Introduction

This chapter is a statement about the tourism and recreational values of Kosciuszko National Park. It analyses the concept of tourism and recreation values and concludes that the intrinsic natural and cultural heritage qualities of the park are the most important tourism and recreation values. What constitutes these qualities, and how the tourism and recreation opportunities and experiences based on these qualities are maximised, is discussed by evaluating 10 attributes that underpin tourism and recreation for Kosciuszko National Park.

This approach ensures that the park’s special heritage qualities are not impacted by the very industry (tourism) that is so dependent on Kosciuszko’s intact natural and cultural heritage. The effects of the 2003 bushfires on visitor use emphasise the dependency of tourism upon the park’s natural and cultural values. This approach recognises that tourism and recreation to the park will benefit from strategic investment to achieve a sustainable future for this very important regional industry.

This chapter has incorporated input from the public consultation process for the interim report, and we would like to thank those who took the time to provide valuable comments.

Tourism and recreation values were not specifically addressed in the 1982 Kosciuszko National Park Plan of Management. They are an important consideration in the new Plan of Management, reflecting global trends for a more sustainable, responsible and well managed tourism industry (WTO 1999, De Lacy et al. 2002).

Protected Area Tourism

There is a growing recognition of the need for professionalism in the management of tourism and recreation in protected areas (Weaver 2001, Worboys et al. 2001, Eagles et al. 2002, Newsome 2002). This has included the development of a range of methods to evaluate tourist motivations, expectations and satisfaction, market segments and carrying capacity. Various planning frameworks, such as limits of acceptable change, visitor activity management process, visitor experience resource protection, recreation opportunity spectrum, visitor impact management and tourism optimisation management model, assist with the management of sustainable tourism in protected areas (Ryan 1991; Weaver and Opperman 2000; Weaver 2001; Worboys et al. 2001; Eagles et al. 2002; Newsome et al. 2002). The benefits to individuals from tourism and recreation experiences in parks have also been examined in studies such as the Canadian Parks/Recreation Association Benefits Catalogue (1997, Box 15.1). These studies reinforce the importance of the tourism and recreation values of Kosciuszko National Park and the need to protect them and the need for its positive and wise management. We have drawn on the body of knowledge and experience noted in this section in developing this chapter.
Structure of this chapter

Initially, we examine the basis for management by the NSW National Parks and Wildlife Service (NPWS). Then the background and context to tourism and recreation in Kosciuszko National Park is addressed. This includes a review of the importance of tourism and recreation in general and in protected areas in NSW specifically. In this section, we outline the history of tourism in the park and describe its current tourism and recreation use, and visitor awareness and visitor satisfaction for Kosciuszko National Park.

The chapter then deals with the tourism and recreation values of Kosciuszko National Park. It defines these values and then documents a number of attributes that underpin them. Tourism and recreation values are defined by Clarke and Stankey (1979) who recognised, what they called, ‘recreation opportunity settings’, as a critical element in describing tourism and recreation values. They described recreation opportunity settings as the combination of physical (such as scenery), biological (such as native plants and animals), social (such as family, friends and/or other visitors), and managerial (such as the facilities and regulations imposed at a setting) conditions that give value to a place. They described the tourism and recreation value of an opportunity setting as the function of the perceived ability of that opportunity (setting) to provide certain activities and experiences.

Adopting this definition, this chapter identifies a number of attributes that help to make up a recreation opportunity setting and underpin the tourism and recreation value of a setting. The attributes have been identified for Kosciuszko National Park, and fit the six management factors of Clarke and Stankey (1979; Attachment One for this chapter). Managing the attributes contributes to management of the tourism and recreation value of the park.

The attributes selected have been bought forward following evaluation of tourist motivational behaviour theory as described by Beeton (1989) and Ryan (1991), as well as geographical, social, managerial and intrinsic factors associated with the recreation opportunity setting as outlined by Clark and Stankey (1979), Beeton (1989), Weaver and Opperman (2000) and Eagles et al. (2002). The attributes are discussed in detail later in this chapter. Briefly, they are:

- the park as a natural attraction;
- the park as a cultural attraction;
- educational activities;
- diversity of tourism and recreation opportunities;
- access to the destination;
- access within the destination;
- services and facilities;
- impacts of use;
- affordability; and
- regional recreation opportunities.

Each attribute is assessed relative to the dependence of the attribute on the park, the condition of the attribute, the trend in its condition, pressures on the attribute, knowledge gaps and opportunities. It is a means of assessing the overall condition of tourism and recreation values for the park, and the trend in condition.
Based on this assessment, a number of findings have been prepared relative to the attributes. These are followed by management advice, including potential environmental management performance monitoring indicators. Lastly, it should be noted that this chapter does not consider the economic values of tourism and recreation, which are addressed in Chapter 17.

**Terminology**

The term ‘tourism’ is used in this report to refer to travel away from home for recreation or pleasure and associated activities (Worboys et al. 2001). ‘Visitor use’ is any use of protected areas by visitors and tourists. The term ‘recreation’ is used to refer to any activity voluntarily undertaken principally for pleasure and satisfaction during leisure time. ‘Recreation opportunity settings’ are areas or sites where a combination of six management factors (Attachment One) provides a distinctive destination condition suitable for certain recreation opportunities and the possibility of certain experiences (Clarke and Stankey 1979). For simplicity, tourism and recreation have been treated together when discussing opportunity settings, but the authors recognise that there are differences at a level of detail.

**Basis for management**

The National Parks and Wildlife Act 2001 (NSW) (NPW Act) and the Kosciuszko National Park Plan of Management (as amended, 1988) provide guidance for the management of tourism and recreation within the park.

Under section 2A(1)(c) of the amended Act (National Parks and Wildlife Amendment Act 2001) the NPWS has a responsibility to foster public appreciation and enjoyment of natural and cultural heritage and their conservation. Under section 30E(2)(e) of the Act, this must be done within a sustainable visitor use framework. The plan of management principles requires the economic and social context of the park to be considered within the plan (section 72AA(1)(u)), along with the provision of opportunities for public understanding, enjoyment and appreciation of natural and cultural values, including opportunities for sustainable visitor use (section 72AA(1)(i)).

The management of tourism and recreation opportunities in Kosciuszko National Park are described in the 1982 Plan of Management. Recreation and tourism are specifically addressed in Section 6, ‘Management of Outdoor Recreation Opportunities’, and Section 7, ‘Management of Skiing Facilities’ (NPWS 1982). For some aspects of tourism and recreation management, the plan is inconsistent with the 2001 amendments to the NPW Act. This anomaly will be corrected in the 2003 plan.

Section 6 of the 1982 plan outlines the policies that guided its strategy for managing tourism and recreation practices (NPWS 2000). These include the following principles:

- In exercising ‘the encouragement and regulation of appropriate use’ of national parks, the NPWS has a primary responsibility to provide outdoor recreation opportunities requiring no facilities and services or only basic facilities and services;
- National parks provide only some of the outdoor recreation opportunities in any region, not all of them. When providing facilities and services in national parks, an effort will be made to provide opportunities different from, and generally less sophisticated than, those provided elsewhere in a region;
- Facilities and services provided will be consistent with the protection of features and processes of high aesthetic, scientific, conservation, educational, recreational and/or cultural value, and satisfy a demonstrated need;
- Only those facilities and services that assist in ‘the appropriate use, understanding and enjoyment of each national park’ will be provided. Facilities that create artificial features, attracting visitors in their own right, are not appropriate in a national park;
- The widest possible range of opportunities for the appropriate use of national parks by as many people as possible will be maintained, consistent with the protection of the natural and cultural features of such areas;
- National parks are public lands and decisions to enhance the opportunities for appropriate uses by any one group should not consistently be at the expense of opportunities for appropriate use by any other group. Nevertheless, the NPWS acknowledges that in many cases it has a responsibility to respond to expectations for recreation opportunities held by only a small number of people, and that many uses are more appropriately conducted outside national parks;
- The NPWS recognises that there is a wide range of socio-economic capacities and physical abilities within the community. When allocating opportunities for appropriate use, the NPWS has a responsibility to minimise or avoid discrimination for or against sections of the community on the basis of socio-economic status or physical handicap, within its constraints of finance and human resources; and
- In many cases, the small-scale facilities and services provided by the government, through the NPWS, for activities undertaken by a smaller number of people or physically handicapped groups will not be commercially viable. However, in other cases, the scale and nature of the facilities provided in national parks will provide economic opportunities for private enterprise. In such circumstances the development and operation of the proposed facility and/or provision of the proposed service may be offered under lease or licence to private enterprise.
Background and context

Tourism and recreation

Tourism is an important global industry, accounting for 12% of global gross national product, or around US$4.8 trillion (Newsome et al. 2002). In Australia, the tourism sector directly contributes 4.7% of gross domestic product (A$31.8 billion), with 551,000 people directly employed in the industry (6% of the labour force) and another 340,600 indirectly employed (ITR 2002). Recent international and domestic events, such as the terrorist attacks in New York and Bali, the drought, bush fires, the Iraq war, the collapse of Ansett and the Severe Acute Respiratory Syndrome sickness, have changed patterns of international and domestic tourism. For example, there are fewer international visitor arrivals to Australia, but in some cases more domestic tourism (Brown 2003). The Australian Tourist Commission’s managing Director, Mr Ken Boundy stated in February 2003 that, “The (Australian) industry has now suffered two years of flat performance, with visitor arrivals down by 3% in the year end 2002 and down by 2% in 2001. In addition to a slump in consumer confidence, arrivals to Australia were also impacted by the trend for international travellers to holiday closer to home for shorter periods”.

Tourism to national areas, including national parks, is a growing segment of the tourism industry, accounting for 20% of all international travel expenditure (Newsome et al. 2002). For overseas visitors to Australia, the natural landscape and heritage is seen as a major drawcard, although fewer people visit national parks than visit capital cities or other key destinations such as the Gold Coast (see Chapter 17). Protected area tourism is popular with domestic tourists, with over 22 million visits to national parks and reserves in NSW in 1994 (Worboys et al. 2001).

Protected area tourism is a distinctive segment of the industry (Worboys et al. 2001, Eagles 2002, Newsome et al. 2002). It incorporates both traditional natural area tourism (tourism in a natural setting) and cultural tourism, where the cultural landscape or built environment occurs within a protected area. Protected area tourism incorporates nature-based tourism, adventure tourism, wildlife tourism and ecotourism (Newsome et al. 2002).

Nature-based tourism occurs where viewing nature is the primary objective. It occurs in natural settings, with an emphasis on understanding and conserving the natural environment. Examples from Kosciuszko National Park include sightseeing, camping and walking. Adventure tourism also focuses on activities in natural areas, however, the activities are the focus rather than the natural area. Examples from Kosciuszko National Park include downhill skiing, snowboarding and rafting. In wildlife tourism, the fauna and flora are a primary attraction. Wildlife tourism is becoming increasingly popular, with estimates that 75 million people in the United States watch wildlife each year (Newsome et al. 2002). Kosciuszko National Park has distinct wildlife tourism opportunities including birdwatching and interacting with kangaroos. Ecotourism should foster sustainable use through resource conservation, cultural revival and economic development and diversification (Worboys et al. 2001, Newsome et al. 2002). For a specific tourism activity to constitute ecotourism, it must be nature based, ecologically sustainable and environmentally educative, it must benefit the local community and it must generate tourism satisfaction (Newsome et al. 2002). In Kosciuszko National Park, examples of ecotourism include the education centre at Sawpit Creek, cave tours at Yarrangobilly and some commercial tours including guided walks that have a strong environmental and educative component.

Cultural tourism in protected areas such as Kosciuszko National Park includes activities such as:

- Aboriginal cultural education;
- visitation to standing structures such as houses and outbuildings, sawmills, power stations, dams, etc;
- visits to surface features such as mining sites, and grazing sites etc) and to cultural landscapes such as Kiandra and, ‘Man from Snowy River Country’; and
- participation in cultural activities such as festivals etc (Worboys et al. 2001).

Tourism and recreation in NSW national parks

Tourism to protected areas in NSW, including national parks, is managed by the NPWS. The total area managed is over 5.39 million hectares (as of June 2001). This consists of 161 national parks, 359 nature reserves, 13 historic sites, 11 Aboriginal areas, 22 state conservation areas, 10 regional parks and 4 karst conservation areas (NPWS 2001a).

Tourism and recreational use of these parks is very popular. Visits to NSW national parks rose by around 2.5% per annum in the years up to 1994, with over 22 million visits per annum to parks in 1994 (Worboys 1997). Under the National Parks and Wildlife Amendment Act 2001, visitor use must be consistent with the primary purpose of the protected areas, which is conservation of natural and cultural heritage. Visitor use to protected areas is an important source of revenue to the NSW NPWS, with total revenue associated with tourism (from all sources, entry fee’s, camping fee’s, leases, and sales) providing 8% of the total budget (total budget for 2001/02 = $284 million), with KNP contributing approximately 40% of this revenue ($9 million/year or 3% of the total budget) (NPWS Annual Report 2001-2002). Expenditure for management of KNP exceeds the revenue generated from its commercial activities (P. Abelson, 1998).
To assist in the management of tourism in protected areas, the NPWS have developed some planning papers. The most recent statements include:

- the Draft Nature Tourism and Recreation Strategy (Worboys 1997)
- the NSW NPWS Visitor Use Charter (NPWS 2001b)
- the Recreation Planning Framework for NSW National Parks (NPWS 2002).

History of tourism and recreation in Kosciuszko National Park

Early tourism and recreation

Tourism and recreation have a long history in Kosciuszko National Park. The first ascent of the summit is thought to have been made on 12 March 1840 by Paul Edmund de Strzelecki (Gare 1992). He was more intent on exploration and discovery than tourism, as were a succession of scientists including the Reverend WB Clarke in 1851, Baron Mueller in 1855, Richard Helms in 1889 and Edgeworth David in 1907 (Gare 1992).

Documentation of early tourism is scant, however, the limestone caves at Yarrangobilly were first discovered by Mr Bowman of Talbingo in 1834 (KSPT 1960). The first documented use of the area for ski tourism was in 1861 at Kiandra, where local miners went ‘ski-running’ using modified palings known as butterpats (Hueneke 1987, Good 1992). The first ski club, the Kiandra Snow Shoe Club, was formed in 1878 and held annual ski competitions (Hueneke 1987, Gare 1992). Other early tourism use included the establishment of cave reserves between 1872 and 1890 for ‘Public Recreation and the Protection of Caves’ for Yarrangobilly, and the use of sites such as Rules Point Guest House and Yarrangobilly Cave House for fishing and other recreational activities. The first cottages developed for tourism at the caves were constructed in 1888 (NPWS 1991). Exploration of the area overlapped with recreational activities, with the routes established by explorers, graziers and miners soon used by others for recreation. This included ascents of Mount Kosciuszko on horse, on bike and on skis during the 1880s to 1900s (Hueneke 1987).

Further development

The NSW government recognised the recreational value of the mountains and snow country when, in 1906, it established a reserve around Mount Kosciuszko (Snowy Mountains National Chase) ‘for public recreation and preservation of game’ (Good 1992). In addition, under the supervision of an engineer named Rennix, the government constructed a road to the summit of Mount Kosciuszko to provide vehicle access to continental Australia’s highest mountain (KSPT 1960). This was completed in 1908. The government also built hotels, including Yarrangobilly Caves House (1901), the Hotel Kosciuszko (1908) and the Creel at Waste Point (1908), to provide accommodation and activities for tourists (KSPT 1960, Gare 1992, Good 1992). The Creel provided accommodation for fisherman and other tourists. The Caves House complex was completed in 1916 with the building of the two-storey wing, and in 1936 it became a hotel, with the transfer of the liquor licence from Rules Point. It was managed by the NSW Government Tourist Bureau from the late 1800s to 1963, when it was transferred to the Kosciusko State Park Trust. It operated until 1966 (NPWS 1991).

By the 1920s, parties of bushwalkers, horse riders and skiers regularly used the area during summer and winter, with marketing of summer and winter recreational activities to wealthy residents of Sydney and Melbourne (Hueneke 1987).

As a result of increasing interest in mountain tourism, additional huts and hotels were built by the NSW state government and private clubs specifically for tourism in the high country. These included the Chalet at Charlotte Pass, built in 1931, burnt down in 1938 and rebuilt in 1939 (Good 1992). A series of small lodges, mainly for back country skiing, were built in more remote locations on the Main Range by the government tourist bureau and ski associations, with the approval of the newly formed Kosciusko State Park Trust. These also included the construction of Lake Albina Lodge in 1951, Kunama Lodge in 1952, and Illawong Lodge in 1956, an extension of Pounds Creek hut built in 1926 (Hueneke 1982, 1987, Good 1992). Facilities provided for the Snowy Mountains Hydro Electric Scheme were also used for tourism and recreation, including workers’ huts at Guthega, Schlink Hilton at Schlink Pass and huts within the Jagungal Wilderness Area (Hueneke 1982, 1987).

In 1944, the Kosciusko State Park Act was passed by the NSW government, protecting a total of 2000 square kilometres. The provision of formal downhill skiing facilities commenced in 1952, when the Act was amended to provide for ski lodge leases (Good 1992). Commercial developments based on alpine skiing commenced in Perisher Valley in 1959, at Thredbo in 1958, and at Guthega, Kiandra and then Mount Selwyn in the 1970s (Hueneke 1987; Good 1992). There was rapid development of the ski resorts in the 1960s, 1970s and 1980s. This included completion of the chairlift from Thredbo Village to Top Station in 1962, the approval of the Thredbo Village Master Plan in 1964, Antons and Sponars T-bars in the late 1970s, the expansion of ski lifts in Perisher Valley in the early 1980s, the Perisher Valley Centre in the mid-1980s, Mount Blue Cow in 1986, the ski tube in 1987 and the sports academy in Thredbo in the late 1990s.

In 1960, there were more than 100,000 visits to the park (Good 1992). In the same year, there were some 16,000 visits to the Yarrangobilly show caves (KSPT 1960). In 1967 the NPWS was established, recognising the importance of conservation of the natural and cultural values of national parks as well as nature tourism and recreation opportunities (Good 1992). The NPWS took over from the Kosciusko State Park Trust. The NPWS began to manage tourism and recreation in the park, including addressing issues associated with increased use. For example, in 1974, due to traffic congestion, traffic jams and associated problems, the summit road from Charlotte Pass to Rawson Pass was closed to private vehicles.
However, from 1978 to 1982, a shuttle bus continued to operate during peak periods. The road was closed to all private vehicles in 1982, and pedestrian access to the summit, via the Thredbo Village to Top Station chairlift, was promoted. As a result of increased numbers using this route, the NPWS built an elevated steel mesh walkway (1982 – 1987), which extended from just beyond the top of the Crackenback chairlift to Rawson Pass, close to the summit (Worboys and Pickering 2002). The mountain huts are important destinations for many cross-country skiers and bushwalkers, and became an important part of the recreational experience.

Ski resort development in the 1980s and 1990s involved diversification of use in winter and summer, and introduction of snow-making facilities (Grenier 1992; Buckley et al. 2000; NPWS 2001c; Pickering and Hill, in press). In the 1990s, and more recently, development has focused on providing improved services and facilities for visitors to the resorts through accommodation and commercial space. There are now 11,899 officially approved beds in Kosciuszko National Park. Snow sports are a very important activity within the park, and the sport of skiing has become more sophisticated, with many Australian skiers performing successfully internationally at the highest levels of this sport. The area of the park that has 60 or more days of snow cover is estimated to be 1201km² or 18.5% of the park (6494km²). In comparison, Switzerland has 41 times more snow covered area (area with 60 or more days of snow cover) than this (Slatyer et al. 1984). The ski resort management units constitute some 3.5% (42km²) of the snow covered area, however, the area directly influenced by the ski resorts is much larger (Good 1995, Buckley et al. 2000).

Data on tourism and recreational use of Kosciuszko National Park

There are a variety of ways to measure tourism and recreation use of protected areas such as Kosciuszko National Park. Data on visitor use of protected areas can include entry gate figures, road traffic counters, visitor surveys within the protected area at specific locations and/or for specific activities, ticketing for facilities such as chairlifts and general tourism surveys that include questions relating to a region or park. For Kosciuszko National Park, sources of visitor data include: park entry gate figures (e.g. Alpine Way and Kosciuszko Road), traffic counters (on several roads including those in the northern part of the park such as Kings Cross Road etc), surveys conducted within the park (ski resorts, summer tourism in the alpine area etc), surveys taken outside the park, of specific user groups (park visitors, members of ski clubs etc), surveys of general visitors to region (Mules et al. 2002), and national visitor surveys (BTR 2002). These data are collected for specific reasons. Each provides different measures of use, and each has its own benefits and limitations. We have included a variety of sources here to provide a picture of current tourism and recreation use of the park.

At a national scale, visitor data is collected by the Bureau of Tourism Research (BTR). This non-statutory, intergovernmental agency compiles a National Visitor Survey of 80,000 Australian residents each year. The BTR provides data on (1) Number of overnight visits, (2) Number of day trip visitors and (3) Visitor nights, the number of people in the region overnight, summed for a specific period (often year). This value combines number of visits by the number of nights spent in the area. From the first two values it is possible to estimate the number of people who visit the region.

