detail. The following conclusions can be drawn from the analysis of these aspects:

The changes in certain constraints other than 'time' have explained many of the changes in participation rates, frequency rates and activity-events in selected activities in the 2007 SEQORDS. For current participants the constraints of 'nowhere to go', 'family', 'health' and 'equipment' constraints were increasing factors. For current participants 'cost' did not appear to be a major constraint for further participation.

For non-participants 'family', 'health' and 'cost' constraints increased over the three SEQORDS for most activities. 'Nowhere to go' and 'equipment' constraints were not major issues for non-participants.

Increasingly participants across all outdoor recreation activities have expressed preference for more *natural settings*. However, there are

some shifts occurring within the overall general preference. It would seem that there are activities that require the use of more natural settings (in which case *totally natural* settings and preference for *very natural* settings increase). At the same time there are some activities that are not dependent on the naturalness of the settings for their use and enjoyment (in which case there is an increase use and preference of *somewhat natural* settings). This may be caused from increased constraints impacting on people's choice of settings. *Somewhat natural* settings may have fewer constraints thus there is an increase in these (despite a preference for more natural settings). *Totally natural* settings are increasingly being used despite major constraints involved with accessing these settings.

The changes to physically active outdoor recreation across the three studies indicates there was a recent decline in activity-events but that the 2007 levels are still greater than 1997 SEQORDS. There were significant decreases noted in women's participation rates, frequency and activity-events data.

The increases in some activities can be explained through decreased cost and changes in leisure preferences. The declines in some of the activities were explained by constraints data, such as 'nowhere to go', 'family', 'health' and 'equipment' constraints. Changes in leisure preferences were also identified as factors that influenced the declining rates.

Future research in the form of another SEQORDS is needed to continue to chart the trends in outdoor recreation. Other research questions were also identified. The central themes of the questions identified centred on the management of the liveability of the region and other key social issues that are related to the impacts of population growth.



# Section 15

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# Section 16

## Appendix

Table 25: A comparison of participation rates from 1997 to 2007 (percentages)

Activity	Participation 1997	Participation 2001	Participation 2007
Picnicking	65%	67%	58%
Walking or Nature Study	60%	49%	35%
Camping	25%	33%	30%
Bicycle Riding	25%	26%	29%
Horse Riding	7%	7%	7%
Water Activities	39%	56%	54%
Driving 2WD Vehicles	31%	24%	15%
Driving 4WD Vehicles	20%	23%	23%
Driving other Vehicles	7%	7%	11%
Riding on Motorised Watercraft	26%	27%	21%
Riding on Non-Motorised Watercraft	17%	19%	17%
Abseiling/Rock-climbing	7%	6%	6%

Table 26: A comparison of median participation frequency from 1997 to 2007

Activity	1997	2001	2007
Picnicking	4.5	4	4
Walking or Nature Study	10.3	12	5
Camping	2.1	2	2
Bicycle Riding	12.2	11	10
Horse Riding	2.4	2	2
Water Activities	6.3	12	10
Driving 2WD Vehicles	3.7	5	3
Driving 4WD Vehicles	3.1	4	3
Driving other Vehicles	4.2	5	6
Riding on Motorised Watercraft	3.3	4	3.5
Riding on Non-Motorised Watercraft	2.5	2	3
Abseiling/Rock-climbing	1.8	2	3

**Table 27: A comparison of outdoor recreation activity-event data from 1997 to 2007**

Activity	1997	2001	2007
Picnicking	3 096 000	5 093 904	3 835 902
Walking or Nature Study	6 622 900	11 176 176	3 857 240
Camping	554 400	1 254 468	1 332 799
Bicycle Riding	3 233 000	5 436 035	7 327 114
Horse Riding	182 400	266 100	482 565.3
Water Activities	2 608 200	12 772 776	9 506 865
Driving 2WD Vehicles	1 224 700	2 280 850	1 326 234
Driving 4WD Vehicles	672 700	1 748 652	1 516 634
Driving other Vehicles	315 000	665 250	1 165 379
Riding on Motorised Watercraft	894 300	2 052 768	1 851 475
Riding on Non-Motorised Watercraft	333 000	722 270	755 034
Abseiling/Rock-climbing	187 500	228 086	265 903
<b>Total</b>	<b>19 924 100</b>	<b>43 697 335</b>	<b>33 223 144</b>

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