Based on four years data (1998-2001) from the BTR, the average number of domestic visitors (different people) each year who travelled for tourism and recreation to the Snowy Mountains region that includes Kosciuszko National Park was 861,000 (Figure 15.1). The average number of domestic visitor nights per year (number of nights on which visitors stayed in the region summed for all visitors) was 2,308,000 (Figure 15.2).
Figure 15.1 Number of domestic visitors (overnight visitors plus day trip visitors, in thousands) per quarter to the Snowy Mountains region, 1998–2001 (data from the Bureau of Tourism Research, 2002)

Figure 15.2 Number of domestic visitor nights in the Snowy Mountains region per quarter for 1998–2001 (data from the Bureau of Tourism Research 2002)
Data from the visitor survey for the BTR for just the year ending June 2001 (Figure 15.3) highlights the episodic nature of visitation to the park, with the highest visitation during the ski season, and two lower peaks during the summer school holidays, and at Easter.

**Figure 15.3**  Number of domestic overnight visitors to the Snowy Mountains Region by month for year ending June 2001 (data from Tourism New South Wales 2001, based on BTR, National Visitor Survey)

In addition to data from the BTR, the NPWS collects data from entry gates on two roads within the southern end of the park, the Alpine Way (a through road for most of the year, but closed at Thredbo Village during winter), and the Kosciuszko Road (which terminates in the park at Charlotte Pass, but is closed above Perisher Village in winter). This data shows the same seasonal pattern of visitation, with winter the peak period (Figure 15.4). For example, 70% of passes for vehicles are issued from June to October (inclusive, 96,426 tickets out of total of 138,619, average 11 years of data). Day

Data from a survey conducted by the Centre for Tourism Research at the University of Canberra (Chapter 17) indicates that winter tourism accounts for some 65% of the annual total visitation to the park.

**Figure 15.4**  Number of vehicle passes (averaged over 11 years, 1989 – 1999) issued (sold or exemption) per month from the entry gates to Kosciuszko National Park along the Alpine Way and Kosciuszko Road (data from NPWS)

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1 Number of vehicle passes sold or exemptions issued. Does not include people using the Skitube to enter the park or repeat entry by vehicles with existing pass (e.g. annual passes etc.).
Most winter tourists visit one of the four ski resorts in Kosciuszko National Park (Table 15.1). The resorts provide a range of facilities for winter visitors, including accommodation, lifts, bars and restaurants. They are increasingly relying on snow manipulation including of artificial snow making to ensure an even cover of snow during the season (Pickering and Hill, In press).

Table 15.1 Information about facilities at ski resorts in Kosciuszko National Park

<table>
<thead>
<tr>
<th>Ski Resort</th>
<th>Maximum altitude (m)</th>
<th>Artificial snow area (ha)</th>
<th>Downhill ski area (ha)</th>
<th>Capacity skiers/hr (x1000)</th>
<th>Cross country trails (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perisher Blue2</td>
<td>2054</td>
<td>34.5</td>
<td>1,245</td>
<td>47.6</td>
<td>100</td>
</tr>
<tr>
<td>Thredbo</td>
<td>2037</td>
<td>70</td>
<td>175</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Charlottes Pass</td>
<td>1980</td>
<td>0.5</td>
<td>50</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Selwyn Snowfields</td>
<td>1601</td>
<td>36</td>
<td>45</td>
<td>9.5</td>
<td>45</td>
</tr>
<tr>
<td>Total NSW</td>
<td>141</td>
<td>1520</td>
<td>77.6</td>
<td>15.8</td>
<td></td>
</tr>
</tbody>
</table>

Estimates of visitation to individual ski resorts include around 650,000 skier days per year for Perisher Blue (NPWS 2001c3), and 700,000 visitors for Thredbo Village from June to October4.

By far the most popular activity in winter is downhill skiing (23.6% of all people visiting the park) and snowboarding (8.4%), with lower numbers engaging in cross-country skiing (5.0%) and other activities (Chapter 17). Some ski resort visitors do not engage in outdoor winter recreation activities but participate in the social life of the resorts. About 5% of visitors engage in activities away from ski resorts, mainly for snowboarding or ski-touring, either on day trips (often from resorts) or camping overnight in snow caves and/or tents. Relatively few engage in snow and ice climbing or snow shoeing (Virtanen 1993; see also Chapter 17).

Although ski resort based skiing is clearly the most popular tourism activity, non-snow based tourism (November to May), is also important and appears to have grown steadily over the past 25 years, from a minimal base. For example, non-ski season tourism now accounts for around 30% of the visitation to Thredbo Village (300,000 visits5), and 30% of the passes issued at the entry gates on the Alpine Way and Kosciuszko Road (Figure 15.4).

When over 3000 visitors to the park were surveyed (mail in survey), walking was found to be the activity undertaken by the greatest range of people, (57.2% of annual visitors), while car touring and sightseeing (50.2%) and nature appreciation (46.1%) were also popular (see Chapter 17). Other popular non-snow-based activities are camping (15.6%), fishing (11.6%), four-wheel driving (8.8%), mountain bike riding (6.1%) and horse riding (5.3%, Chapter 17). These results are similar to those obtained in a survey of 300 park visitors in NSW, the Australian Capital Territory (ACT) and Victoria (Worthington and Di Marzio Pty Ltd 1999). In this study, walking was the most popular activity among visitors to the Australian Alps national parks. Ninety-three per cent of visitors had gone walking in a park, with 47% going to the region specifically to walk (highest listed activity). Other popular activities and motivations were ‘peace and quiet’ (94%), picnicking/barbecues (88%), ‘enjoying nature and natural environments’ (87%), scenic driving (84%) and ‘to see specific sites’ (83%).

Summer visitation to the small alpine area of the Main Range (as estimated by on site visitor surveys) appears to have increased during the last 25 years. A survey in 1978 estimated that there were 20,000 summer visitor to the alpine area (Worboys 1978). By the early 1980s the number had increased to 36,000 people per summer (quoted in Virtanen 1993). The most recent estimate for the snow-free period of 1999–2000 is 64,000 people (Johnston SW and Pickering 2001). However, this survey finding is potentially contradicted by usage patterns recorded for the Thredbo chairlift, and park entry gate data which both indicate that summer usage has been fairly stable for the last decade (Denise Allardice, Kosciusko-Thredbo Pty Ltd, pers. comm., September 2002, NPWS entry gate figures).

In the northern part of the park, ski tourism is popular at the family orientated Mt Selwyn ski resort. There is also extensive use of the north of the park for other types of tourism, particularly in the summer. Cave tourism is popular, with the Yarrangobilly Caves receiving around 24,000 visits, and 40,000 visits to the nearby thermal pools and picnic areas each year (NPWS, South West Slopes Region visitation figures 2001/2002, Mark Adams, NPWS pers. comm., 2003). The Tumut Regional Visitors Centre received around 33,500 visits from July 2001 to June 2002.

2 Perisher Blue Resort was formed by the merger of Perisher-Smiggins and Blue Cow-Guthega Resorts in 1995. Sources: Web sites for each of the resorts and personal communication by Wendy Hill, Griffith University with resort snow managers June 2001.
3 Annual skier visitation for years 1989 to 1999, Figure 2.7 from Perisher Range Resorts Master Plan, 2001.
4 Number likely to be based on skier days or overnight visits, Data from Thredbo Village Web Site, Facts and Figures.
5 NB This is activities undertaken by different people who visit the park and hence differs from measures based on visitor days or nights.
6 Number likely to be based on number of visits to resort, Data from Thredbo Village Web Site, Facts and Figures.
Other popular areas include Long Plain, Elliot Way and Tantangara (Figure 15.5). Horse riding is also common in the north of the park with an estimated 1,140 commercial and private horses in the Northern Plains region between October 2001 to April 2002 (Mark Adams, NPWS, pers. comm., 2003).

**Figure 15.5 Number of vehicles July 2001 – June 2002 on roads in the northern part of Kosciuszko National Park (data from NPWS).**

Most visitors to Kosciuszko National Park and the Snowy Region are domestic tourists and less than 3% are international visitors (TNSW 2001, see also Chapter 17). Most domestic overnight visitors come from Sydney (49%), regional NSW (23%) or the ACT (11%), with low numbers from Victoria (7%) and Queensland (7%) (TNSW 2001). Nearly all visitors come for holidays or leisure (78%) rather than to visit friends or relatives or for business.

By far the largest market segment of domestic visitors are families with dependent children (46%). The other 54% of the market comprises young solos (4%), single adults (18%), young couples without children (19%) and older couples (17%) (TNSW 2001). There are some ecotourists, with this niche market having the potential to grow.

As mentioned above, few international visitors travel to the Snowy Mountains. In the year ending June 2000, there were 23,000 international visitors to the region out of 2.5 million international visitors to NSW (TNSW 2001). Most (73%) came from the United Kingdom (27%), Germany (19%), other countries in Europe (33%) and the United States (10%). Public access opportunities to the park and lack of knowledge about the destination appear to be factors contributing to the low levels of international visitation (TNSW 2001, see also Chapter 17). There are strong links between the community and the tourism and recreation industry in the area.

**2003 Fires**

The bushfires, in the summer of 2003, are natural phenomena that had an immediate effect on tourism and recreation in the park. The fires resulted in the closure of the park for several weeks, with obvious impacts on summer visitation to the region. The uncertainty over the duration of park closure and other fire issues, along with perceived changes to the natural values of the park caused by the fires, resulted in a dramatic post fire drop in tourism. This helped to crystallise, for the tourism industry and the region the importance of the natural and cultural heritage values of the mountains as the principal tourism value of the area. The fires also reinforced the need to account for natural events in tourism business planning. For example the historical proposals to located potential new ski resorts at Tantangara Mountain and Twin Valleys immediately above alpine ash forests (with a high fire potential) would have proven difficult to protect from fire. Fire as a natural event in Kosciuszko National Park and tourism needs to be planned carefully.

Active information campaigns by the NPWS and local tourism organizations are likely to help result in a recovery of non-snow based tourism after the 2003 fires, as people recognise the attraction of post fire landscapes. Winter tourism is likely to be less affected by the fires, and may benefit in the short term from the decline in overseas travel by Australians associated with SARS and terrorism.
Visitor awareness and satisfaction with Kosciuszko National Park

At least among people who visit protected areas, awareness and satisfaction with Kosciuszko National Park is high. Worthington and Di Marzio Pty Ltd (1999) found that 98% of surveyed visitors to national parks were aware of Kosciuszko National Park. This recognition was higher than for any of the other 25 parks listed on their survey, including Kakadu, Uluru (Ayers Rock), the Blue Mountains or the other parks in the Australian Alps (Worthington and Di Marzio Pty Ltd 1999). Kosciuszko National Park was also a very popular park, with 52% of the 300 respondents having visited the park. There were high levels of satisfaction with facilities in the Australian Alps national parks, including Kosciuszko National Park (92%). There was high satisfaction (greater than 80%) with toilets (80% totally satisfied), short walking tracks (86%), picnic and barbecue areas (86%), car parking (89%), scenic driving (93%), visitor information centres (92%), information display boards (89%), roads within national parks (94%) and direction and information signs (81%). The main areas of dissatisfaction were the number of parks (with 33% wanting more), availability of water (9%), understaffing (7%) and poorly signposting of tracks (6%).

Tourism and recreation values of Kosciuszko National Park

The concept of tourism and recreation values

Kosciuszko National Park has long been an important destination for a large number of visitors. What are the values that underpin this visitation? There are a wide range of activities undertaken within the park, from sightseeing, bushwalking, snow boarding down hill and cross-country skiing to adventure sports such as ice climbing and white water rafting (Attachment Two, Part B). The concept of values, for essentially natural lands such as Kosciuszko National Park, are briefly discussed here as part of establishing the concept of tourism and recreation values for the park.

In modern industrialised Australia, human and natural environments are starkly contrasted with natural environments, such as Kosciuszko National Park, often having great cultural and spiritual value, for both indigenous and non-indigenous Australians. For indigenous Australians, natural landscapes and natural sites are of immense cultural significance. Likewise, for non-indigenous Australians, there are strong connections to the bush. Historical events and life experiences since 1788 have made many sites and landscapes particularly significant for individuals and families. Connections to nature may also be spiritual. Thus conserving natural areas which provide opportunities for self-reliant recreation is important. Recent wilderness legislation has recognised this by reserving areas of natural lands for opportunities for solitude and self-reliant activities (Worboys et al. 2001).

Kosciuszko National Park also has intrinsic values. The 1993 Convention on Biological Diversity, ratified by Australia, affirmed the concept of the intrinsic value of biodiversity. The 1982 World Charter for Nature, adopted by over 100 countries, stated:

*Every form of life is unique, warranting respect regardless of its worth to man, and, to accord other organisms such recognition, man must be guided by a moral code of action.*

Many people hold ethical, religious and cultural beliefs, and feel strongly about their relationship with other life forms (Worboys et al. 2001). Human-centred values of Kosciuszko National Park may be recognised as ‘use’ and ‘non-use’. Non-use values include option values (natural systems have not been exploited and may be valuable in the future), existence values (enjoyment people get from knowing an area has been conserved, whether or not they use it) and bequest values (derived from the belief that natural resources should be retained for future generations to appreciate and enjoy). Use values are, where humans benefit directly from using natural living resources. Biodiversity is important, for example, for medicine and agriculture and for ecosystem services. Natural areas are also becoming increasingly important for tourism and recreation (Worboys et al. 2001). Chapter 16 has further details of use and non-use values of the park. The tourism and recreation values of Kosciuszko National Park described in this report are focused on ‘use values’, that is, how the park is valued by users as a tourism and recreation opportunity.

Describing tourism and recreation values for the park

The tourism and recreation use values of Kosciuszko can be described in terms of ‘opportunity settings’ found within the park. According to Clarke and Stankey (1979), recreation opportunity settings can be defined as the combination of physical (such as scenery), biological (such as native plants and animals), social (such as family, friends and/or other visitors) and managerial (such as the facilities and regulations imposed at a setting) conditions that give value to a place (Figure 15.6; see also Table 15.2). They are what we usually visualise when we think about a destination before a visit. Clark and Stankey (1979) further explain the concept:

Recreation opportunity settings imply a choice for recreationists; people must be aware of the opportunities, and the opportunities must be comprised of conditions desired by recreationists. The recreational value of an opportunity is a function of the perceived ability of that opportunity to provide certain activities and experiences.

The definition of recreation opportunity settings used in this chapter focuses on the social, physical and managerial attributes of settings, but not on the psychological/spiritual experiences that may be derived.
It should be noted that Clarke and Stankey described visitor experience in terms of the opportunities for experiences, rather than becoming embroiled in complexities surrounding the visitor experience (psychological state) of individuals. However, the relationship between the opportunity and the experience is important; as opportunities lead to experiences, so it is important to briefly introduce this area of theory.

Tourism and recreation opportunities are means by which a visitor acquires experiences and fulfils aspirations; it has been argued that these experiences fulfill psychological needs and motivations (Ryan 1991). Described in a general way for tourism, some of these needs and aspirations include the escape motivation, relaxation and play, strengthening family bonds, prestige, social interaction, sexual opportunity, educational opportunity, self-fulfilment, wish fulfilment and shopping (Ryan 1991). Beeton (1994) extends this discussion to protected areas. Some relevant extracts of his work are:

*Motivation to travel, or to participate in recreation activities, results from the set of needs and attitudes which predispose individuals to act in specific goal oriented ways. Motivation is therefore an inner state which directs behaviour to achieve specific goals.*

*Natural areas such as national parks play an important role in both tourist and excursionist satisfaction by providing areas which can potentially offer experiences of challenge, escape, relaxation, self-discovery and spiritual awareness.*

*Protected landscapes can provide the matrix for a wide range of tourist experiences involving the utilisation of attraction and facilities in a particular landscape.*
All the elements involved in a traveller’s visit and the psychological benefits obtained from these activities constitute the recreation/tourist experience. The destination, or on-site experience incorporates all aspects relevant to the destination and the recreationists state of mind. The area, including area design, setting, activities engaged in, proximity to and number of other recreationists and their behaviour, the facilities available, and inter-area travel nodes, will all contribute to the on-site experience.

The tourism and recreation value of Kosciuszko National Park is influenced by a number of geographical, social, managerial and intrinsic factors, including geographical proximity to markets, accessibility to markets, cultural links, availability of services, affordability, peace and stability, positive market image, pro-tourism policies and availability of attractions (Weaver and Opperman 2000). Visitor attractions, in the case of Kosciuszko National Park, are seen as an important component of the tourism sector; and they may incorporate specific features such as natural destinations (such as the alpine area with its summer wildflowers and the mountain scenery) through to destinations with more sophisticated services that support recreation and tourism, such as ski resorts, and limestone caves. Artificial attractions or high impact, derived activities that may change the core or natural or cultural heritage values of the park are not considered to be consistent with most important tourism and recreation values of the park. This paper describes further describes this position.

This chapter identifies 10 attributes of tourism and recreation opportunity settings that underpin the tourism and recreation value of Kosciuszko National Park. They are shown in Figure 15.7. Management of the attributes is a contribution to the management of the tourism and recreation values of the park.

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**Figure 15.7 Importance of some attributes that underpin the tourism and recreation values of Kosciuszko National Park**

![Diagram of attributes](image-url)
The ten attributes have been developed specifically for Kosciuszko National Park, and conform with the six management factors identified by Clarke and Stankey (1979) (see Attachment one). The attributes have been selected following evaluation of tourist motivational behaviour theory as described by Beeton (1989) and Ryan (1991), as well as taking into account the geographical, social, managerial and intrinsic factors associated with the recreation opportunity setting, as outlined by Clark and Stankey (1979), Beeton (1989), Eagles et al. (2002) and Weaver and Opperman (2000). The attributes determined have been evaluated by park staff and some members of the Kosciuszko National Park Plan of Management Community Forum.

The next section assesses these attributes using the following criteria: the significance of the attribute, dependence of the attribute on the park, condition of the attribute, trend in condition, pressures on the attribute, knowledge gaps, and opportunities to improve the attribute. The order in which each attribute is presented does not reflect its relative importance.

Significance of Kosciuszko National Park tourism and recreation values

Kosciuszko National Park is considered to have nationally significant tourism and recreation values. The importance of the ten attributes is discussed further in the following sections. This importance of some of these attributes to visitors is illustrated in Figure 15.8.

Figure 15.8 Importance of some attributes that underpin the Tourism and Recreation Values of Kosciuszko National Park
Attribute 1: natural attraction

The extraordinary aesthetic scenic and natural qualities of Kosciuszko National Park are one of the primary factors contributing to the high tourism and recreation values of the park. The natural attraction of a protected area such as Kosciuszko National Park can provide opportunities that cater to visitors' needs for play, self-fulfilment, educational opportunity, relaxation and escape (Beeton 1989). In a survey of park visitors in NSW, Victoria and the ACT, and rural residents, 96% of park visitors and 85% of rural residents believed that conservation of natural heritage was the most important reason for the existence of these national parks (Worthington and Di Marzio Pty Ltd 1999). Natural attraction was also a major motivation for 68% of summer visitors surveyed while visiting the alpine area of Kosciuszko National Park (Figure 15.9).

The natural condition of the park contributes to visitor satisfaction by providing opportunities for challenge, escape, relaxation, self-discovery and spiritual awareness. The park features a diversity of natural settings, including the highest mountains on the Australian continent and the highest peak, natural mountainous scenery of high aesthetic quality and appeal, snow-covered landscapes, clear air, mountain streams, glacial lakes, waterfalls, limestone caves, thermal springs, alpine wildflowers, subalpine snow gum woodlands, montane forests, native pine communities, endemic plants and animals and open space. The park is a World Biosphere Reserve, in part due to the international recognition of the natural values of the park.

Importance of the park as a natural attraction

Kosciuszko National Park as a natural attraction is nationally important. The natural scenic qualities of Kosciuszko National Park, its mountainous landscapes, its size and its diversity of natural settings and the presence of snow are paramount in what is valued as a tourism and recreation attraction by visitors.

Dependence on the park

The opportunity to experience natural attractions such as alpine landscapes that include the summit of Mount Kosciuszko and the Main Range, large, natural wilderness areas such as Jagungal, Pilot, Byadbo, Bogong Peaks and Bimberi in sub-alpine and montane ecosystems is available only in Kosciuszko National Park. For other tourism and recreation opportunities, such as to experience the natural attraction of the snow country and frost hollow grassy valleys, there is partial dependence on the park, as there are similar opportunities in Victoria and Tasmania.

Condition and trend in condition

The extraordinary aesthetic, scenic and natural heritage of Kosciuszko National Park is one of the primary tourism and recreation attributes of the park. Table 15.2 describes the condition and trend in condition of these attributes.

Figure 15.9 Motivations of summer visitors to the Kosciuszko alpine area (McMaster 2000)
### Table 15.2 Condition and trend in condition for natural tourism and recreation attraction aspects of Kosciuszko National Park

<table>
<thead>
<tr>
<th>Natural attraction</th>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Natural scenery$^a$</td>
<td>Undisturbed; no human structures</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Native wildlife$^b$</td>
<td>Presence of native fauna; absence of introduced fauna</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Native plants$^c$</td>
<td>Presence of native flora; absence of non-native plants and pathogens</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Limestone caves$^d$</td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Soils</td>
<td>Non-eroding; non-compacted/disturbed</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Water quality$^e$</td>
<td>Unpolluted streams</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Air quality$^f$</td>
<td>Unpolluted air; greenhouse gas emissions minimised</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Natural noise$^g$</td>
<td>No artificial noise</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Natural light$^h$</td>
<td>No electric lights; natural darkness; opportunity to see stars without light pollution</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

- Overall status for Kosciuszko National Park; ☐ Relates to parts of Kosciuszko National Park

$^a$ The park is scenically very diverse. There are many large natural areas where the natural scenery is in very good condition. Some other areas are impacted by power lines, urbanised areas and car parks within the ski resorts and many features of the Snowy Scheme. Some areas are degraded including the nation’s highest peak, Mount Kosciuszko, where further rehabilitation works are required. Natural scenery is very important for tourism and recreation.

$^b$ Impacted by tourism and recreation. Habitats of endangered species have been modified in the ski resorts. There are road kills, and many species are influenced by visitors throughout the park. Bats may be disturbed in caves, breeding populations of snakes and other species may be disturbed by walkers. Special management is needed for the ski resorts including aquatic organisms.

$^c$ Slashing of native vegetation in the ski resorts and trampling of alpine area plants are two impacts that need managing. Control of alien plants in the park should be a continuing priority.

$^d$ Access to the caves in the park is by permit system or by ranger guided tour. This system appears to be working satisfactorily.

$^e$ There are water quality issues for streams downstream from urbanised facilities with sewage and other discharges and run-off into the park. There are other streams which may include water borne parasites. Water quality management needs action to help maintain minimum standards of water quality, especially for remote areas.

$^f$ Generally this is very good for the park, however, air quality for the ski resort areas diminishes at peak times.

$^g$ This is usually very good, but it is an issue which may affect visitors within the ski-resort areas, near the major dams and transmission lines of the Snowy Scheme and along the highway routes. The NPWS helicopter and other management helicopters may be an issue in remote areas.

$^h$ This feature is usually very good, with the exception of the ski resort areas.

### Pressures

A range of pressures may influence the natural attraction of Kosciuszko National Park, including threatening processes, incidents, and planning and management decisions. Such pressures on protected areas are described in more detail in Worboys et al. (2001) and Newsome et al. (2002). The evaluation of the natural values presented in other chapters of this report, including flora, fauna, geomorphology, water quality, wilderness and natural aesthetics, highlights the range of pressures operating on the natural attraction of the park.

Tourism, recreation and park facilities and services can directly impact on the natural attraction of Kosciuszko National Park unless they are managed carefully and strategically. Any impact on the park’s natural values is an impact on its tourism and recreation values. There are specific pressures on natural scenery, wildlife, native plants, soil, water quality and air quality. Pressures include feral animals and plants, non-natural noise, non-natural light and climate change.
Many parks zone recreation opportunity settings to ensure that a range of recreation opportunities are provided. The 1982 Kosciuszko National Park Plan of Management does this in part with the recognition of the Ski Resort Management Units and Wilderness areas. Management theory that underpins the concept of recreation opportunity setting classes and a Recreation Opportunity Spectrum was developed by Clarke and Stankey (1979). (Attachment Two). The methodology could be usefully applied in Kosciuszko National Park. Generally speaking, the more developed end of the Spectrum recognises that specific areas (“developed” setting class) are more intensively used and that greater levels of noise, activities and infrastructure and services may be expected. Thresholds for disturbance are applicable for a national park environment, but may be different to other setting classes. For the more natural end of the Spectrum (“primitive” setting class), opportunities for recreation in a more natural setting, opportunities for quiet solitude, and no-non-natural noise are expected. Such “primitive” setting classes are a diminishing resource for recreationists in NSW. High standards would be typically established for thresholds of disturbance for such settings.

Natural scenery

There are areas in the park where structures detract from the natural scenery (see Chapter 11). These include the unrehabilitated summit road; the disturbed Rawson Pass car park area; old Snowy Hydro-electric Scheme work sites; unfinished Jounama rehabilitation site; erosion at Cooleman, Nungar, Tanangara Dam, Kiandra and Ravine; transmission lines through the park (including unlawful clearing works); some unaesthetic urbanised landscapes at the ski resorts; alpine area multiple tracking; eroding access tracks, including those in the northern section of the park; fire trails and introduced plants (Grenier 1992, Mosley 1992, Buckley et al. 2000, NPWS 2000, Johnston, FM and Pickering 2001, Worboys and Pickering 2002, Pickering et al. 2003). Further rehabilitation work is required in many areas of the park, including the summit area.

Wildlife

Feral horses, foxes, cats and pigs impact on streams, natural grasslands and native fauna (Chapter 10). Such introduced species are considered to diminish the natural values and therefore the tourism and recreation experiences (Mosley 1992). The loss of the corroboree frog from some areas and pressures on the habitat of the mountain pygmy-possum are further examples of the pressure on native animals. The loss of wildlife through road kill is also of concern.

Native plants

The spread of weeds is strongly associated with tourism infrastructure, and other types of disturbance, and detracts from the natural attraction of the region (Johnston FM and Pickering 2001, Worboys and Pickering 2002). The alpine area is one area of concern: trampling of native vegetation is creating disturbed areas – for example, multiple tracking – which provide opportunities for the spread of weeds (Worboys and Pickering 2002, Pickering et al. 2003). Similar impacts in other high-use areas in the park are of concern.

Soil

A range of areas within the park are subject to high-frequency visitor use, including horse riders and walkers. This has caused soil compaction and erosion, in some cases to the level of bedrock (Virtanen 1993, Arkle 2000). There is the potential for serious erosion at these sites (Virtanen 1993, Arkle 2000; see also Chapter 6).

Water quality

Large numbers of visitors to the park place pressure on catchments, which brings potential issues for water quality (see Chapter 8). Water in most streams in the park is likely to be contaminated by pathogens such as Giardia (Cullen et al. 1992, Good 1995, AALC 2000, Buckley et al. 2000). The release of treated sewage waters to subalpine streams at the very headwaters of Australia’s principal river system catchments, including the Snowy River at Spencers Creek, the Snowy River at Perisher Creek, the Thredbo River at Thredbo, and possibly Rules Creek at Yarrangobilly Caves, places additional pressure on rivers, creeks and streams (Cullen et al. 1992, Good 1995; see also Chapter 8). All sewage treatment operations in the park are licensed by the NSW Environment Protection Authority to meet stringent water quality requirements. Nevertheless, there is and will continue to be pressure on the health of streams and rivers in the park.

Air quality

Pressures occur during periods of controlled burning (and wildfires), from smoke pollution from lodge fires and heating combined with atmospheric inversions, and locally from motor vehicle exhausts at resort car parks (Buckley et al. 2000).

Non-natural noise

Pressures occur, especially in the urbanised ski resorts, which can have a high latent noise level (Buckley et al. 2000) from sources such as lodges, restaurants, entertainment centres and visitor services. This is part of the tourism and recreation activities for such “Developed” Recreation Setting Classes within the park (Attachment Two). In principle, it is understood that the minimum acceptable defined levels of noise generated at such centres would generally mean higher permitted noise levels (for a national park setting) than “Primitive” areas. Noise pollution and noise management, including monitoring, for such areas are an important management input.
Increased use of machinery such as snow guns, snow grooming vehicles and over-snow transport, which may occur as a result of additional facilities and services in the resort areas, will add to the non-natural noise in these areas. There is a need for acceptable limits to be defined and managed for.

For areas of the park within the more natural end of the Spectrum, including wilderness areas, the use of vehicle access to remote areas (skidoo, four-wheel drive, helicopter, low-flying aircraft) can be an issue. Maintenance of fire trails, and other management programs are potentially an issue. The Sydney–Melbourne and Canberra–Melbourne flight paths lie over the northern sections of the park, creating additional noise (and visual) impact for wilderness areas. In the long term, such flight routes could well be influenced by a policy.

**Non-natural light**

Pressures mainly occur in the urbanised areas of the park, with some light spill into adjacent areas. As urban areas expand and as countries develop globally, there are fewer and fewer areas where electric lighting does not exist. Protected areas, especially in intensively settled areas, are some of the few opportunities remaining where a natural night sky can be observed. Light pollution impacts had occurred for the Mt Stromlo Observatory (prior to its destruction by fire in 2003) near Canberra and may have an influence on the what is rebuilt. Management at the Siding Springs Observatory near the Warrumbungles National Park have sought minimum use of light within the park. Light can be managed (through good design) within the resorts to ensure that the destinations are safe for visitors and that light pollution is minimised.

**Climate change**

Snow cover in the Australian Alps is predicted to decline within the next 70 years with global warming (Whetton et al. 1996, Whetton 1998). As a result, there are likely to be wide-ranging changes to the ecology of the system, including changes in the distribution and abundance of species, water catchments and fire regimes (Green 1998).

**Effect of 2003 fires on natural values of Kosciuszko National Park**

Although fires (even fires as intense as those in January-February 2003) are a natural part of the ecosystem, they change the nature of the landscape in the short term. Fires may alter the visual appeal of some areas to some tourists. The government has, however, provided information to the public and the tourism industry to promote Kosciuszko National Park to visitors. Post fire vegetation is different and provides starkly beautiful scenery, with more open and exposed landscapes revealing different vistas and geological profiles than before. Wildlife is more easily observed post fire. The phoenix like regeneration of the vegetation will, over time, provide new attractions as a green cover comes to black landscapes. All of these elements are of interest to visitors.

In terms of specific aspects of the natural attraction, the potential negative impacts of how tourists may perceive the quality of the natural attraction are likely to be on:

- native wildlife (reduced numbers of some animals, potentially greater numbers of feral animals in remaining unburnt areas);
- native plants (lack of native vegetation cover around areas of high attraction);
- water quality (short term as runoff occurs, long term with soil erosion etc changing stream quality);
- air quality (short term impacts of such as smoke, and latter ash and dust); and
- soil erosion.

**Knowledge gaps**

Additional information is required on water quality management and noise quality management. There is a need for detailed measurements of the impacts of feral animals and weeds on natural attractions. The impact of the fires on visitors’ perceptions of the natural attraction of the region is not clearly understood. Knowledge of this could also contribute to the management of tourism post fire in this and other parks.

**Opportunities**

There are a number of opportunities for improved management, including the establishment of baseline levels of environmental management performance in natural settings for operations within the park and establishment of a monitoring system that maintains a minimum level of environmental performance for operations.

**Attribute 2: cultural attraction**

The park has a rich and diverse cultural setting (Good 1992, Chapter 13 and 14). It is especially important to local communities for its Aboriginal and historical heritage. There is archaeological evidence of Aboriginal use and there continues to be Aboriginal use. There is evidence of early mining, forestry, tourism and grazing – for example, historic chalets, old ski lodges, mountain huts, old mining debris and sawpits (see Chapters 13 and 14). Scientific discovery of the natural heritage of the park is also important, and has contributed to our understanding of geology, ecology and evolution (Good 1992). The Snowy Mountains Hydro Electric Scheme, with its dams, villages and power stations, is a significant cultural feature, recognised internationally as an engineering marvel (Good 1992).
The cultural heritage of Kosciuszko National Park enhances visitors’ cultural links, an important component of visitor satisfaction (Beeton 1989, Weaver and Opperman 2000). Experiencing the cultural heritage of Kosciuszko National Park may also assist visitors in fulfilling needs for social interaction, education, self-fulfilment, relaxation, play and strengthen family bonds (Ryan 1991).

**Importance of the park as a cultural attraction**

Kosciuszko National Park has a rich and varied cultural heritage (Good 1992) and is considered to be nationally important. It is highly valued by Aboriginal people, artists, scientists, tourists and locals. Historical artefacts within the park include paintings, poems, legends and bush folklore, all help to underpin its nationally important cultural values (see Chapters 13 and 14).

**Dependence on the park**

The intrinsic and historic and cultural heritage values of Kosciuszko National Park are completely reliant on the park setting for their context and importance.

**Condition and trend in condition**

The cultural heritage sites of Kosciuszko National Park are generally in a satisfactory condition. There have been some instances of damage to sites, including Aboriginal sites, during fire operations. Interpretation and preservation are poor at some specific sites, including Kiandra. At this and some other sites, the status of the cultural heritage are considered poor and declining (see Chapter 13). Table 15.3 describes the condition and trend in condition for cultural attractions. Regrettably, a number of cultural heritage structures, (including 19 huts), were lost during the 2003 fires. The sites where these structures had been located, will be important to park visitors in the future. The 2003 fires and the way in which the community responded is likely to become a key part of the history of the park, and hence part of the cultural attraction.

### Table 15.3  Condition and trend in condition for cultural attraction aspects of Kosciuszko National Park

<table>
<thead>
<tr>
<th>Cultural attraction</th>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conserved status of Aboriginal cultural heritage sites (^a)</td>
<td>Sites adequately protected; absence of vandalism</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
<tr>
<td>Conserved status of historic cultural heritage sites (^b)</td>
<td>Sites adequately protected; absence of vandalism</td>
<td>![ ]</td>
<td>![ ]</td>
</tr>
</tbody>
</table>

\(^a\) Many Aboriginal heritage sites are in the same locations as visitor use sites and need careful management. Some sites need repair. Others are in a satisfactory condition. Damage from 2003 fires will need to be evaluated.

\(^b\) Many historic sites within the park need constant work. The Kosciuszko huts are maintained through voluntary work with the Kosciuszko Huts Association. Caves House has been renovated and repainted. Locations such as Kiandra need work to conserve heritage features. Damage to historical cultural heritage sites from 2003 fires will need to be evaluated and decisions concerning the appropriate response undertaken in consultation with stakeholders.

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\(\square\) Overall status for Kosciuszko National Park  \(\square\) Relates to parts of Kosciuszko National Park
Pressures

The pressures on cultural attractions include issues associated with access, use, maintenance, and interpretation. For example, there is continued need for maintenance of some cultural heritage structures and sites (for example, some Aboriginal sites, mining and grazing sites including Kiandra, and many of the huts). The Kosciuszko Huts Association has played an important ongoing role in the conservation of the mountain huts. There are strong pressures from specific groups for recognition of their cultural links to the park. These groups are seeking greater access to and use of sites. While there has been a decline, within the general community, of knowledge of cultural events associated with the mountains, (e.g. early tourism, mining and the Snowy Mountains Hydro Electric Scheme), there can also be pressures associated with conflicting messages invoked by different aspects of the park’s cultural heritage (e.g. scientific conservation and ‘Man from Snowy River’, Aboriginal heritage and some early grazing practices).

Knowledge gaps

More knowledge is needed about many aspects of the cultural history of the park, including detailed local history. We need to develop greater understanding of the importance of the park to the Aboriginal community. We also need greater understanding of the importance of park’s cultural history, since European settlement, to other sections of the local community.

Opportunities

Opportunities for management improvements include further recognition and appreciation of Aboriginal cultural heritage, including full collaboration with the Aboriginal community. There is also a need to work with the local community more broadly to understand the diversity of cultural values and strategies to ensure that they are acknowledged in the management of the park. There could be an expansion of cultural tourism to the region, particularly for schoolchildren (see educational activities) and the over-50 market. This could be undertaken as part of a package of regional tourism opportunities in collaboration with local tourism organisations, educational institutions and organisations such as the Snowy Hydro Limited. There are also opportunities for more interpretation of the cultural values in the park and at visitor information outlets and for cultural heritage audio tours. Working with volunteers could be further developed to help protect tourism and recreation values while enhancing a sense of involvement and ownership of the interpretation of the cultural values of the park.

Attribute 3: educational activities

Kosciuszko National Park provides rich opportunities for informal experiential learning and for education through formal classes, study groups and major conferences. Aspects of the park and its heritage are part of the national educational curriculum. Natural, cultural and managerial education themes are important, as are the pursuit of the arts through painting, poetry and literature. The work of the NPWS Educational Centre at Sawpit Creek, and the occasional hosting of important conferences and seminars in the mountains provide quality experiences. The NSW government Department of Sport and Recreation and Department of Education have important programs related to the park. In addition, guided walks at Thredbo, the NPWS discovery ranger program and cave tours at Yarrangobilly all add to the educational activities in the park.

Education is a major motivator for visitors, whether it concerns the natural or cultural heritage of the park or the recreational activities themselves. The high-quality experience that can be achieved enhances visitor satisfaction. The benefits of enhanced educational activities in the region are recognised by local tourism organisations (TSM 2001). Yet the full potential of Kosciuszko National Park as an educational destination has not been realised.

Importance of the park for educational activities

Kosciuszko National Park is considered to have national importance as an educational opportunity.

Dependence

The park plays an important (if not essential) role in setting the scene for educational opportunities. Many aspects of the educational experience are park dependent.

Condition and trend in condition

Table 15.4 describes the condition and trend in condition of educational activities.
Table 15.4  Condition and trend in condition for educational activity aspects of Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Educational activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational opportunities availablea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to school groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to adult education groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for university training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to aboriginal groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth of education opportunities potentially available and utilised,b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from the elders,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from the locals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from the tourism industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from alpine sports medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from the arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from managers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learning from international conservation experience</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Overall status for Kosciuszko National Park □ Relates to parts of Kosciuszko National Park.

a Whilst there is a range of educational programmes linked to the park, there could be far more. The park has unique infrastructure, which could be used more in facilitating education programmes. The resorts have advised that they are interested in playing a greater role in the future (Resorts Group submission).

b The range of potential educational opportunities available are considered to be poorly adopted.

**Pressures**

Pressures on educational activities include poor knowledge of the intrinsic values of the park; inadequate knowledge of cultural heritage values; too few opportunities for education for the growing numbers of visitors; lack of diversity in the educational experience; and the fact that there is no system for establishing a minimum standard for educators in the park.

**Knowledge gaps**

More knowledge is needed on educational use of the park. There should also be further market research into opportunities for educational use and the types of education experiences that currently attract visitors.

**Opportunities**

Management opportunities include facilitating use of the park for education, with interpretation centred around themes such as: Aboriginal culture, the Snowy Hydro-electric Scheme, and the scientific exploration of the park. This could involve the provision of a range of educational activities, including activities prior to arrival at the destination (e.g. visitor centres and websites). There should also be research on visitor needs for educational activities. Expansion of educational activities could also involve further collaboration with commercial operators to assist with the educational experience.

Following the 2003 fires, the educational potential of the park is, if anything, improved, in that it provides a living laboratory showing the role of fire in the ecosystem, and its role in the culture of the region. Again, implementing a program of educational both directly to visitors and more broadly to the community will enhance the park as an educational destination.
Attribute 4: diversity of tourism and recreation opportunities

The park encompasses a range of tourism and recreation setting classes (as developed by Clarke and Stankey 1979) from wilderness (“primitive”) to the more urban environments of ski resorts (“developed”). The park has a managerial environment supportive of a range of tourism and recreation experiences, and managerial setting classes either without tourism support infrastructure or with a range of infrastructure (Attachment Two). Kosciuszko National Park caters for a wide diversity of recreation activities based on these settings. It is an important destination for snow-based recreation activities. It is also very important for wilderness or remote area recreation opportunities. The quiet and peaceful atmosphere and scenic qualities of many parts of Kosciuszko are regarded by many visitors as the most important characteristic of the park (Mackay and Virtanen 2001).

Importance of the park for diversity of tourism and recreation opportunities

The park is considered to be nationally important for the diversity of its recreational opportunity settings. Snow and mountains are rare phenomena in a continent dominated by arid and flat lands. Access to snow and the possibility of participating in snow-based activities (e.g. downhill skiing, snow boarding, cross-country skiing, snow sports, tobogganing and snow play) in a natural Australian snow setting complete with ski lifts and visitor services, are opportunities valued by Australians. Therefore this is a very important tourism and recreation attribute of Kosciuszko National Park. The park offers outstanding opportunities for self-drive site-seeing, picnicking and camping. This is especially important for disabled visitors, and many vehicle destinations and scenic outlooks have been equipped to assist disabled visitors. It is especially valuable for its large areas of natural lands, which offer opportunities for solitude and self-reliant recreation. It is the exceptional variation of recreation opportunity settings within one park that establishes its national significance. The diversity of recreation setting classes that are applicable for Kosciuszko National Park and the types of activities that may be linked to them are presented in Attachment Two.

Dependence on the park

Many of the opportunity settings of Kosciuszko are unique in an Australian context and thus totally dependent on the park. Kosciuszko National Park is one of the very few remaining areas in NSW where there are opportunities for self-reliant activities in remote lands. In NSW, snow-based recreation is totally dependent on the park.

Condition and trend in condition

Table 15.5 describes the condition and trend in condition of diversity of tourism and recreation opportunities.

Table 15.5 Condition and trend in condition for diversity of tourism and recreation opportunities in Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Diversity of recreation settings</td>
<td>Wide range of appropriate recreation facilities and services including a strong NPWS policy for minimising the provision of infrastructure for wilderness areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recreation opportunity settings are actively managed to maintain a diversity of settings</td>
<td></td>
</tr>
</tbody>
</table>

- Overall status for Kosciuszko National Park
- Relates to parts of Kosciuszko National Park

There is a diversity of recreation opportunity settings for the park. Recent (2002) expansion of wilderness areas has consolidated this diversity with the additional protection of the most vulnerable recreation opportunity setting type, the facility free, disturbance free areas (Attachment Two).

There is no active management planning guidance and policy controls by the NPWS to control the nature of facilities provided at particular settings. There is a strong probability of incremental hardening of sites over time in the absence of such guidance.
**Pressures**

There are a number of pressures (including unsustainable and inappropriate use) that apply in managing a diversity of opportunities. For example, the environmental impacts of a diversity of activities at a given site can be an issue. Developing pressures include impacts associated with increasing visitor numbers and new activities. Climate change is likely to produce new pressures associated with decrease in snow cover and potential increase in summer tourism. Impacts of tourism activities and infrastructure combined with changes in tourism activities could have negative synergistic effects, such as the spread of weeds (Scherrer and Pickering 2001). There is also potential for conflict between visitor groups and within groups (Table 15.6). Conflicts may be minimised through careful management practices, visitor education and clear management of recreation opportunity setting classes (Attachment Two).

**Table 15.6**  
Personal experience conflicts that affect tourism and recreation values in Kosciuszko National Park (after Eagles et al. 2002)

<table>
<thead>
<tr>
<th>Conflict</th>
<th>Nature of the conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitor-manager</td>
<td>Managers may be required to regulate visitors closely to protect environmental values. A visitor’s experience may be impacted by the regulatory environment.</td>
</tr>
</tbody>
</table>
| Visitor–visitor (single activity) | Conflicts may occur within one recreational activity. They may occur when there are:  
- inappropriate visitor behaviours  
- different skills and experience levels of visitors  
- different expectations of social behaviour. |
| Visitor–visitor (different activities) | Conflicts may occur between different visitor activity groups. This may occur between:  
- motorised and non-motorised recreation  
- active recreationists (e.g. cyclists) and passive recreationists (e.g. nature study)  
- active recreationists (e.g. downhill skiers) and active recreationists (e.g. snowboarders)  
- active non-assisted recreationists (e.g. bushwalkers) and active assisted recreationists (e.g. horse riders). |
| Visitor–management operations | Conflicts may occur when a recreational experience is impacted by management operations. This may occur when:  
- low flying aircraft are required for management duties over remote areas  
- motor vehicles (over snow, over water, over land) are used in remote areas  
- controlled burning introduces smoke and creates poor visibility  
- incidents involve multi-agencies and media operations. |

**Knowledge gaps**

Knowledge gaps include an absence of a recreation opportunity setting management model for tourism and recreation within the park and an absence of information about activities and use, including trends.

**Opportunities for tourism and recreation opportunities**

Opportunities for management include establishment of NPWS competency and capacity to manage for recreation opportunities and supply and demand, and the detailed mapping of recreation opportunity settings. It is important to ensure that activities foster appreciation and enjoyment of natural and cultural heritage and their conservation, and that there is more user-group liaison.

There is also an opportunity to continue the process of refining a tourism and recreation strategy for the park in conjunction with those developed by the local tourism authorities and commercial operators in and adjacent to the park. There is recognition among tourism operators of the need to diversify recreation opportunities both in the park and outside the park (SGS 2001). This is, in part, driven by the recognition of the volatility of winter tourism, which is strongly affected by the quality of the snow season (SGS 2001). Tourism opportunities outside the park that have been identified include: coach tours, scenic drives, hiking, water sports (Lake Jindabyne, Lake Eucumbene), horse riding, four-wheel driving, golf, fishing and mountain biking (SGS 2001). Use of areas outside the park for activities requiring considerable infrastructure (e.g. golf courses, tennis courts, and sporting fields) would complement the strategy of providing recreation opportunities within the park that are based on natural and cultural values.

**Effect of 2003 Fires on recreational opportunities**

The NPWS may need to take some short-term protection actions to aid recovery from the 2003 fires. Recreational opportunities most affected (relatively speaking) are considered to be at the “primitive” and “remote” ends of the recreation opportunity spectrum (Clarke and Stankey 1979; Attachment Two).
For these opportunities new (temporary) controls or management interventions may be required. These actions reflect the large area of Kosciuszko National Park which was burnt during the summer of 2003. Only small areas of the “Developed” end of the spectrum were burnt, and recreation opportunities such as skiing are not expected to be affected. Vehicle access for car-based touring is essentially intact for car-tours of the park. Descriptions of how individual recreation opportunity setting classes may be being affected by the 2003 fires are described below.

For wilderness/remote recreation opportunity settings, tourism/recreation opportunities may be affected by the;
- Continued closure of some areas
- Requirement to remain on certain routes;
- Requirement to register for use and obtain permits for use, with quotas for use being established;
- Requirements for the cleaning and sterilisation of boots/ hiking gear.

For semi-remote non-vehicular access areas tourism/recreation opportunities may be affected by the;
- Continued closure of some areas;
- Requirement to remain on certain routes;
- Requirement to register for use and obtain permits for use, with quotas for use being established;
- Requirements for the cleaning and sterilisation of boots/ hiking gear.

For natural with hardened roads access areas tourism/recreation opportunities may be affected by the;
- Continued closure of some areas, especially remote picnic and camping areas due to fire damage to facilities or access;
- Requirement to remain on certain routes;
- Requirement to register for use and obtain permits for camping use, with potential quotas for use being established.

For developed areas tourism/recreation opportunities may be affected by the;
- Closure of some areas (e.g. geotechnical advice for steep slope environments that have been burnt);
- Requirement to remain on certain routes/access roads;
- Pavement damage and repairs required to roads;
- Requirement to register for use and obtain permits for camping use, with potential quotas for use being established.

Special care may need to be exercised in managing activities in unburnt parts of the park, so that undue pressure is not placed on these locations.

Attribute 5: access to Kosciuszko National Park

Access to recreation opportunity settings within Kosciuszko National Park are fostered by an all-weather, bitumen-sealed highway system within NSW. The park is readily accessible by road from the major urban centres of Sydney (six hours drive), Melbourne (eight hours) and Canberra (three hours). Approximately 50% of the Australian population lives in these three centres.

Air services take tourists to Canberra (from where it is a three-hour drive to Kosciuszko National Park) or to Cooma airport (a one-hour drive to the park). Planes can land at Tumut airport and Khancoban airstrip, just outside the park. Although these air services are relatively close to the park, they are further from the ski fields than are the airfields at the Victorian ski fields on Mount Hotham, which are serviced by the adjacent Dinner Plain airfield. The Jindabyne airstrip is not suitable for visitor access to the mountains.

Importance of access to the park

Access to Kosciuszko National Park (as a destination) is a very important attribute, as is access to recreation opportunity settings within the park. The main access routes to the park are by the main roads through the region (e.g. Monaro Highway, Snowy Mountains Highway and Kosciuszko Alpine Way), although access on gravel roads and walking tracks and by other means (e.g. horse, bike, ski tube etc.) is also available. See Map 15.1 for details.

Dependence on the park

Access to the park and the availability of public transport, including air access, are not dependent on the park.

Condition and trend in condition

Upgraded highways between Sydney and Kosciuszko National Park, and recent improvements to the Kosciuszko Alpine Way, have reduced travel times and made travel safer. Access by air is somewhat diminished by the infrequency and uncertainty of the regional air service to Cooma, and the distance from Cooma airport to Kosciuszko National Park. The competitive advantage achieved at Mount Hotham ski resort in Victoria, as a result of the Dinner Plain airfield adjacent to the snowfields, has placed some competitive pressures on NSW ski resort operators. The absence of regular bus services to many areas in the region particularly in summer, detracts from low cost access to the park and the region.

Table 15.7 describes the condition and trend in condition of access to Kosciuszko National Park.
Map 15.1  Main access routes into Kosciuszko National Park
Table 15.7 Condition and trend in condition for access to Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Access to Kosciuszko National Park</td>
<td>Access to Kosciuszko National Park is maintained through road-based services and air services.</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>Access to region, skifields and other areas in Park by low cost and/or public transport.</td>
<td>■</td>
</tr>
</tbody>
</table>

- Condition status for access to Kosciuszko National Park
- Condition status for some aspects of access to Kosciuszko National Park

- The highway system servicing the park has been improving with time. Travel times to the snow fields are consistently being reduced through better road systems. Air services to Cooma have been less than satisfactory in recent times.
- Public transport systems to the snowfields and the park are generally less than satisfactory.

**Pressures**

Pressures in relation to access to the park include high maintenance costs for road systems to the park; extreme weather conditions, with ice on roads and poor visibility affecting road safety and consuming large resources to maintain access; pressures for easy and faster access to ski resorts; and traffic congestion in peak use periods in the southern parts of the park.

**Knowledge gaps**

Knowledge gaps include the carrying capacity of key access roads to the ski resorts; the life-expectancy of access arrangements in their current form; and alternative access opportunities for the park.

**Opportunities**

Opportunities include dealing with limitations associated with air access and other forms of public transport in cooperation with industry and local government; and the need to improve transport from gateway towns to the ski resort areas of the park.

**Attribute 6: access within Kosciuszko National Park**

Within the park, there is a major high-quality north–south highway system, the Snowy Mountains Highway. The gravel-surfaced Barry Way connects Jindabyne to Victoria in another north–south route suitable for the majority of weather conditions. Running east–west, the Alpine Way provides all-season bitumen sealed vehicular access, though heavy snows in winter may disrupt this from time to time. The Alpine Way is an important tourism link with Victoria for most of the year. The Kosciuszko Road provides all-season vehicular access to Perisher Valley and seasonal access to Charlotte Pass, and the Khancoban to Cabramurra road provides bitumen non-snow season vehicular access across the Great Dividing Range.

The Long Plain Road also provides north-side summer access for the park. In addition, a large number of public-access bitumen and gravel roads provide vehicular access (often seasonal) to multiple locations within the park, such as the Tantangara road, the Island Bend road, the Little River track; the Murray Gates track, the Grassy Flats track, the Geehi Dam road, the Elliot Way, the Lobbs Hole to Ravine road, the Goobaragandra road, the Broken Cart track and the Blue Waterholes track. A large part of this vehicle access system is a legacy of the Snowy Mountains Hydro Electric Scheme.

The public road system provides ready access to a wide range of recreation opportunity setting classes (Attachment Two) within Kosciuszko National Park. The perimeters of all wilderness areas are readily accessed. This public vehicle accessibility is also used by cyclists, bushwalkers, horse riders and commercial tour groups. The extensive road network provides access for alpine skiing opportunities; bushwalking track heads; camping sites; picnic sites; white-water rafting and horse riding drop-off/pick-up points; cross-country skiing commencement points; adventure activity sites; and cultural heritage sites.

**Importance of access within the park**

Access to tourism and recreation opportunities within Kosciuszko National Park is a very important attribute. The NPWS determines the types and ease of access within the park (for example, roads, tracks and cross-country travel), the means of conveyance (for example, cars, four-wheel drives, horses and by foot), the sophistication of the access type (for example, high-standard fire trails) and the maintenance regime for access tracks. Access decisions determine the diversity of recreation opportunity settings maintained for visitors.
A policy change to permit vehicular access to a remote area, for example, reduces the diversity of recreation opportunity settings unless there are mitigating circumstances. Access opportunities are provided for disabled visitors.

**Dependence on the park**

The access system within the park is dependent on the park.

**Condition and trend in condition**

Recent improvements to the Alpine Way and the generally consistent maintenance to the gravel public access roads within the park have contributed to quality and reliable access for tourism and recreation. The absence of regular bus services within the park, particularly in summer, detracts from low cost access to the park and region. The Snowy Mountains Hydro Electric Scheme has provided visitors to Kosciuszko National Park with an outstanding public road access system. More recent access facilities, such as the ski tube, have considerably assisted skier access to snow.

Table 15.8 describes the condition and trend in condition for access within the park.

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access within the park</td>
<td>Excellent</td>
<td>No net change</td>
</tr>
<tr>
<td>Access to the skifields within the park is maintained through vehicle access from dormitory towns, snow clearing services and the Skitube</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to natural attractions and diverse recreation opportunity settings within the park is maintained through a network of public access roads. Provides opportunities for activities such as bushwalking, canoeing, cross-country skiing, ski-touring, horse-riding, cycling, swimming, picnicking, photography, painting and camping</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Access to the ski fields is generally acceptable to better than satisfactory. Poor weather conditions and icy roads easily disrupt traffic flows. Ski tube provides an alternative service. | Excellent | No net change |
| Access to recreation opportunity settings is excellent for the park. Recent policy decisions have reduced the number of areas that are readily available for horse riding and this has been recognised. The same decisions have provided protection for further areas, providing opportunities for self-reliant recreation and solitude. | Excellent | No net change |

**Pressures**

Pressures on access within the park include high maintenance costs for the park road and track system; extreme weather conditions and ice on roads, with poor visibility, reducing the quality of a visitor’s experience and affecting safety on roads, a periodic demand for upgrading some gravel roads within the park; public risk associated with verge parking and pedestrian access in certain areas of the park, such as the road below the turning circle at the Charlotte Pass road head; car parking problems in the ski resort areas during peak periods, with spill-over onto adjacent roads; and pressure for access to the same areas of the park for different activities such as bushwalking, horse riding, four-wheel drive use and trail bike use.

**Effect of 2003 Fires on access within Kosciuszko National Park**

Access to some parts of the park may be affected post fire. During the short term:

- Vehicle access to some remote areas may be prohibited or impractical for a number of reasons including:
  - Temporary closure of roads for practical or safety reasons (tree falls, burnt bridges etc.);
  - Bridle trails that are closed until they are declared safe from the potential of tree falls, unstable slopes;
  - Damage created to access tracks due to bulldozer works or heavy equipment use during fire operations;
- Bushwalker access may be restricted or subject to increased controls for the remote areas for a range of management reasons.
Knowledge gaps

Knowledge gaps include visitor use profiles for the different forms of access provided for the park; cost–benefit analyses of investments in the provision and maintenance of access for tourism and recreation; and the environmental effects of the provision of access.

Opportunities

Opportunities include improvements in transport efficiencies from gateway towns to resort areas of Kosciuszko National Park, including innovations such as increasing the capacity and extent of the Skitube by connecting it to the dormitory town of Jindabyne; and definition of limits of use for access to the summit of Mount Kosciuszko. In addition, there is an opportunity for the provision of vehicle-based touring circuits within the region, including within the park. The over-50s self-drive market is a demand that could be met by the provision of self-drives within the region, and several such circuits have been identified by Tourism Snowy Mountains (TSM 2001). The provision of roadside interpretation and car based picnic facilities enhances such car touring experiences.

Attribute 7: services and facilities

The availability of services and facilities is considered to be an important aspect of the attraction for tourists (Weaver and Opperman 2000). In Kosciuszko National Park, a range of facilities and services may attract visitors, including no services or facilities; picnicking and camping in mountainous settings; restaurants in a snow environment; ski lifts; managed ski slopes; high-quality walking tracks suitable for people with limited mobility; visitor centres; ranger walks; and signage. Map 15.1 shows the location of NPWS facilities in the park. The importance and sophistication of the current ski resorts in providing services for visitors to facilitate skiing and snow sports are recognised. Services and facilities provided need to be consistent with the status of Kosciuszko National Park as a protected area.

Importance of the park for services and facilities

The park is seen to have state level of importance for the provision of services and facilities. Within the park, the high-quality facilities for visitors range from basic picnic and camping sites in scenic locations to more sophisticated skiing resorts.

Dependence on the park

The facilities and services are dependent on the park and its management as licensed, serviced facilities approved by the NPWS consistent with the plan of management.

Condition and trend in condition

There is a high diversity of recreation facilities and services within the park. The 1982 Kosciuszko National Park Plan of Management provides a detailed inventory of those facilities. Table 15.9 describes the condition and trend in condition of recreation services and facilities.

Table 15.9 Condition and trend in condition for service and facilities in Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Services and facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The nature and sophistication of visitor services and facilities are appropriate to the recreation opportunity settinga</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>There is no unplanned or inconsistent incremental hardening of visitor destination settingsb</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>There is a diversity of visitor services and facilities for the parkc</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>Visitor services and facilities provided are designed to reflect the limits of sustainable visitor use for recreation opportunity settingd</td>
<td>□</td>
<td></td>
</tr>
<tr>
<td>The nature of the visitor services and facilities provided are safe, and are designed to deal with natural and human caused incidents including fire, geological phenomena, and weather extremes including blizzards and wind stormsf</td>
<td>□</td>
<td></td>
</tr>
</tbody>
</table>

□ Overall status for Kosciuszko National Park; □ Relates to parts of Kosciuszko National Park
The literature describing recreation opportunity settings describes certain services and facilities that are appropriate to different recreation opportunity setting classes (Clarke and Stankey 1979, NPWS 2002) (Attachment Two). The NPWS currently lacks a formal system for dealing with this in Kosciuszko National Park.

Incremental hardening of visitor sites is a potential management problem. Good planning can overcome this (Worboys et al. 2001).

The diversity of settings in Kosciuszko National Park ranges from ski resort areas with urban style facilities to wilderness areas with no facilities.

Limits of visitor use reflect that there are only so many people a site or area can accommodate at any given time. There are only so many people that can fit into a theatre. There are only so many people that can fit onto a boat. The same applies for destinations within the park. Planning frameworks are available to provide a rationale and process for such decision making (Worboys et al. 2001).

This simply reflects an appraisal of whether managerial processes and systems are in place to ensure that public safety is managed as part of the provision of services and facilities.

The 2003 fires highlighted problems with some tourism infrastructure in the park. The behaviour and extent of the 2003 fires is reported to be very similar to the extreme fires of 1939. The difference now is that the natural fire paths have coincided with the location of tourism infrastructure. This infrastructure constructed post the 1939 fires was built with regard to weather conditions (cold and snow). There was limited consideration of once in a hundred years fire event. During the 1950s and 1960s, when a lot of ski resort construction took place, only a few of the older locals, fire management professionals and ecologists would have had an appreciation of the potential effects of a 1939 type fire on the mountains. A large amount of this infrastructure has been based on the Snowy Mountains Hydro-electric Scheme developments (from 1949 to the late 1970s). This has been effectively a 52-year fire free period for such tourism infrastructure. Care needs to be taken in the planning for tourism infrastructure to take into account fire issues in Kosciuszko National Park.

The 2003 fires may result in the provision of new services and facilities. They will also result in additional tourism and recreational service operational tasks for the NPWS. This has the potential lower the quality of service at visitor destinations for the medium term (due to work overload and budget constraints). Potential new services may include:

- New signs;
- Replacement infrastructure;
- New educational information;
- Potential new access permit systems;
- Weed and feral animal management systems/services; and
- Visitor help/information desk/web service.

**Pressures**

Pressures include the unsustainable overuse of facilities; the high cost of maintenance; poor-quality maintenance and services; inconsistent design and poor design of facilities; and increased demand for additional facilities and services.

**Knowledge gaps**

Knowledge gaps include visitor feedback on existing services and facilities and unmet needs; supply and demand management; trends in visitors’ expectations of services and facilities; and visitor movements in the region and the park.

**Opportunities**

Opportunities include introducing a framework for sustainable management and visitor use limits; designing environmentally sustainable facilities and services which meet visitor expectations; asset management systems; supply and demand management; visitor satisfaction surveys; partnerships with local governments and the tourism industry to provide a range of recreation and tourism services that are not park dependent; and better opportunities for access to facilities for people with limited mobility.

**Attribute 8: degraded destinations (impacts of use)**

Human use of resources inevitably results in impacts, and tourism and recreation is no exception (Worboys et al. 2001, Eagles et al. 2002, Newsome et al. 2002). Impacts of use in the context of tourism and recreation values must be considered relative to the desired opportunity and subsequent impacts on visitor experiences (Clarke and Stankey 1979). Garbage-strewn picnic areas, vandalised facilities and polluted streams are just some impacts arising from visitor use that which can impact a recreation opportunity setting. Generally, recreationalists have greater tolerance towards impacts (ecological, social or managerial) in modified recreation opportunity settings, (such as the ski resort management units), than towards impacts in remote areas (such as the designated wilderness areas) (after Clarke and Stankey 1979) (Attachment Two). There are no excuses, however, for visitor use impacts that detract from the natural attributes of Kosciuszko National Park. Natural attributes are the most important attribute underlying the tourism and recreation values of the park. The World Conservation Union (IUCN) World Commission on Protected Areas (Eagles et al. 2002) described the types of risks to protected areas from tourism activities, infrastructure, services and facilities. This includes the provision of accommodation within a park (Table 15.10).
This assessment is based on their global experience and input from protected area management experts from around the world. If not managed adequately, visitor use impacts can be a threatening process to the natural values of Kosciuszko National Park.

Table 15.10 Environmental risks to protected areas from tourism (after Eagles et al. 2002)

<table>
<thead>
<tr>
<th>Element</th>
<th>Examples of risk from tourist activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecosystems</td>
<td>The construction of accommodation, visitor centres, infrastructure, and other services has a direct impact on the environment, by vegetation removal, animal disturbance, elimination of habitats, impacts on drainage etc. Wildlife habitat may be significantly changed (travel routes, feeding areas, breeding areas, etc) by all kinds of tourist development and use.</td>
</tr>
<tr>
<td>Soils</td>
<td>Soil compaction can occur in certain well-used areas. Soil removal and soil erosion also occurs, and may continue after the disturbance is gone.</td>
</tr>
<tr>
<td>Vegetation</td>
<td>Concentrated use around facilities has a negative effect on vegetation. Transportation may have direct negative impacts on the environment (e.g. vegetation removal, weed transmission, animal disturbance). Fire frequency may change due to tourists and park tourism management.</td>
</tr>
<tr>
<td>Water</td>
<td>Increased demands for fresh water. Disposal of sewage or litter in rivers, lakes.</td>
</tr>
<tr>
<td>Air</td>
<td>Motorised transportation may cause pollution from emissions. Energy consumption and green house gas emissions</td>
</tr>
<tr>
<td>Wildlife</td>
<td>Fishing may change population dynamics. Fishers may demand the introduction of foreign species, and increased populations of target animals. Impacts occur on insects and small invertebrates, from effects of transportation, introduced species etc. Disturbance by visitors can occur for all species, including those that are not attracting visitors. Disturbance can be of several kinds: noise, visual or harassing behaviour. The impact can last beyond the time of the initial contact (e.g. until heart-rate returns to normal, or until birds alight, or mammals resume breeding or eating). Habitation to humans can caused changed wildlife behaviour, such as approaching people for food.</td>
</tr>
</tbody>
</table>

Impacts do occur, but impacts caused by use of Kosciuszko National Park must be acceptable relative to its status. Contemporary management authorities can use a number of techniques to minimise impacts, including making management judgments and defining limits of visitor use for destinations by policy (as distinct from the less practical limits of acceptable change theory), managing supply and demand, managing resource capabilities (such as site hardening) and managing the impact of use by modifying the type and nature of use (Worboys et al. 2001, Eagles et al. 2002). All require active tourism management by the NPWS. Banff National Park in Canada has introduced visitor use limits, with its planning of destinations. Montague Island Nature Reserve, off the south coast of New South Wales, and Macquarie Island have also introduced visitor use limits to guide their operations (Worboys et al. 2001).

Modifying the type and nature of use is an important opportunity for Kosciuszko National Park. A new trend in industry accountability for environmental management performance has slowly emerged from the tourism industry in the last decade. This reflects a sharing of the accountability for environmental management performance by industry. It would be a new paradigm for Kosciuszko National Park. Some background about this opportunity is provided here.

Following the Rio De Janeiro Earth Summit in 1992, the World Tourism and Travel Council, the World Tourism Organisation and the Earth Council published (in 1994) ‘Agenda 21 for the travel and tourism industry, towards environmentally sustainable development’. This document recognised 10 key areas for environmental and social management performance by the tourism industry. It was a basis for a minimum level of environmental and social management performance by the travel and tourism industry. A certification standard was developed based on the document. Other certification standards have subsequently been developed.

In 2001, the World Tourism Organisation released a global code of ethics for travel and tourism. The Asia Pacific Economic Cooperation (APEC) and Pacific Asia Travel Association (PATA) released a code for sustainable tourism in 2001, and encouraged industry to adopt and promulgate its principles. (Attachment Three).

The international APEC–PATA and World Tourism Organisation codes also strongly encourage individual industry members and companies to be accountable for environmental management performance. The voluntary certification schemes are a practical means of demonstrating such performance.
Sustainable tourism is now strongly advocated by the travel and tourism industry globally. The term is based on the environmentally sustainable development (ESD) outcome arising from the Rio De Janeiro Earth Summit and its famous Agenda 21 ESD document. It has been recently defined by the Queensland Government (1997) as follows:

- Sustainable Tourism is the development of an internationally competitive ecologically sustainable and socially responsible tourism industry based on the integration of economic, social and environmental objectives.

This approach is consistent with recommendations made to the World Summit on Sustainable Development in Johannesburg in September 2002 by the United Nations Environment Programme Global Environment Outlook Report (GEO 3). This report made a number of recommendations to the summit (UNEP 2002), including the following:

- Reinforce the linkages between global and local levels and ensure that implementation and capacity (for environmental improvement) are passed on to local authorities wherever possible;
- Support private sector initiatives on environmental performance standards and reporting, such as voluntary disclosure on progress in stemming pollution, protecting environmental assets and promoting sustainable development;
- Take active measures to stimulate sustainable consumption and production practices;
- Provide incentives for eco-efficient (cleaner) production and innovation; and
- Encourage further adoption of voluntary initiatives such as commitments by companies to achieve additional environmental targets; codes of conduct for sectoral industry associations regarding environmental responsibility; environmental performance targets agreed between government; and, a company or sector legally binding covenants.

Sustainable tourism is appropriate for Kosciuszko National Park as a tool to help maintain tourism and recreation values. Such an approach brings with it a sharing of the accountability for environmental management performance. It is unnecessary and unwise for the NPWS to have the sole accountability for determining environmental management performance. Certification schemes introduce individual accountability for environmental management performance reporting. The schemes also recognise environmental performance areas (WTTC et al. 1996, APEC–PATA 2001, De Lacy et al. 2002) that respond to global environmental issues as well as park-specific issues. It is a more appropriate and holistic approach to environmental management for the park, a very relevant point given that environmental issues such as global warming are directly influencing the future of snow tourism in the park.

New environmental benchmarking tools developed by the Cooperative Research Centre for Sustainable Tourism have established environmental performance indicators (Earthcheck indicators) and a system of quantified environmental performance for these global and local environmental issues for the travel and tourism industry (De Lacy et al. 2002). Such cutting edge, quantified, environmental management performance could be used at Kosciuszko National Park. The important environmental management system initiative underway in Perisher Valley could be extended to include benchmarking of performance, with the system being used elsewhere in the park. Independent (third party) assessment of performance would provide confirmation of the performance.

**Importance of impacts of use of the park**

This is a very important attribute in influencing the tourism and recreation value of Kosciuszko National Park. Impacts of use need to be managed to retain the tourism and recreation value of the park. Tourism and recreation needs to be sustainable and based on environmental performance that meets agreed performance targets. Quantified environmental management performance improvement outcomes (and targets) are possible under a benchmarking system.

**Condition and trend in condition**

The condition and trend in condition of degraded destinations (impacts of use) for Kosciuszko National Park can be expressed relative to the global environmental criteria identified by Agenda 21 for the travel and tourism industry (WTTC et al. 1996) and subsequent work by the Cooperative Research Centre for Sustainable Tourism (De Lacy et al. 2002).

Table 15.11 indicates how well the particular environmental management performance criteria are managed to minimise either primary or secondary impacts of visitor use on the park. The table shows that impacts of use can be better managed for the park.
### Table 15.11 Condition and trend in condition for impacts of use of Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition (These broad criteria are being used with the Perisher Valley EMS system).</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Energy consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green house gas reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid waste reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid waste reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potable water use reduction; disposal standards met</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biodiversity conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kosciuszko specific criteria</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Condition status** (how well the environmental performance criteria are managed for the park) for ‘impacts of use’ criteria

- Earthcheck environmental performance management criteria from De Lacy et al. (2002), and environmental performance criteria adopted for Perisher Valley, Kosciuszko National Park.

- Energy consumption is relatively high for snow based tourism which is underpinned by snow making. Transport to and from visitor destinations within the park consumes energy, as does the special heating required for accommodation and energy consumed in sewage treatment. Electricity energy consumption, where it is based on coal-fired power stations is a contributor to green house gases and global warming. Reduction targets for the park in tonnes of carbon per annum may be possible. There are currently no known tourism strategic energy conservation schemes in place for the park. Energy reduction means cost savings for companies and authorities.

- Greenhouse gas reductions can be achieved by lowering energy consumption in all aspects of travel and tourism operations. Examples include: less potable water used means less use of pumps and less energy used; less sewage water created means less treatment needed and less energy consumed; and, less garbage generated and sent to landfill means less transportation and less energy used. There is no known programme in place for the strategic reduction of greenhouse gases for the entire park.

- Solid waste reduction means less waste going to landfill, through systems that minimise waste generation, recycling, reuse. This means less pollution of the planet at the landfill, less greenhouse gases generated through energy consumed in managing the waste. Less waste means cost savings for the managing authority. There is no known programme in place for the strategic reduction of solid waste generated for the entire park.

- Liquid waste reduction means less waste waters to be treated. Reduction in inputs through reduced water use is one tool that is available. Licensed disposal standards being met reflects on the quality of treatment achieved. All ski resorts discharge into sub-alpine streams within the park. Some discharges have not met licensing performance standards. There have been some pollution incidents associated with ski resort management. There is no known programme in place for the strategic improvement of liquid waste generated for the entire park.

- Reduction in potable water use will benefit the natural flow regimes of the mountain streams that provide water supplies to service visitor use facilities. There is no known programme in place for the strategic reduction in potable water use for the entire park.

- Social criteria currently focuses on local employment created through travel and tourism. This criterion is considered satisfactory, and there are active programmes of employment generation locally through tourism.

- Noise reduction. There is no known programme in place for the strategic reduction of non-natural noise within the park.

- Biodiversity conservation. There are a number of biodiversity conservation programmes and specific species conservation initiatives within the park. There is no known programme in place for the entire park for the strategic improvement of biodiversity conservation developed as a joint initiative with the travel and tourism industry.

- Supplementary indicators. There are no known supplementary (Kosciuszko National Park specific) indicators in place within the park for the strategic improvement of ‘impacts of use’ developed with the travel and tourism industry. Such indicators could monitor large scale changes reported to be occurring in the northern end of Kosciuszko National Park due to horse riding activities, as a basis for action.

### Pressures

Pressures that contribute to degraded destinations (impacts of use) largely relate to the absence of relevant management frameworks, such as the lack of: visitor and recreation management programs; limits of visitor use programs; monitoring programs for visitor use and environmental performance. There are no active and applied tourism and recreation research programs and consequently no adaptive use of research findings. There is often poor management of services and facilities; and overcrowding. Strategic planning of tourism and recreation can deal with these pressures.
Knowledge gaps

There is a need for quantified environmental performance baseline levels for key criteria specific to Kosciuszko National Park and for supplementary indicators for monitoring.

Opportunities

Strategic planning of tourism and recreation opportunities will help to minimise impacts. There is also an opportunity to introduce a new system for managing tourism and recreation at Kosciuszko National Park, based on environmental management performance and minimum performance levels. It would include:

- quantified environmental management performance monitoring;
- global and local environmental management performance criteria;
- individual company environmental performance;
- minimum (annual) environmental performance standards for companies and communities;
- strategic environmental performance criteria and incremental improvements;
- adaptive research;
- continuous improvement in environmental performance;
- limits of use for destinations; and
- active, continuous, professional management of travel and tourism.

Attribute 9: affordability of tourism and recreation in Kosciuszko National Park

Competitive, low-cost accommodation, services, transport, lift and ski facilities and entry fees, relative to other tourism destinations, are considered to be an important consideration for visitors (TSM 2001).

Competition for visitors between the Snowy Mountains region, the northern parts of Kosciuszko National Park and other tourism regions, as well as competition for visitors within the region, provides a low-cost basis for visitors to come to the area. There is also a range of low-cost tourism opportunities within the park, particularly for summer activities. Pricing competitiveness of the ski lift companies is influenced by the limited supply of ski facilities and relative high demand for these facilities. Some resorts, such as the Mt Selwyn snowfields, have positioned themselves as providers of low-cost family holidays, providing additional opportunities for an affordable snow holiday, low cost resort based snow play and cross country skiing. As a result there are high-cost, high-status, luxury tourism opportunities centred around the resorts; lower cost, resort based accommodation; and affordable basic holiday options in and around the park, particularly in the summer, including camping trips and back-country walking and camping. The diversity of holiday costs, including the option of affordable holidays, is seen as a major asset for the region.

Kosciuszko National Park has a $15 per day entry fee and an $80 annual pass. Fees are collected at the Kosciuszko Road, Alpine Way, the Elliot Way (in winter) and, (when it is cost effective to do so) at the Yarrangobilly Caves. These fees help the NPWS to maintain the extensive access system, utilities, customer service and facilities across the park. However, the park entry fees and fees for services and utilities paid by ski resorts do not cover the costs of administering tourism and recreation in the park. This cost is subsidised by the NPWS and the NSW Government (Applied Economics 1998). The subsidy facilitates the retention of a decentralised and vibrant tourism and recreation industry (predominantly based on snow) and the economic benefits this brings to the region.

Importance of affordability in the park

The affordability and diversity of costs of recreational and tourism opportunities within the park are important at the regional level.

Dependence on the park

The affordability of Kosciuszko National Park as a destination for visitors is influenced by a range of costs, including those directly associated with and dependent on the park. These include the cost of park entry. Most park facilities are free, except for entrance to Yarrangobilly Caves and the use of accommodation at Currango Homestead.

Costs associated with the use of commercial facilities in the park, which are charged to visitors by concessionaires, are independent of the park. They are influenced by competitive forces, park use fees, rents and charges for the provision of municipal services administered by the NPWS.

Condition and trend in condition for affordability

Table 15.12 describes the condition and trend in condition of affordability.
Table 15.12  Condition and trend in condition for affordability of tourism and recreational activities in Kosciuszko National Park

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td></td>
<td>Satisfactory</td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td>Improving</td>
<td>Improving</td>
</tr>
<tr>
<td></td>
<td>No net change</td>
<td>Declining in</td>
</tr>
<tr>
<td></td>
<td>Widespread</td>
<td></td>
</tr>
<tr>
<td>Affordability</td>
<td>Competition for the provision of services and facilities for visitors is effective.</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Demand and supply is carefully managed, consistent with the sustainable limits of visitor use established for recreation settings for Kosciuszko National Park.</td>
<td>□</td>
</tr>
</tbody>
</table>

Overall status for tourism and recreation for Kosciuszko National Park;

Relates to components of tourism and recreation for Kosciuszko National Park.

Pressures

Pressures include the high cost of maintaining tourism and recreation facilities and services within the park; limits on the budget of the NPWS and other government organisations that restrict their capacity to provide the most appropriate facilities (social and environmental). There are pressures on the NPWS to limit the cost of entry fees and to provide more efficient ways of collecting fees at peak times. There is also pressure from the increasing costs of winter skiing, including lift tickets and accommodation.

Knowledge gaps

Knowledge gaps include detailed information about the actual cost to the NPWS and the NSW government of providing services and facilities for tourism and recreation.

Opportunities

Opportunities include:

- recognition of the actual costs borne in the provision of tourism and recreational opportunities by the NPWS and the NSW government, the local community and the tourism industry;
- the continued provision of low-cost tourism and recreation opportunities in summer, including family camping and back-country walking and camping options as part of the recreational opportunity spectrum (where environmentally appropriate);
- the provision of additional facilities that enhance visitors’ experience of the park and their understanding of how the entrance fee is spent;
- improved options for the collection of entry fees (in a user friendly manner), to the park to reduce congestion at entry gates during peak periods.

Attribute 10: regional recreation opportunities

Surrounding regional towns, such as Adaminaby, Batlow, Bombala, Jindabyne, Khancoban, Talbingo, and Tumut, provide recreation services and recreation opportunities (TSM 2001). At a regional scale, important centres such as Cooma and Canberra have a key role. These, together with the diversity of tourism and recreation opportunities within the park, increase the attraction of the region for tourists (TSM 2001). Lands outside the park with a different status from the park provide complementary recreational opportunity settings.

Public lands managed by the forestry industry provide many recreation opportunities. Map 15.1 illustrates the other land tenures in the region. Some freehold lands with natural settings provide opportunities for horse riding and other activities. If we review this even further a field, the pattern of land use reflects essentially cleared lands, with other protected areas providing protection to the remaining natural lands around the park, and some state forests. In south-eastern Australia, there are few options for natural land tourism and recreation outside the public reserve system. This reinforces the need to carefully manage the tourism and recreation values of the park.

The road approaches to the park are also important as a tourism and recreation setting. The eastern approaches to the park are under pressure from small subdivisions, potentially leading to an urbanised strip near the approaches to the park. Cooperative planning with local governments can help to prevent this. Urbanised lands on the boundary of the park are not a satisfactory model.

212
Importance of recreation opportunities in the park’s region

The region surrounding the park, when combined with the park, is very important and of national significance.

Dependence on the park

The region complements the park. There is interdependency.

Condition and trend in condition

Major improvements for a cooperative and integrated approach to tourism management for regions surrounding the park (the Greater Snowy Mountains Region) and the park itself are considered essential for the improvement of tourism and recreation values of the area (SGS 2001). Also, continued active involvement in the Australian Alps Liaison Committee will facilitate cooperative management of the Australian Alps national parks and provision of a diversity of recreation activities across these parks.

Table 15.13 describes the condition and trend in condition for regional recreational opportunities.

Table 15.13  Condition and trend in condition for recreation opportunities in the Kosciuszko National Park region

<table>
<thead>
<tr>
<th>Criteria for assessment of condition</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td></td>
<td>Satisfactory</td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td>Very poor</td>
<td>Improving generally</td>
</tr>
<tr>
<td></td>
<td>Improving slightly</td>
<td>No net change</td>
</tr>
<tr>
<td></td>
<td>Declining in some areas</td>
<td>Decline</td>
</tr>
<tr>
<td></td>
<td>Widespread</td>
<td></td>
</tr>
<tr>
<td>Regional tourism and recreation opportunities</td>
<td>Snowy Mountains regional tourism resources are managed in an integrated way $^a$</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>More sophisticated tourism and recreation facilities and services such as golf courses, swimming pools, theme parks, vehicle based adventure sports, horse riding and other intensive impact sports are developed outside the park $^b$</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>Opportunities to facilitate new markets such as the education based market are developed cooperatively $^c$</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Overall status for the region; $^b$ Relates to parts of the region

Pressures

Pressures include demands for more facilities in national parks (often reflecting a lack of understanding of the tourism and recreation values of the parks); increased tourism use, placing increased pressures on existing recreational opportunities; changes in land use in areas adjacent to the park (e.g. rural residential developments in the Thredbo Valley); and demand for more commercial opportunities in the park.

Knowledge gaps

Knowledge gaps include information about the diversity of recreation opportunities and visitor activities across the region and how the park contributes to these.

Opportunities

Coordination and integration between the NPWS, local government and private tourism organisations should be further enhanced to develop a clear whole of park regional tourism strategy, including building on the Snowy Mountains Region Tourism Plan fostering a diversity of tourism opportunities in the region within and external to the park. This would facilitate the marketing of the region as a distinctive destination. The NPWS can play a leadership role.
Summary of findings

Kosciuszko National Park has nationally significant tourism and recreation values. These national values are underpinned by 10 key attributes. In this chapter, we have evaluated these attributes relative to their condition and trend in condition and the pressures to which they are exposed. Here, we present some findings from the analysis.

<table>
<thead>
<tr>
<th>ATTRIBUTE</th>
<th>FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural attraction</td>
<td>The natural quality of Kosciuszko National Park is the most important attribute underpinning the tourism and recreation value of the park; and The importance of this attribute will increase with time as the area of natural lands and the availability of recreation opportunities in natural lands outside of protected areas decrease.</td>
</tr>
<tr>
<td>Cultural attraction</td>
<td>The cultural heritage of Kosciuszko National Park is a very important attribute underpinning the tourism and recreation value of the park.</td>
</tr>
<tr>
<td>Education</td>
<td>Educational opportunities within Kosciuszko National Park are an important attribute underpinning tourism and recreation value. There is potential for education to be more important as a market niche for tourism and recreation services in the future.</td>
</tr>
</tbody>
</table>
| Diversity of tourism and recreation opportunities | The diversity of recreation opportunity settings is a very important attribute underpinning the tourism and recreation value. Recreation opportunity settings appropriate to the tourism and recreation value of the park includes:  
  - large, remote and unmodified settings;  
  - remote areas with minor facilities;  
  - natural areas providing motorised access and basic visitor facilities;  
  - areas of relative naturalness with recreation facilities evident and all weather motorised access; and  
  - major visitor facility areas which may include ski facilities, picnic areas, camping grounds, information centres and car parks.  
  Maintenance of the diversity of recreation opportunity settings requires active management including:  
  - planning and identification of recreation opportunity settings;  
  - maintaining an absence of facilities and non-natural disturbance to the most vulnerable lands – the large natural areas; and  
  - diligence, quality planning, and quality managerial systems to ensure the nature of visitor services and facilities provided are suitable for the recreation opportunity setting.  
  Opportunity for tourism and recreation experiences requires constant management to maintain the tourism and recreation value of Kosciuszko National Park including:  
  - planning for tourism recreation including establishing visitor use limits for destinations and active supply and demand management within such limits;  
  - active management to minimise and prevent inter-activity social conflict; and  
  - active management to prevent over-crowding. |
| Access to Kosciuszko National Park  | Access to the park is a very important attribute underpinning the tourism and recreation value.                                                                                                                                                        |
| Access within Kosciuszko National Park | Access within the park is a very important attribute underpinning the tourism and recreation value. There is a comprehensive and adequate vehicle-based access system to recreation opportunity settings within the park.                              |
| Services and facilities            | The diversity of tourism and recreation services and facilities suitable within a national park is a very important attribute underpinning the tourism and recreation value. Urbanised facilities are in conflict with the most important tourism and recreation value of Kosciuszko National Park, its natural qualities. Urban facilities that service skiing such as access, car parks, food and shelter, ski lifts and utility and safety support services are necessary to underpin skiing recreation opportunities within designated areas of the park. For skiing areas, it is critical that the natural qualities of the park are protected. Urban style tourism and recreation facilities such as accommodation, golf courses, tennis courts, swimming pools, theme parks recreation within the park are unnecessary to underpin skiing recreation opportunities within the park. They are inconsistent with the principal tourism and recreation attribute of the park. |
Given legal requirements for Perisher Valley which permit urban expansion, a basic requirement for any new urban facilities is that they have no detrimental impact on the natural and cultural heritage attributes of the park and that this is demonstrated by annual environmental management performance monitoring systems and defined minimum environmental standards of management. The additional accommodation is a commercial subdivision of the national park. The full cost of ensuring that there are no impacts to the national park and the long term monitoring needs will need to be built into the cost of the approved subdivision.

Services and facilities within Kosciuszko National Park need to be actively managed including:
- the suitability of services and facilities for recreation opportunity settings;
- competent facility maintenance and service delivery.

Tourism and recreational use of Kosciuszko National Park needs to be actively managed so that it is not a threatening process to the tourism and recreation value of the park. Cutting edge sustainable use management of the park needs to be introduced including:
- individualising accountability for environmental performance for companies, communities and authorities operating within the park;
- strategic and quantified environmental performance improvements established against global environmental issues as well as specific Kosciuszko National Park environmental issues; and
- recognition of visitor use limits and frequency of use limits by informed policy for sites or areas within the park.

The affordability of tourism and recreation services provided in support of activities within the national park is an important attribute underpinning the tourism and recreation value.

The diversity of tourism and recreation services and facilities within the greater Snowy Mountains Region is a very important attribute underpinning the tourism and recreation value of the park.

**Future Management**

**A proposed Tourism and Recreation Strategy for Kosciuszko National Park**

Management of the tourism and recreation values of Kosciuszko National Park needs to be planned. Outputs for such a Strategic Plan could include:
- the NPWS achieving a capacity and competency to proactively manage for tourism and recreation values and sustainable use;
- the conservation and protection of the most important tourism and recreation attribute, the natural intrinsic qualities of the park;
- the professional management of other attributes which underpin the tourism and recreation values;
- identification of the nature and spatial arrangement of recreation opportunity setting classes for the park;
- the definition of a sustainable tourism and recreation operational framework for the park in the context of global and local criteria;
- active management for sustainable tourism and recreation, including supply and demand management, and addressing unacceptable impacts of use;
- active management of the ramifications of global warming and reducing snow cover with time, especially lease management;
- the establishment of policy ‘limits of use’ figures for destinations to achieve sustainable use, including the summit of Mount Kosciuszko;
- the introduction of a quantified environmental performance management system which underpins sustainable tourism and recreation management, especially for leases and licenses;
- the introduction of quantified environmental improvement targets for tourism and recreation for the park with a performance monitoring system; and
- working with the community and the tourism and recreation industry at a park and regional scale to manage for tourism and recreation values.
Such a strategic plan should be developed in consultation with the local community, particularly in regard to the development of policy decisions for visitor use limits for destinations and environmental performance management baseline standards for the park.

**Sustainable use: strategic environmental management performance**

Tourism and recreation management performance and monitoring indicators should target global and local environmental improvement performance outcomes. Environmental management performance baseline standards should be developed for the park against these criteria. Monitoring of the acceptability of environmental performance for individual organisations would then be against these standards.

**Strategic information and research**

Improvements in information availability are required to adequately manage for tourism and recreation values. There is a need for information for the establishment and management of baseline environmental management performance; data for supply and demand management, including visitor use numbers, visitor use by market segments (survey information), demand forecasts for market segments, and supply limits for recreation opportunities (tourism resource management information); visitor experience information; visitor impact information; economics of visitor use information; and visitor facilities and services information.

**Strategic research and adaptive management**

An active research program focusing on the key tourism and recreation issues facing Kosciuszko National Park is critical. Management mechanisms for determining research priorities and mechanisms for implementing the results of research in an adaptive manner are considered important.

**Leadership in regional sustainable tourism management**

There is a strong, and perhaps unrealistic expectation that the park should provide all the tourism services for the regional economy. It can and will play an important role, but it should not be an exclusive role. There is a need for a leadership role in working at a landscape scale with tourism and recreation management. This would be in close cooperation with Planning NSW for the ski resorts, local authorities for regional tourism management, the Australian Alps Liaison Committee for whole of Alps approaches, and with the NSW tourism industry. This will help achieve sustainable tourism and recreation outcomes for Kosciuszko National Park.

**Conclusion**

The tourism and recreational value of Kosciuszko National Park has been assessed as significant at a national level. The tourism and recreational value of an opportunity setting has been defined as a function of the perceived ability of that opportunity to provide certain activities and experiences. This chapter identifies 10 attributes that underpin tourism and recreational values for Kosciuszko National Park. They have been evaluated and are found to be in a varied condition and subject to various pressures. To manage for the tourism and recreation values of the park, active, competent management of tourism and recreation is advised at a park and regional level, supported by an approach to management that focuses on strategic planning and environmental performance outcomes focused on sustainable use. The tourism industry is a vibrant industry of great significance to the regional economy and heavily dependent on Kosciuszko National Park. This chapter suggests the introduction of new approaches to tourism and recreation management by the NPWS. This includes continued positive working with the tourism industry as well as professionally managing tourism on a full time basis to protect the most important tourism and recreation values of the park in the long term interests of tourism. Techniques including sustainable use management, limits of use management, environmental performance management and individual company, community and authority accountability for environmental performance outcomes would be important.

**Acknowledgements**

We would like to acknowledge the contribution of representatives of the Kosciuszko National Plan of Management Community Forum. The discussions at this forum were valuable in assisting us to formulate and evaluate the attributes used in this report (Attachment Four). Our thanks also go to Wendy Hill, Roger Good, Janet Mackay, Prof Elery Hamilton-Smith, Mark Adams, Penny Spoelder, Sam Rando, Monica McDonald, Andy Spate and members of the public who provided written submissions on the draft report for valuable discussions and/or comments on this chapter.
Attachment 15.1

The theoretical link between Attributes underpinning the tourism and recreation values (described by this chapter) and Clarke and Stankey’s 1979 Management Factors are presented here. This is an important link, given that the Management Factors underpin the concept of recreation opportunity classes. Recreation opportunity classes are considered to be a fundamental planning tool for the spatial management (or zoning) of tourism and recreation opportunities within the park in the future (Newsome et al, 2002, p.161).

Tourism and recreation opportunity setting management factors (after Clarke and Stankey 1979) and attributes of Kosciuszko National Park

<table>
<thead>
<tr>
<th>Management Factor (Clarke and Stankey 1979)</th>
<th>Notes (after Clarke and Stankey 1979)</th>
<th>Attributes underpinning the tourism and recreation value of Kosciuszko National Park (this paper)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Management defines the ease of access eg roads, tracks, cross-country travel; the means of conveyance such as cars, four-wheel-drives, horses or on foot; the sophistication of the access type, such as high-standard fire trails; and the maintenance regime. Research identifies what recreationists prefer for access.</td>
<td>Access to Kosciuszko National Park. Access within Kosciuszko National Park. Affordability.</td>
</tr>
<tr>
<td>Other non-recreational resource uses</td>
<td>This factor considers the extent to which non-recreational uses of a park are compatible with various opportunities for outdoor recreation. Operations of electricity authorities, Snowy Hydro Limited operations, police, NPWS and others fit into this consideration for Kosciuszko National Park.</td>
<td>For Kosciuszko National Park, naturalness is considered a major tourism and recreation attraction that is directly influenced by on-site management. For cultural attractions, cultural heritage infrastructure and sites are an important tourism and recreation attraction for Kosciuszko National Park. Services and facilities are the critical facilities and services to assist visitors.</td>
</tr>
<tr>
<td>On-site management</td>
<td>This includes site modifications such as facilities, exotic species of vegetation, vegetation management, landscaping, traffic barriers etc (the extent of the modification is important); the ‘apparentness’ of the modification; the complexity of the modification; and the nature of the facilities (if any).</td>
<td>For Kosciuszko National Park, naturalness is considered a major tourism and recreation attraction that is directly influenced by on-site management. For cultural attractions, cultural heritage infrastructure and sites are an important tourism and recreation attraction for Kosciuszko National Park. Services and facilities are the critical facilities and services to assist visitors.</td>
</tr>
<tr>
<td>Social interaction</td>
<td>The appropriate amount of social interaction is an important characteristic of different recreational activities. In more remote settings, low levels of interaction are appropriate and expected. In more modern settings, interaction can rise to very high levels. Natural terrain and management activities can greatly influence the level of contact of people. Social carrying capacity is an important management consideration. The type of use for a setting is important.</td>
<td>Educational activities within the park may be formal and informal. Social interaction is an important part of the learning experience, as is the opportunity setting.</td>
</tr>
<tr>
<td>Acceptability of visitor impacts</td>
<td>Human use of resources inevitably results in impacts. The level of impact that is consistent with the type of opportunity setting (and the status of the lands as a protected area) is important. Generally the tolerance of recreational users for impacts (ecological, sustainable, managerial) is greater among ‘modern’ recreation opportunity settings than among ‘primitive’ recreation opportunity settings.</td>
<td>The attribute ‘Impacts of use’ considers visitor use impacts. Sustainable use and environmental performance management and monitoring.</td>
</tr>
<tr>
<td>Acceptable level of regimentation</td>
<td>The nature, extent, and level of control over recreational use are important factors characterising different opportunity settings. A continuum of controls can be described, from subtle to regulatory. ‘Modern’ settings are generally more highly organised and regulated than ‘primitive’ types.</td>
<td>Diversity of recreation opportunities is the range of tourism and recreation opportunities in the context of the park. Regional recreation opportunity settings are also important.</td>
</tr>
</tbody>
</table>
Different combinations of the Management Factors (Attachment One) were used by Clarke and Stankey (1979) to derive recreation opportunity classes. They recognised a range of classes that may exist on a landscape. These “classes” have been widely used by recreation planners to ensure that a diversity of recreation opportunities can be maintained for protected areas (Newsome et al, 2002, p 159). Interestingly, the hardest areas to sustain are the areas with the least modification (Class 5). The setting classes are described here (in Part A), and some indicative activities associated with the classes are described in Part B.

Recreation opportunity setting classes (Modified from Clarke and Stankey, 1979), description of attraction-landscape-managerial settings and potential visitor opportunities and experiences (NPWS 2002\(^7\)). These are indicative setting classes which could be used at Kosciuszko National Park.

<table>
<thead>
<tr>
<th>Class</th>
<th>Destination Attraction/Landscape/Managerial setting</th>
<th>Visitor Opportunities/ Potential Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>Large area. Very high natural values. Negligible evidence of non-traditional human activity. No formed access or alien tenures. “Ideally a totally natural landscape that has not been affected by modern technological landuse”. Principle purpose preservation of wild values or significant natural values. May provide low intensity self reliant recreation. No facilities provided or structures of any description present.</td>
<td>Isolation from the sights and sounds of people. Opportunities for independence, solitude, closeness to nature, tranquillity and self reliance through the application of outdoor skills in an environment that offers a high degree of challenge.</td>
</tr>
<tr>
<td>Class 2</td>
<td>Generally remote areas with conservation significance. Only minor evidence of human activity including management trails and walking tracks. Principle purpose the conservation of significant natural and cultural values. Natural landscape with only minor recreation and management structures. Ideally no alteration to skylines and escarpments. Essential basic management structures, walking trails and management trails may be evident. Basic visitor facilities only provided for public safety, health and environmental protection.</td>
<td>General isolation from people though minimal contact with other visitors may occur. Opportunities for independence, solitude, closeness to nature, tranquillity and self reliance in an environment that offers a high degree of challenge.</td>
</tr>
<tr>
<td>Class 3</td>
<td>Natural area providing motorised and walking access and low to moderate intensity recreation with some facilities. Natural landscape with minor works and structures that support management and recreation are evident. Most visitors will use this zone to explore the park either by car or on foot. Low frequency of contact with other visitors. Opportunities for closeness to nature, tranquillity and some self reliance may be required through the application of outdoor skills (inc 4W driving) in a natural environment.</td>
<td></td>
</tr>
</tbody>
</table>

\(^7\) Recreation Management Classes are a modification by the NPWS of Clarke and Stankey’s original recreational opportunity classes (after NPWS 2002).
<table>
<thead>
<tr>
<th>Class 4</th>
<th>Destination Attraction/Landscape/Managerial setting</th>
<th>Visitor Opportunities/ Potential Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Includes areas of relative naturalness with recreation facilities evident. All weather motorised access is usually provided. A natural appearing landscape where the built environment has infrastructure for management and recreation but is not dominated by it. Provides for moderate intensity facilities based recreation in a natural setting. Cognisant of the need to protect natural (especially landscape) and cultural values. Predominantly natural appearing environment. Some modifications will be evident at specific sites. Medium scale camping and picnic facilities, good all weather road access, walking tracks and safety structures are provided.</td>
<td>Opportunities to interact with the natural environment while still having access to visitor facilities. Some social interaction with other visitors is likely.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class 5</th>
<th>Destination Attraction/Landscape/Managerial setting</th>
<th>Visitor Opportunities/ Potential Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A modified landscape with natural elements. The built environment is a major component of the landscape character. Includes major visitor facilities such as picnic areas, camping grounds, scenic drives and major access routes, information centres and carparks. High level of site hardening and provision of facilities is evident. A natural, although modified setting with moderate to low conservation values.</td>
<td>Medium to high levels of recreation and social interaction in a natural setting. Opportunities of social interaction with other users of the site. Group or family activities are an important part of the recreational experience. A natural setting is important but in the security of a safe and managed environment. Ski Resort infrastructure, access services, accommodation, food, shelter and information services may be present. Well developed picnic and camping areas. Good all weather roads, graded walking tracks, safety structures provided.</td>
</tr>
</tbody>
</table>
## Attachment 15.2 (Part B)

Indicative tourism and recreation activities undertaken for Recreation Opportunity Classes 1 to 5 (A Theoretical Guide for the Plan of Management review, Modified from NPWS 2002).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Zone 4</th>
<th>Zone 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpine skiing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Snow boarding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross country skiing</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Ice Climbing</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Picnicking (facility based)</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Camping (no facilities)</td>
<td></td>
<td></td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Camping (facility based)</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Scenic driving</td>
<td></td>
<td></td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>4wd driving and registered trail bike riding</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Nature study or cultural awareness</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Horse riding</td>
<td></td>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Canoeing/ kayaking/white water rafting</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Boating (motorised)</td>
<td>□</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Sailing/sail boarding</td>
<td></td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Adventure activities</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Fishing</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Non-powered flight: hang-gliding, hot air</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>ballooning, paragliding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered flight: low altitude</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Cycling (on existing roads and trails)</td>
<td>□</td>
<td>□</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Bushwalking (on formed tracks, not overnight)</td>
<td>□</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Bushwalking (remote areas or long distance</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>trails)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orienteering / rogaining</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-country running</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caving</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Organised Mountain biking</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

- ■ Activity permitted
- □ Activity may be permitted subject to certain conditions such as designated sites only, or subject to consent
Attachment 15.3

Pacific Asia Travel Association – Asia Pacific Economic Co-operation Code for Sustainable Tourism 2001

The Code for Sustainable Tourism has been adopted by both the Pacific Asia Travel Association (PATA) and the Asia Pacific Economic Co-operation (APEC) as a reflection of their strong commitment to tourism growth, across the Asia and Pacific region, that is viable and sustainable over a long-term future.

PATA was established in 1951 as the body for national tourist offices, airlines, hotels, tour operators, travel agencies and other firms active in tourism to promote travel to and within the Pacific Asia region. Its charter sets out its fundamental commitment to what is now called sustainable development:

…to encourage and assist in the development of travel industries throughout Pacific-Asia in a manner which recognises the urgent importance to practice an environmental ethic that supports responsible conservation and restoration of Pacific Asia’s unique combination of natural, social and cultural resources.

PATA has maintained that commitment for over 50 years through numerous publications, conferences and workshops, and through its consistent promotion of heritage conservation, cultural tourism and eco-tourism. PATA first adopted a code for environmentally sensitive tourism at its 40th annual conference in 1991.

APEC was formed as a high level forum for the leaders of Asia Pacific economies in 1989. It has a particular commitment to opening the region to the freer flow of trade in goods and services, which includes tourism, and to co-operation across its economies on a wide front.

APEC established a Tourism Working Group in 1991 and convened the first meeting of Asia Pacific Ministers of Tourism in Seoul in 2000. At that meeting APEC adopted its Tourism Charter, which sets out the goal to ‘sustainably manage tourism outcomes and impacts.’ This expresses APEC’s clear commitment to ecologically and culturally sustainable tourism development.

Reflecting these commitments, APEC and PATA, at a meeting of the APEC Tourism Working Group and at the Fiftieth PATA Conference respectively, both in Malaysia in April 2001, adopted the Code for Sustainable Tourism to guide their own activities and for promotion to their members and affiliates.

The code is designed for adoption and implementation by a wide range of tourism-related organisations and companies. By adhering to it they will be showing their commitment to the vision of tourism growth that is fully responsible in its approach to natural environments, to social needs and to cultural sensitivities. By following the Code, organisations will also be positioning themselves to deal with environmental regulation, environmental accounting, environmental standards such as ISO, and accreditation schemes requiring reporting on environmental and social impacts.

Code for sustainable tourism

The PATA/APEC code urges PATA Association and Chapter members and their industry partners and APEC Member Economies to:

CONSERVE THE NATURAL ENVIRONMENT AND ITS ECOSYSTEMS

CONTRIBUTE to the conservation of any habitat of flora and fauna affected by tourism

ENCOURAGE relevant authorities to identify areas worthy of conservation and to determine the level of development, if any, which would be compatible in or adjacent to those areas

INCLUDE enhancement and corrective actions at tourism sites to conserve wildlife and natural ecosystems.

RESPECT AND SUPPORT LOCAL TRADITIONS, CULTURES AND COMMUNITIES

ENSURE that community attitudes, cultural values and concerns, including local customs and beliefs, are taken into account in the planning of all tourism related projects.

PROVIDE the opportunity for the wider community to take part in discussions and consultations on tourism planning issues where these affect the tourism industry and the community.

ENCOURAGE an understanding by all those involved in tourism of each community’s customs, cultural values, beliefs and traditions and how they relate to the environment.

CONTRIBUTE to the identity and pride of local communities through providing quality tourism products and services sensitive to those communities.
MAINTAIN ENVIRONMENTAL MANAGEMENT SYSTEMS

ENSURE that environmental assessment is an integral step in planning for a tourism project.

ENCOURAGE regular environmental audits of practices throughout the tourism industry and to promote desirable changes to those practices.

ESTABLISH detailed environmental policies and/or guidelines for the various sectors of the tourism industry.

INCORPORATE environmentally sensitive design and construction solutions in any building or landscaping for tourism purposes.

CONSERVE AND REDUCE ENERGY, WASTE AND POLLUTANTS

FOSTER environmentally responsible practices for: reducing pollutants and greenhouse gases conserving water and protecting water quality managing efficiently waste and energy controlling noise levels promoting the use of recyclable and biodegradable materials.

ENCOURAGE NATURAL AND SOCIAL ENVIRONMENTAL COMMITMENT

ENCOURAGE those involved in tourism to comply with local, regional and national planning policies and to participate in the planning process.

FOSTER, in both management and staff of all tourism projects and activities, an awareness of environmental and cultural values.

ENCOURAGE all those who provide services to tourism enterprises to participate through environmentally and socially responsible actions.

SUPPORT environmental and cultural awareness through tourism marketing.

EDUCATE AND INFORM OTHERS ABOUT LOCAL ENVIRONMENTS AND CULTURES

SUPPORT the inclusion of environmental and cultural values in tourism education, training and planning.

ENHANCE the appreciation and understanding by tourists of natural environments and cultural sensitivities through the provision of accurate information and appropriate interpretation.

ENCOURAGE and support research on the environmental and cultural impacts of tourism.

COOPERATE WITH OTHERS TO SUSTAIN THE ENVIRONMENT

COOPERATE with other individuals and organisations to advance environmental improvements and sustainable development practices.

COMPLY with all international conventions and national, state and local laws which safeguard natural environments and cultural sensitivities.
A joint workshop between representatives of the Independent Scientific Committee and the Kosciuszko National Park Plan of Management Community Forum, held on 5th September 2002, generated information which summarises, in their view, the condition and trend in condition of the ten tourism and recreation attributes considered in this chapter. The condition and trend in condition are considered indicative, not definitive (Attachment Four).

**Evaluation of the condition and trend in condition of ten tourism and recreation attributes of Kosciuszko National Park (input provided by representatives of the Kosciuszko National Park Community Forum)**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Category</th>
<th>Condition</th>
<th>Trend in condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Excellent</td>
<td>Very good</td>
</tr>
<tr>
<td>Natural</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Mount Kosciuszko</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Snow</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Valleys</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Cultural</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Kiandra</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Snowy Scheme</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Aboriginal</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Huts</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Mining/grazing</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Diversity</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Facilities</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Ski resorts</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Access</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Mass transport</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Road</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Scarcity</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Regional opportunities</td>
<td></td>
<td>■</td>
<td>■</td>
</tr>
</tbody>
</table>

■ Strong correlation with the level of condition or trend in condition status; □ Some correlation with the level of condition or trend of condition.

Note: Concepts such as ‘condition’ and ‘trend in condition’ can mean many things and apply to the attributes in many ways. For the purposes of this planning exercise and the workshop which derived this table, these terms have been generally used to refer to the principal components of the attribute determined as being significant (eg, for natural values, the summit of Mount Kosciuszko) and an interpretation of the condition status of those attributes. The trend in condition simply refers to whether the attribute condition is static, improving or declining in its condition.
A growing environmental awareness and the development of environmental and ecological economics over the last three decades have led to an increasing understanding that the economic values of environmental attributes are considerably wider than just the dollar values they generate.

The studies in this report examine different aspects of Kosciuszko National Park. The economic study in this chapter attempts to combine the financial, social and environmental values to give a broad perspective of how the park contributes to the state and to the nation. Such an attempt at valuation is not easy, and its comprehensiveness has been limited by the available time and resources. By no means have all the economic values of the park been valued here.

To a large degree this assembly of data that are readily available in the public domain should be viewed as a first, preliminary step in a more detailed economic evaluation that will need to be completed should significant changes to the management of the Park be considered. Such an evaluation would require the extra level of detail that can best be pursued once details of various options for changes to park management are known. The evaluation would need to consider the impact of the various management options on the value of the future stream of goods and services provided by the Park. Such an evaluation would need to be conducted against an estimate of how the value of that stream could be expected to change in the absence of such management changes. It would also need to consider the distributional effects of those changes ie how the management changes could be expected to affect those who gain benefits from the goods and services provided by the Park. Such an evaluation would also need to consider how the different values could be expected to change over time. For example, the relative value of environmental attributes could be expected to increase as a result of increasing demand and increasing relative scarcity.

Valuation methodology

The IUCN World Commission on protected Areas has recommended the use of Total Economic Value as a framework for the economic evaluation (WCPA 1998). The concept of Total Economic Value has been described in various ways by various authors (e.g. Young, R 1991; Pearce and Turner 1990). While there are similarities in the general concepts, there are differences in the details and underlying assumptions of the various approaches. Figure 16.1 shows the approach reported here, which is adapted from M D Young (1992).

Figure 16.1 Model for environmental valuation

<table>
<thead>
<tr>
<th>Total economic value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use</td>
</tr>
<tr>
<td>Option</td>
</tr>
<tr>
<td>Ecological function</td>
</tr>
<tr>
<td>Intrinsic</td>
</tr>
<tr>
<td>Own</td>
</tr>
<tr>
<td>Vicarious</td>
</tr>
<tr>
<td>Bequest</td>
</tr>
</tbody>
</table>

1One common community view is that environmental attributes have value in their own right (that is, in the absence of humans they would still have value). The approach taken in this report is that environmental attributes have value because they are important to people. In many cases these values can be related to aspects of irreversibility, uncertainty and uniqueness.
In the above diagram ‘Use values’ are values that people gain from using the environmental attribute. This category includes a diverse range of values such as the value of water provided, power generated and crops produced, as well as the value of recreation experiences and the enjoyment that people gain from viewing environmental attributes in photographs or television documentaries.

‘Option values’ are values held by people who want the resource to be there in the future for their own personal use or the personal use of others. Following Pearce and Turner (1990), both ‘bequest values’ and ‘vicarious values’ have been included in this category\(^2\).

‘Ecological function’ values are benefits that humans derive directly or indirectly from the habitat, biological or system properties or processes of ecosystems. It includes such functions as flood control, regulation of the atmosphere’s gases and the waste assimilation capacities of river systems. This type of value has received widespread interest since 1997, when Costanza and others published a paper in Nature (Costanza et al. 1997). While research in this area is progressing, there are currently insufficient relevant data to assign monetary estimates to these types of values for the Kosciuszko National Park\(^3\). Significantly, a number of these values are likely to take the form of services, like water supply, delivered to other parts of New South Wales (NSW), Victoria, the Australian Capital Territory (ACT) and South Australia.

‘Intrinsic values’ are values that people attribute to the knowledge that the environmental attributes exist. According to Pearce and Turner (1990), they reflect people’s preferences and include concern for, sympathy with and respect for the rights or welfare of other organisms, not related to their use by humans. For example, people gain value just from knowing that the Corroboree Frog exists.

Use and non-use values are strongly related to cultural values. Many cultural values (such as aesthetic, historic, scientific and social values) are part of use and non-use values. These are examined in depth elsewhere in this report (e.g. Chapters 13 and 14). However, one source of difficulty is the significant difference between what Adamowicz et al. (1998) call ‘held values’ and ‘assigned values’. Held values are the ethical beliefs that individuals or groups share concerning how one should live one’s life. They involve concepts that go well beyond the standard economic concept of a good that can be exchanged or traded. Assigned values are defined by the relative worth of things. Held values tend to be relatively stable over time but assigned values reflect adaptations to changing conditions (CSIRO 2000).

When objects, practices or places are considered sacred, revered or taboo, conventional decision-support techniques have little application. Typically, held values are sacrosanct and non-negotiable. They are not considered tradeable. No monetary amount or preference ranking can be assigned (CSIRO 2000). Hence, these values can be above and beyond any values described in this chapter.

### Values attached to Kosciuszko National Park

Examples of the types of values associated with the Kosciuszko National Park are presented in Table 16.1. These types of values were largely derived from information provided to the members of the Independent Scientific Committee (ISC) and they fit most neatly into use and ecological function values. However, there are also significant option and intrinsic values. The table shows that there is considerable overlap among different types of benefits; they are not additive.

### Table 16.1 Examples of values associated with Kosciuszko National Park

<table>
<thead>
<tr>
<th>Use values</th>
<th>Ecological function values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>Atmospheric gas regulation</td>
</tr>
<tr>
<td>Urban water use</td>
<td>Flood mitigation</td>
</tr>
<tr>
<td>Power generation</td>
<td>Genetic resources</td>
</tr>
<tr>
<td>Recreation (including bushwalking, sightseeing and skiing)</td>
<td>Pollination</td>
</tr>
<tr>
<td>Photography</td>
<td>Waste assimilation</td>
</tr>
<tr>
<td>Education</td>
<td>Nutrient cycling</td>
</tr>
<tr>
<td>Health</td>
<td>Pharmaceuticals and other products</td>
</tr>
<tr>
<td>Research</td>
<td>Water supply</td>
</tr>
</tbody>
</table>

\(^2\) ‘Bequest values’ are concerned with the value that people place on preserving the environment for future generations. ‘Vicarious values’ refers to the pleasure that people obtain from observing others derive use values.

\(^3\) Costanza et al. (1997) provided broad estimates for a range of values derived from the literature available at the time. For example, the waste treatment functions of rivers and lakes were valued at $695 per hectare per year when expressed in 1994 US dollars. Further examples of the values derived by Costanza et al. are presented later in this report.
Generally, it is much easier to gain data for values related to the direct use of an environmental attribute, such as value of water supplied to irrigators.

Without conducting specific studies, it is difficult to gain estimates for many other values of Kosciuszko National Park. For example, robust estimates of the values of specific ecological functions or intrinsic values would need further study. Although it is usually possible to quantify environmental benefits in physical terms, it is much harder to place monetary values on environmental benefits without substantial effort. Briefly, there are three main ways to estimate the value of environmental benefits:

- ‘Environmental valuation’ estimates the specific benefit and costs for a given project through various environmental economic approaches (such as contingent valuation, choice modelling, hedonic pricing or travel cost method).
- ‘Benefits transfer’ involves transferral of values obtained from other economic environmental valuations if they meet some prior criteria.
- The ‘threshold approach’ provides a figure for what the minimum value of environmental benefits has to be in order to justify the existence of a project.

Much of the new work on the value of ecosystem services seeks to identify opportunity cost. Environmental valuation is generally expensive and resource intense. Although many projects may have several unpriced benefits and costs associated with them, a choice needs to be made on when and how values are attributed to the environment. Such unpriced benefits or costs are referred to as ‘externalities’. A first best policy is always to try and accurately estimate the value of all externalities, but in reality this is rarely possible. This is why many economic analyses will employ the method of benefits transfer. In some cases, it is possible to provide a broad order-of-magnitude estimate by reference to the values derived in other studies.

For such a transfer of values to be valid, the following criteria need to be met:

- the primary study cannot be fundamentally flawed;
- the study site and the policy site need to be similar;
- the environmental change at the policy site needs to be similar to the environmental change at the study site; and
- the socio-economic characteristics of the populations affected by the environmental changes at the two sites need to be similar.

These criteria are very restrictive and consequently are rarely met. New developments in environmental valuation have increased the probability of benefits transfer.

Recently, another technique for valuing changes to environmental attributes has been developed and trialled. This approach is termed ‘choice modelling’. Respondents evaluate a number of different options or scenarios that have varying levels of attributes, taken from a common set, and express their preference by making a choice between options. Given the wide-ranging design of choice modelling, early indications are that it has the potential to satisfy benefit-transfer rules; therefore, some carefully planned choice-modelling studies could be used to transfer benefits from one study to another. If the review of the management plan for the Kosciuszko National Park indicates major changes to costs of managing the park, then a choice-modelling approach could help to gain an understanding of the values that people place upon changes to various attributes of the park. Not all values would be covered by this technique. In fact, there is no known simple technique that is capable of estimating all values. Normally, a suite of techniques needs to be used with careful design to avoid double counting and the summing of inconsistent numbers.

If conditions for benefits transfer are not satisfied, then the threshold approach could be used. This approach provides a figure for what the minimum willingness to pay for the environmental benefits would need to be, to warrant the change in expenditure. This figure is then presented to the community and to government and they are asked whether this figure seems reasonable given the presence of environmental improvements and costs. It should be emphasised that the value of the extra information gained through either application of the threshold approach or through a separate non market valuation is significantly greater once any potential changes to park management have been more clearly specified.

The following section presents publicly available information on aspects of use values associated with Kosciuszko National Park. The economic impact on the New South Wales and regional economies of tourism expenditure in Kosciuszko National Park is presented in Chapter 17.

**Use values**

**Irrigated agriculture**

Some indication of the contribution of the waters sourced from the Kosciuszko National Park to the value of irrigated agriculture can be gained from the following. The annual value of irrigated products from the Murray-Darling Basin is approximately $3.5 billion. Under the Snowy Water Licence, Snowy Hydro Limited is required to provide minimum annual releases of 2088 GL to the Murray and Murrumbidgee rivers - ie 1062 and 1026 GL respectively (Carol Bruce, Snowy Hydro Limited, pers. comm., 14 August 2002). Scoccimarro et al. (1997) report that these releases represent long-term average contributions of approximately 5% to the Murray system and 14% to the Murrumbidgee system.
They further report that in years when downstream water supplies are reduced by low rainfall, the relative importance of the contributions from the Snowy Mountains Hydro Electric Scheme increases significantly⁴. Adopting a conservative approach and using the long-term average contributions presented in Scoccimarro et al, the Snowy contributes at least 7% ($245 million)⁵ to the annual gross value of irrigated production in the Murray-Darling Basin. Based on an estimated, indicative value-added multiplier of 0.6 the annual value-added contribution to the regional economies associated with this level of irrigated production could be in the order of $150 million. In traditional terms this is often described as the economic impact of the water provided for irrigation to regional economies. Of course, there are significant extra contributions to the regional economies from the further processing of these agricultural products.

**Significance**

As described above, the contribution of the waters from the Snowy River to the value of irrigated agriculture in the Murray-Darling Basin is significant. It was estimated that in 1992, the Murray-Darling Basin contained about 70% of Australia’s irrigated crops and pastures and accounted for approximately 40 per cent of Australia’s total gross value of agricultural production (MDBC 2002). The contribution of the region’s water to the national value of agricultural production is thus very important, though overall it represents only about 3% of the national total. The contribution to both the basin and the nation varies considerably, depending on seasonal conditions and world prices, but from a world perspective it could not be considered significant. It should also be noted that whilst irrigated agriculture provides significant benefits it also imposes costs through, amongst other things, its contribution to river salinity and the impact of altered flows on riverine ecosystems.

**Trend in condition**

As discussed above, the annual value of irrigated agricultural production varies with seasonal conditions and world prices. Despite these variations, it could be expected that, in real terms, the value of production over the last few decades has probably increased due to improvements in production efficiency. For example, total factor productivity in the dairy industry increased by 1.6% per year for the 22 years to 1998–99 (Martin et al. 2000).

**Pressures**

Significant pressures on the region’s contribution to the value of irrigated agricultural production within the basin are likely to come both from diversions of extra water away from the Murray and Murrumbidgee systems as a result of the Snowy River Inquiry, and also from moves to increase the quantity of water retained within the River Murray to improve environmental flows within that system.

**Domestic, industrial, stock and town water use**

In addition to its use by irrigators, water from the Snowy system is an important source of water for residential and industrial use in several major urban centres throughout the basin. For example, as cited above, long-term average water contributions from the Snowy River contribute approximately 5% to the Murray system and 14% to the Murrumbidgee system.

Table 16.2 illustrates that on average, between 1988 and 1993, 208 GL of water was used largely for urban and industrial purposes. Applying the above percentages results in an average contribution of the Snowy River to urban and industrial uses of about 13 GL.

Volumetric charges paid by residential users of this water vary between 28 cents per kilolitre (Lower Murray Water) and 97 cents per kilolitre (SAWater)⁶. On these figures, the relevant water authorities would gain about $7 million each year for the provision of this water.

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⁴ This point is supported by Carol Bruce (Snowy Hydro Limited), who reported that flows from the Scheme into the Murray River range from 5% of average annual flows in wet times to 33% in dry times and that for the Murrumbidgee the contributions of the flows range from 25% in wet times to 60% in dry times.

⁵ Note that these values will be influenced by a range of factors, including, but not restricted to, seasonal conditions and world commodity prices. They are provided only to give an indicative estimate of the size of the possible values.

⁶ Source: <www.sawater.com.au>
### Table 16.2  Average domestic, industrial stock and town water use, 1988–93

<table>
<thead>
<tr>
<th>River system and state</th>
<th>Water for domestic, industrial, stock and town use (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td></td>
</tr>
<tr>
<td>Murray</td>
<td>29</td>
</tr>
<tr>
<td>Murrumbidgee</td>
<td>19</td>
</tr>
<tr>
<td>Victoria*</td>
<td></td>
</tr>
<tr>
<td>Murray</td>
<td>56</td>
</tr>
<tr>
<td>South Australia</td>
<td></td>
</tr>
<tr>
<td>Murray</td>
<td>104</td>
</tr>
</tbody>
</table>

* Includes Ovens and Kiewa river system

### Power generation

The Snowy Mountains Scheme has a generation capacity of 3756 MW and can provide up to 11% of the total power requirements of the mainland of eastern Australia at any one time. Over a 12-month period, the Scheme produces approximately 3% of the total energy in the National Electricity Market. The difference between capacity and production is due to limits on the amount of water that is collected, stored and released each year. As electricity prices are now determined on the spot market, prices are calculated at half-hour intervals and reflect rapidly changing market conditions. Consequently, it is difficult to assign a value to the current level of power produced. However, Snowy Hydro Limited has estimated that in current prices, its business is valued at over $300 million annually (Carol Bruce, Snowy Hydro Limited, personal communication, March 2003). Snowy Hydro Limited is one of the largest employers in the region, with approximately 400 full-time employees (Carol Bruce, Snowy Hydro Limited, personal communication, 14 August 2002).

In the absence of the Snowy Mountains Scheme, extra power would need to be generated from thermal plants. Snowy Hydro Limited estimates that it directly displaces 4.5 million tonnes of carbon dioxide emissions each year. If these emissions were valued at $10 per tonne, then the annual value of reduced emissions would be approximately $45 million.

### Significance

Whilst the actual contribution of Snowy Hydro Limited to the National Electricity Market in the eastern states is not very significant, its actual contribution through its participation in the National Electricity Market is nationally significant because of the following factors:

- Its physical location within the electricity grid provides support to both northern and southern major centres of electricity demand. This provides the market with an ability to reduce transmission line losses when required to transport power produced in NSW to Victoria or from Victoria to New South Wales;
- Its major role in providing risk management contracts for other market participants including both generators and retailers;
- Its provision of ancillary services to support the network;
- The range of hedge and financial derivative contracts available to other players in the industry; and
- Its role as an important peak load and emergency supplier because of the speed with which it can respond to sudden demands for power.

From an international perspective the contribution to power generation could not be considered significant.

### Trend in condition

As discussed above, Snowy Hydro Limited now operates in the National Electricity Market in the eastern states of Australia. A key feature of this market is the variability of electricity spot prices, which are based on half-hour intervals and respond to rapidly changing market conditions. It is thus difficult to determine future trends in Snowy Hydro Limited’s income from power generation.

### Pressures

The results of the Snowy River Inquiry and the subsequent increase in water flowing down the Snowy River are expected to have a significant impact on the value of power generated by Snowy Hydro Limited.

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7 Source: <www.mdbc.gov.au>

8 Source: <www.snowyhydro.com.au>

9 The Australian Greenhouse Office (AGO 2001) cites recent predictions of permit prices in Australia ranging between $10 and $50 per tonne.
Recreation

Estimating the recreational use value of the Kosciuszko National Park is difficult because the values that people gain are not usually exchanged through normal market processes. Therefore, alternative techniques are needed to gain an estimate of these values. One of the most common techniques for estimating the value of the recreation experience provided by national parks is the ‘travel cost’ method. In this method the costs of travelling to and from the recreation site as well as the value of the opportunity cost of the time spent travelling are used to estimate recreation use value. A draft travel cost study of the recreation use values of the Australian Alps has recently been completed (Mules et al. 2002). The study was based on the following recreational activities (in order of activities undertaken most by visitors to the New South Wales Alps): bushwalking/hiking; car touring/sightseeing; nature appreciation; downhill skiing; camping; fishing; four- wheel driving; snowboarding; mountain bike riding; horseriding/trailriding; cross-country skiing; canoeing; kayaking; white water rafting; orienteering; rock climbing/abseiling; and trail bike riding.

The study estimated the value of recreation in the New South Wales part of the Australian Alps ranged between $102 million and $458 million per annum. It should be noted that this estimate relates to the value that visitors to the Park gained from their use of the New South Wales part of the Australian Alps for recreation activities. It does not refer to the economic impact of Kosciuszko National Park. The economic impact of expenditure by visitors to the Kosciuszko National Park is presented in Chapter 17.

Significance

From a regional perspective, the recreation use values presented in this report are significant. It is harder to classify the values from a national perspective, because there is little information on recreational value for Australia. From an international perspective, the values cannot be considered significant.

Trend in condition

In the absence of other similar studies of the region it is difficult to determine a trend in the condition. It is, however, possible to identify pressures.

Pressures

The value that individuals gain from a recreation experience is influenced by various factors and varies from person to person, so the pressures on recreation use values have different sources.

For some people, the value of the recreation experience is increased by a sense of isolation. Increased numbers of tourists and increased interactions with other people would decrease the value of the experience for these people. For others, the experience is dependent on social interactions with others. Below a certain threshold of congestion, the value of the recreation experience would in general be increased by more tourists. Beyond this threshold congestion level, the values that these people gained from their recreation experience would in general decrease. Yet another group of people will derive enjoyment from the state of the biological and geological attributes of the park. The recreation use value for these people would be diminished by deterioration of these attributes.

Recreational fishing

Many of the values associated with recreational fishing in Kosciuszko National Park are captured in the estimate of the value of recreation above. However, Dominion Consulting Pty Ltd (2001) recently confirmed some of the recreational values cited above. It is important to note that the presence of some recreational fish (e.g. trout) can have a negative influence on native fish (see Chapter 8 for more detail).

The economic study of the Snowy Mountains trout fishery had three core elements: face to face fishing interviews in the Snowy Mountains region, the use of freshwater recreational fishing license records and the economic survey of businesses.

Results from the state-wide analysis of the recreational fishing licence records showed the popularity of inland native fish and trout fishing. The results suggest that $46.5–70 million is spent annually on trout fishing in the Snowy Mountains region (Dominion Consulting Pty Ltd 2001).

Amenity migration

There has been substantial migration to certain towns in the Snowy River Shire area because it is an amenity rich region; for example, the Snowy River Shire has had an average population growth of 1.6% over the last five years (Department of Local Government 2002).

Indeed, the Snowy River Shire spends a significantly higher amount per person on recreation and leisure services than the average in New South Wales (around 16% higher, Department of Local Government 2002).

Amenity migration has its own benefits and costs to individual council (and state) areas. If migration to a scenic rural area exceeds a certain threshold level, the social, economic and ecological resources of the area in question may be compromised through, among other things, congestion.
Although increased amenity migration may result in additional economic activity within the Snowy River Shire, this may result in a reduction in economic activity in another part of the state or nation. This could represent a redistribution of economic activity within the state or nation. However, if a considerable number of the immigrants have come from other countries, there would generally be a net economic development benefit to both New South Wales and Australia.

On the other hand, net welfare of the country is increased because of the increase in consumer surplus that arises from individuals choosing to move into amenity-rich areas. The enjoyment and pleasure that people receive from such a move increases society’s overall consumer surplus.

Unfortunately, it has not been possible to quantify the benefits (or costs) associated with amenity migration to the Snowy River Shire within this report.

**Intrinsic values**

As with the estimation of recreation use values, specific techniques are required to obtain estimates of the intrinsic values associated with specific environmental attributes such as national parks\(^{10}\). One of the most commonly used techniques has been the ‘contingent valuation’ technique. With this technique a sample of people are generally asked how much money they would be prepared to pay to achieve a specified change in a particular environmental attribute. For example, they could be asked to state how much they would be prepared to pay to increase the area of remnant native vegetation in a particular area.

The expense of these studies has been one of the key factors in limiting their wider use in decisions about the management of natural resources. Instead there has been a tendency to try to transfer the derived values from one study to another. As discussed above, there are criteria that need to be satisfied for such a transfer to be valid, and these criteria are rarely satisfied.

A review of the literature indicates that no specific contingent valuation studies have been completed for the Kosciuszko National Park. Lockwood et al. (1993) used the contingent valuation technique to estimate the willingness to pay of Victorian households to reserve unprotected East Gippsland national estate forests in national parks. Lockwood et al. (1993) estimated that the aggregate annual non-market value to Victorians was $41 million when expressed in 1999 dollars. However, for the reasons given above, it is impossible to extrapolate this value to the Kosciuszko National Park case.

National Land and Water Resources Audit (2002) presented the results of another stated preference technique that appears to hold greater promise for the transfer of benefits from one study to another. As part of the National Land and Water Resources Audit, the choice modelling technique was used to estimate how non-market environmental and social values could be affected by land and water degradation. In these studies, households in various parts of Australia were asked how much they would be prepared to pay for changes in the following four attributes: species protection, landscape aesthetics, waterway health and social impact. The reports also recommended an approach for transferring these results to other situations. Therefore, if the review of the management of Kosciuszko National Park led to specific changes to the way in which Kosciuszko National Park was to be managed and, further, if it was possible to quantitatively specify how those changes would affect the number of species to be protected, the hectares of bush to be protected, the kilometres of waterways to be restored for fishing or swimming, and the number of people leaving country areas each year, it would be possible to estimate the non-market values associated with those management changes.

**Ecological function**

There are many ways in which environmental attributes create values for society. For example, Kosciuszko National Park can increase the quality of water caught in catchments (and hence reduce water treatment bills) by providing filtering services. It also provides a wide diversity and stock of plants and other produce. As well as having current uses, plants provide future option values through new pharmaceuticals and other products.

Placing a value on such ecological functions is not easy. Each value needs a highly specialised study, and is above and beyond the requirements of the current report.

Table 16.3 presents the values developed by Costanza et al. (1997) for various ecosystem services that would be provided by biomes present in the Kosciuszko National Park. Again, for the reasons given above about benefits transfer, it would be inappropriate to expect that the values quoted would be relevant to the Kosciuszko National Park. Therefore no attempt has been made to multiply the unit values by the relevant areas of the Kosciuszko National Park. They are presented only to illustrate the types of values that the Costanza et al. study derived for these types of ecosystem functions. In all cases the unit values have been converted to the value of the Australian currency in 1999.

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\(^{10}\) This is not to suggest that such non-market valuation techniques provide only estimates of intrinsic values. They can also provide estimates of the bundle of non-market values, including option values. Some of the more recent research also captures aspects of direct use values.
<table>
<thead>
<tr>
<th>Ecological function</th>
<th>Forest</th>
<th>Grass/rangeland</th>
<th>Wetland</th>
<th>Lake/river</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas regulation</td>
<td>10</td>
<td>191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate regulation</td>
<td>202</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disturbance regulation</td>
<td>3</td>
<td>6506</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water regulation</td>
<td>3</td>
<td>4</td>
<td>21</td>
<td>7804</td>
</tr>
<tr>
<td>Water supply</td>
<td>4</td>
<td>5447</td>
<td></td>
<td>3034</td>
</tr>
<tr>
<td>Erosion control</td>
<td>138</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil formation</td>
<td>14</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutrient cycling</td>
<td>517</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste treatment</td>
<td>125</td>
<td>125</td>
<td>5987</td>
<td>953</td>
</tr>
<tr>
<td>Pollination</td>
<td></td>
<td></td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Biological control</td>
<td>3</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habitat/refugia</td>
<td></td>
<td></td>
<td></td>
<td>436</td>
</tr>
<tr>
<td>Food production</td>
<td>62</td>
<td>96</td>
<td>367</td>
<td>59</td>
</tr>
<tr>
<td>Raw materials</td>
<td>198</td>
<td></td>
<td></td>
<td>152</td>
</tr>
<tr>
<td>Genetic resources</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td>95</td>
<td>3</td>
<td>823</td>
<td>330</td>
</tr>
<tr>
<td>Cultural</td>
<td>3</td>
<td></td>
<td></td>
<td>1263</td>
</tr>
<tr>
<td><strong>Total value</strong></td>
<td><strong>1389</strong></td>
<td><strong>333</strong></td>
<td><strong>21,191</strong></td>
<td><strong>12,180</strong></td>
</tr>
</tbody>
</table>

Economic reasons for conserving wild nature have also been presented by Balmford et al. (2002).

**Conclusion**

This study has briefly described some of the considerable economic values (environmental, social and financial) associated with Kosciuszko National Park. Some of the values that have been able to be identified include irrigated agriculture, urban and domestic water use, power generation and recreation. In addition, there are large economic values attached to amenity migration, ecological functions and cultural values, but it has not been possible to quantify these.
Description

Although the Kosciuszko National Park has been a key snow-skiing destination for generations of Australians, it is not a designated tourism destination for which data is compiled by tourism agencies such as Tourism New South Wales (NSW) and the Bureau of Tourism Research. Instead, such agencies designate the Snowy Mountains as a tourism region, coinciding with the Australian Bureau of Statistics’ Snowy Mountains Statistical Division, which contains the Local Government Areas of Cooma–Monaro, Snowy River and Bombala.

Visitation data for domestic tourists to the Snowy Mountains tourism region are shown in Table 1 for the years 1998–2001. Although these figures do not relate exclusively to Kosciuszko National Park, the park is the major tourist attraction in the region. The visitation numbers do not display any discernible trend, but tend to vary from year to year in line with snowfall and the quality and length of the ski season. There may be some correlation with the general health of the economy, as domestic tourism tends to be income-elastic1.

Table 17.1 Annual visitor numbers to Snowy Mountains region, 1998–2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Overnight visitors ('000)</th>
<th>Day trip visitors ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>647</td>
<td>195</td>
</tr>
<tr>
<td>1999</td>
<td>620</td>
<td>292</td>
</tr>
<tr>
<td>2000</td>
<td>689</td>
<td>260</td>
</tr>
<tr>
<td>2001</td>
<td>651</td>
<td>272</td>
</tr>
</tbody>
</table>

Source: Tourism NSW

While the park is closely associated with winter sports such as skiing and snowboarding, the 2001 Australian Alps visitor survey conducted by the University of Canberra’s Centre for Tourism Research (Mules et al. 2002) showed that bushwalking, sightseeing and nature appreciation are undertaken by more people. Figure 1 shows the activities undertaken as reported in the survey. One possible reason for the fact that these activities outranked snow-based activities is that multiple responses were possible. This means that a winter visitor who ticked downhill skiing may also have ticked sightseeing. If a summer visitor also ticked sightseeing (but obviously not snow skiing) then overall, sightseeing would outrank skiing.

1Domestic tourism to Kosciuszko National Park would also be affected by the cost of visiting substitute mountain destinations, such as New Zealand and North America, where exchange rate movements play a part. While the exchange rate against the NZ$ has been stable, the US$ rate has declined markedly; given some degree of price response, this should have triggered an increase in domestic ski/snow based visitors to Kosciuszko National Park.
There is some support for the finding that non-snow based activities are popular from the National Visitor Survey ending June 2002 which showed that for all visitors, "rest and relaxation" rated 45%, snow skiing and boarding 37%, and "national parks and forests" 32%. It should also be noted that the high proportion of bushwalkers in the sample which was used for Figure 17.1 may be partly a result of the data collection methods. Experienced regular skiers who had season passes may have missed many of the survey distribution points, thereby possibly under-weighting skiing in the sample.

Included in “sightseeing” in Figure 17.1 would be people who visited the Snowy Hydro Limited’s visitor facilities either within the Park or at Cooma. Data from Snowy Hydro indicate that some 30,000 people visited power stations within the Park in 2002, and 41,200 visited the Cooma Education and Information Centre.

The 2001 survey suggested that winter tourism accounted for some 65% of the annual total, down from 89% in a 1994 survey (KPMG Consulting 1994\(^2\)). Clearly, the park is now an all-year-round attraction, in contrast to the situation in 1994, and the natural and scenic aspects of tourism in the park are rivalling the importance of the snow-based aspects.

Significance

International

The international tourism significance can be thought of in two streams:

- How important an attraction is Kosciuszko National Park to international visitors to Australia?
- How important is Kosciuszko National Park is keeping Australian travellers at home, rather than travelling overseas?

The top 10 places visited by international visitors to Australia are shown in Table 2. The popularity of Sydney and Melbourne is partly due to their gateway status, but international visitors clearly have a preference for capital cities, or non-capital city attractions that are in some way ‘special’; for example, tropical North Queensland. Kosciuszko National Park is not in the top twenty destinations for international visitors to Australia.

\(^2\) Both surveys were comprehensive random samples, and so should provide estimates of parameters of the visiting population. The differences between the two samples are also too large to be explained by sampling variation.
While some may argue that Kosciuszko National Park is ‘special’ in an international setting, perhaps for scientific uniqueness, this does not translate into significance for international tourism. As a mountain destination, Kosciuszko National Park competes internationally with the Himalayas, the Southern Alps of New Zealand and various European and North American alpine regions. The height and extent of the Australian Alps pale by comparison with these international destinations. As a result, only 6% of the visitors to Kosciuszko National Park in 2001 were international tourists (Mules et al. 2002). Thus it cannot be argued that Kosciuszko National Park is of international tourism significance in terms of attracting visitors to Australia. This is a reflection of its relative insignificance on the world scale of mountain destinations, rather than an issue of cost, and it is difficult to imagine any level of promotion that would alter this situation.

Table 17.2  Top 10 destinations for international visitors to Australia, 1999

<table>
<thead>
<tr>
<th>Destination</th>
<th>Percentage of international visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney</td>
<td>55.5</td>
</tr>
<tr>
<td>Melbourne</td>
<td>24.4</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>21.4</td>
</tr>
<tr>
<td>Tropical North Queensland</td>
<td>18.4</td>
</tr>
<tr>
<td>Brisbane</td>
<td>17.2</td>
</tr>
<tr>
<td>Perth</td>
<td>12.7</td>
</tr>
<tr>
<td>Adelaide</td>
<td>7.2</td>
</tr>
<tr>
<td>Petermann, Northern Territory (including Uluru and Yulara)</td>
<td>6.2</td>
</tr>
<tr>
<td>Alice Springs</td>
<td>5.5</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Source: Bureau of Tourism Research (2001)

Similar considerations apply to retaining Australians who might otherwise travel overseas. While there are no official data on outbound Australian travel to mountain destinations, there is anecdotal evidence that Australians do travel to New Zealand and to North America for skiing and hiking, and to the Himalayas for trekking and climbing.

The general impression obtained from talking to skiers and trekkers is that Kosciuszko National Park is not world class in terms of either mountain activities or facilities. Problems that are often cited with Kosciuszko National Park include:

- high cost of accommodation and ski lift tickets;
- lack of dependable snow;
- lack of developed walking/trekking trails;
- altitude (lack of).

There may be some ‘cultural cringe’ in Australians’ attitudes to their own mountain destinations. Further research is needed into the outbound Australian travel market to determine the extent to which Kosciuszko National Park is seen as a potential substitute for travel to foreign mountain destinations.

Domestic

Kosciuszko National Park and the Victorian Alps are the only two alpine tourism destinations in Australia. While parts of Tasmania may lay claims, only Kosciuszko National Park and the Victorian Alps have well developed ski fields with on-mountain accommodation and significant tourism visitation all year.

However, as is shown in Table 3, Kosciuszko National Park does not rate in the top 10 tourist destinations for Australian domestic tourism. Part of the reason for this is that business tourism is always going to be dominated by capital city visits; also, a lot of Australian holiday tourism is beach related - 38% of Australian domestic holiday travellers list the beach as a destination/activity and 11% list visiting a national park (Bureau of Tourism Research 2002).
Table 17.3 Top 10 Australian domestic tourism destinations, 2000

<table>
<thead>
<tr>
<th>Destination</th>
<th>Percentage of domestic visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney</td>
<td>11</td>
</tr>
<tr>
<td>Melbourne</td>
<td>8</td>
</tr>
<tr>
<td>Brisbane</td>
<td>6</td>
</tr>
<tr>
<td>Gold Coast</td>
<td>5</td>
</tr>
<tr>
<td>Hunter region</td>
<td>4</td>
</tr>
<tr>
<td>Adelaide</td>
<td>3</td>
</tr>
<tr>
<td>Sunshine Coast</td>
<td>3</td>
</tr>
<tr>
<td>Perth</td>
<td>3</td>
</tr>
<tr>
<td>South Coast NSW</td>
<td>3</td>
</tr>
<tr>
<td>Canberra</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Bureau of Tourism Research (2002)

In a tourism sense, it could not be said that Kosciuszko National Park is a destination of major national significance, at least in terms of the number of visitors. Estimates by the Centre for Tourism Research at the University of Canberra (Mules et al. 2002) put the total number of visitors in 2001 at 1,001,500. By comparison, the south coast of NSW attracts 4,934,000 and the Hunter region attracts 8,332,000 visitors per year (Tourism NSW data). These figures include domestic overnight visitors, international visitors and day trip visitors.

The domestic tourism significance of Kosciuszko National Park lies not in the total number of visitors who are attracted to it, but in the uniqueness of the tourism experience. It is one of the few areas of Australia where people can experience the unique climate, scenery, history and danger of an alpine destination.

Impact

As the previous section has shown, Kosciuszko National Park is primarily a domestic tourist destination. Of the one million annual visitors, some 335,000 are from interstate, and it is the expenditure of the interstate tourists that drives the economic impact of Kosciuszko National Park tourism on the economy of NSW. Expenditure by visitors who are NSW residents is transferred from elsewhere in the state and therefore provides no gain in state economic activity.

Mules et al. (2002) estimated that interstate visitors’ expenditure generated $150 million of gross state product in 2001, and that this was responsible for 2300 jobs, in full-time-equivalent terms. Some 65% of this economic activity was generated by the expenditure of winter visitors. Thus, although snow-based activities were outranked by scenic attractions in the park, the winter expenditure was responsible for almost two-thirds of the economic impact.

The size of the impact of tourism on the state economy depends upon three factors:

- the number of non-resident visitors
- the total expenditure of the non-resident visitors
- the pattern of this expenditure.

The pattern of expenditure is important, because if visitors tend to spend money on goods that are produced outside of the state, the economic impact will be less than if the expenditure is on goods produced within the state. Table 4 below shows the estimated expenditure pattern from the 2001 survey (Mules et al. 2002). As is the case with most studies of tourism’s economic impact, the largest expenditure item is accommodation. Because this item is site specific, it cannot be imported into the state, and this illustrates why tourism is generally very efficient at generating economic impacts.

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3 There is a conventional wisdom that the park attracts around 3 million visitors per year. However, this figure would seem to be visitor-nights rather than visitors, since Tourism NSW figures put the annual number of domestic visitors, including day-trippers and international visitors, to the Snowy Mountains region at 956,000 in 2001, and the average length of stay is 3.3 nights.

4 This is a deliberately conservative position, since if New South Wales residents were to go interstate or overseas instead of to Kosciuszko National Park, state economic activity would decline.
Table 17.4  Total expenditure by visitors to Kosciuszko National Park, 2001

<table>
<thead>
<tr>
<th>Expenditure item</th>
<th>Total visitor expenditure ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation</td>
<td>28.05</td>
</tr>
<tr>
<td>Food and drink</td>
<td>15.73</td>
</tr>
<tr>
<td>Transport</td>
<td>11.91</td>
</tr>
<tr>
<td>Park entry fees</td>
<td>3.96</td>
</tr>
<tr>
<td>Lift tickets, fishing licences, etc</td>
<td>23.26</td>
</tr>
<tr>
<td>Shopping, ski hire</td>
<td>14.61</td>
</tr>
<tr>
<td>Entertainment, gambling</td>
<td>7.16</td>
</tr>
<tr>
<td>Other</td>
<td>6.03</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>110.73</strong></td>
</tr>
</tbody>
</table>

**Condition**

The condition of the park as a tourist destination is difficult to assess, depending to some extent on the views of visitors on questions such as quality of accommodation, transport, signage, attractions (including scenery), accessibility, restaurants, shopping, and entertainment. The park may have some outstanding sites for tourists, but if they are difficult to find or access, or are poorly maintained, then the tourism condition would be given a low rating.

The park attracts a wide cross section of visitor types, from downhill skiers to back country hikers, and they are likely to have different views about the importance of the attributes that comprise a tourist destination. Research on such matters has never been carried out, with the past research emphasis in Kosciuszko National Park being scientific and ecological in its orientation. Now that the park is a year-round tourist destination, it is timely for more research to be done on the tourism attributes of the park.

Such research would yield information on the condition of both the human-made and natural features of the park, as perceived by park visitors. ‘Condition’ in a tourism sense is a relative concept, and tourists make destination choices between different destinations based on differences in the destinations’ attributes. For example, the quality, modernity and price of accommodation are all part of the way in which tourists compare accommodation at different destinations. Similar considerations apply to other features such as roads, signs and picnic and camping areas.

One measure of condition where there has been some limited research is ‘consumer surplus’. Each user of the park for tourism derives pleasure/satisfaction from their visit, and in most cases the value of the satisfaction exceeds the cost of visiting the park, where ‘cost’ includes not only entry fees, but also cost of travel to the park and return. This excess is the consumer surplus.

Economists use a method called ‘travel cost’ to derive the demand/cost relationship for visitors. From this relationship it is possible to estimate the annual dollar value of the consumer surplus for all Park users. If the assumption is made that this value will continue indefinitely, then a present value of the flow of consumer surplus can be calculated using a social discount rate. This value could be regarded as a monetary measure of the condition of the park, for if the condition were to deteriorate, so too would the consumer surplus.

Mules et al. (2002) estimated the consumer surplus under a range of assumptions about travel cost per person per kilometre, and for a range of different demand functions. The study’s preferred range was between $102 million per year and $458 million per year, with the ‘middle of the road’ value being $280 million. The present value to perpetuity of this annual flow, using a 6% social discount rate is $4943 million. In round terms this means that the recreational use value of the park is just under $5 billion.

**Trend in condition**

According to the two studies that have been carried out into the economic impact of tourism in Kosciuszko National Park (KPMG Consulting 1994; Mules et al. 2002), the economic impact of tourism to Kosciuszko National Park has increased from $137.3 million in 1994 to $150.21 million in 2001 (in nominal terms). This represents a compound growth rate of 1.3% per year, which is less than the rate of inflation (around 3%) and below the general growth rate in the economy (around 4%), but is in line with the growth in Australian domestic holiday tourism (1.1% per year according to the Tourism Forecasting Council (2002)).

The other trend that is observable from the two studies is that the seasonal pattern of tourism is changing from 89% winter in 1994 to 65% winter in 2001. This trend towards the park being an all-year tourism destination is partly due to the deliberate strategy of tourism operators to develop non-winter activities such as mountain bike competitions, mountain running competitions and jazz festivals. However, there has been a world wide increase in nature-based tourism over the past two decades, and the increase in summer tourism may be partly attributable to this trend.
The trend towards summer tourism has implications for the economic impact and commercial yield of tourism in the park. The 2001 study (Mules et al. 2002) estimated average expenditure per person by summer visitors to be $268, and by winter visitors to be $700. Thus, in economic terms, each winter visitor is worth almost three summer visitors. The two are not mutually exclusive of course, and it is possible for operators to even out their seasonal cash flow by developing summer tourism with no loss of winter tourism.

There are three trends in the Australian tourism industry that have implications for tourism in the park:

- International inbound tourism is the high growth area in Australian tourism, and is doubling in size every ten years. Kosciuszko National Park’s low share of international tourists means that the park’s tourism operators benefit very little from that growth.
- Kosciuszko National Park’s current market segment is domestic tourism, which nationally is languishing. Its growth, approximately 1% per year, is slower than the rate of growth of population and the rate of growth of the economy.
- Australian outbound tourism is growing at approximately 6% per year. The mountain/nature oriented segment of this growth represents potential for Kosciuszko National Park tourism operators.

Pressures

Pressures on a tourism destination may arise because of new competition from other destinations; from internal sources such as failure of the destination to keep pace with customer demand; or from changes in the external tourism environment. To our knowledge, there has been no research on visitors’ satisfaction with aspects of their visit to Kosciuszko National Park, and so no conclusions can be drawn on the matter of customer perspectives.

There is clearly some tension between the conservation objective and the tourism use objective of the park, and decisions on park conservation may always have implications for the tourism use. However, the greatest pressure on the tourism industry in and around the park is from competition from other destinations, especially skiing and mountain destinations. There has been no competitor analysis research done, to our knowledge, for Kosciuszko National Park as a tourism destination.

Future snowfall, and how global warming will affect it, is clearly a threat to the tourism industry in the region. The response of the industry to date appears to be to invest in snow-making technology and infrastructure.

Opportunities

The emergence in recent years of summer tourism in Kosciuszko National Park, and the plans by the operator at Perisher Valley for an all-year tourism village, indicate where the tourism opportunities lie in the near future. More research is needed on the capacity of the park to handle the various segments of the summer market (e.g. fishing, bushwalking, camping), and on the investment and infrastructure needed if that market is to develop further.

The great challenge for the tourism industry in and around the park is to develop a niche in the international visitor market in Australia. It is this market which is highest in yield and potentially highest in growth. Both Canberra and Kosciuszko National Park are similarly afflicted with their inability to attract a significant share of this market, and there may be synergies to be gained in marketing and travel logistics.

The same synergies may apply in the educational tourism market, where over 120,000 school children per year already visit Canberra on a school excursion. The park has numerous educational aspects, such as ecology, geology, history and science, which could form part of a linked educational excursion to Canberra, where the educational focus is civics and society.