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SLOPES: Information session invitation to review of environmental carrying capacity in the alpine resorts - Jindabyne on 3 March 2016

SLOPES <slopes.au@gmail.com>
Bcc: frank.zipfinger@gmail.com

24 February 2016 at 17:48

Dear SLOPES Members

We forward this email for your information.

Also attached for your assistance is a copy of the background paper referred to in the invitation. We will provide some comments soon in a separate email.

We have responded to NPWS saying that this short period of notice for a meeting in Jindabyne on 3 March is not conducive to a reasonable consultation process.

It would assist SLOPES in co-ordinating a further response to NPWS if Clubs could indicate whether they are planning to send representatives to this meeting.

Regards

Frank Zipfinger
President
SLOPES

----- Forwarded message -----

From: **Susan Learmont** <Susan.Learmont@environment.nsw.gov.au>
Date: 19 February 2016 at 17:01
Subject: Information session invitation to review of environmental carrying capacity in the alpine resorts
To:

Dear Stakeholder

As indicated in my letter of 15 February 2016, the first stage of community consultation for the review of environmental carrying capacity in the alpine resorts of Kosciuszko National Park is underway.

Attached is an invitation to the information session to be held in Jindabyne on Thursday 3 March.

Susan Learmont
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Southern Ranges Region
NSW National Parks and Wildlife Service

Office of Environment and Heritage

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**Environment,
Climate Change & Water**
National Parks & Wildlife Service



For Mick Pettitt

Regional Manager

Southern Ranges Region

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2 attachments

Invitation to Info Session -Stage 1 - Carrying Capacity.pdf
153K

160119-alpine-carrying-capacity-background-paper.pdf
306K



19 February 2016

Kosciuszko National Park plan of management – review of environmental carrying capacity in the alpine resorts - Stage 1 community consultation

INVITATION TO INFORMATION SESSION
Thursday 3 March 5pm to 7pm
Rydges Horizons
10 Kosciuszko Road, Jindabyne

Dear Kosciuszko National Park stakeholder,

As indicated in my letter of 15 February 2016, the first stage of community consultation for the review of environmental carrying capacity in the alpine resorts of Kosciuszko National Park is underway.

I am now writing to invite you to an information session on Thursday 3 March 2016 between 5 and 7pm, to be held at Rydges Horizons, 10 Kosciuszko Road, Jindabyne. The session will provide an introduction to the review, the issue of carrying capacity, and alternative approaches to the current use of limits on overnight bed numbers.

The session will be hosted by National Parks and Wildlife Service. There will be opportunities for informal discussions with NPWS staff, viewing of information material, and to ask questions following a short presentation. Refreshments will be provided.

If you have not already done so, I would be grateful if you could RSVP to carryingcapacity.npws@environment.nsw.gov.au. Please advise us of any special needs you may have.

For more information on carrying capacity

To assist people in understanding the issue and what some of the potential alternative options could be, a background paper and information on the review and consultation process is available at: <http://www.environment.nsw.gov.au/alpineresorts/alpine-carrying-capacity-consult.htm>.

If you have any questions about the review of carrying capacity or the upcoming information session, please do not hesitate to send a request to carryingcapacity.npws@environment.nsw.gov.au.

Perisher Range and Charlotte Pass Resorts Review

NPWS is also concurrently undertaking this review into the best management model to provide day-to-day operational management of the resorts and increase investment to build year-round visitor activities. Details of the opportunities to provide feedback into this review will be available soon.

If you are interested in participating or would like further information please email: resort.consultation@environment.nsw.gov

I hope you are able to accept this invitation to attend the information session on the review of environmental carrying capacity. I look forward to seeing you on 3 March.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Mick Pettitt', with a large, stylized initial 'M'.

MICK PETTITT
Regional Manager
Southern Ranges Region
National Parks and Wildlife Service



Office of
Environment
& Heritage

Carrying Capacity in the Alpine Resorts of Kosciuszko National Park: Background paper

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Overview

The alpine resort areas of Charlotte Pass, Thredbo, Selwyn and Perisher Range occupy less than 1% of Kosciuszko National Park but are the most popular visitor destinations. They also support a range of significant natural and cultural values, including important protected habitat for endangered plants and animals such as the mountain pygmy possum, montane skink and alpine bogs. The NSW alpine resorts attract many hundreds of thousands of visitors per year, with more than half visiting during the four months of winter. People go to the resorts to experience and enjoy a diverse range of recreational activities in a spectacular alpine setting, increasingly during the summer months.

Sustainable management of the resorts poses unique challenges not faced elsewhere in the park. These challenges include major seasonal peaks in the number of visitors, the need to provide a range of infrastructure in resort areas, changing visitor expectations and operational constraints in a harsh and variable climate. Underpinning all considerations is the need to ensure the outstanding natural and cultural values of the park are maintained and will endure for the benefit of current and future generations.

In responding to these challenges NPWS is guided by the principles of sustainable development including the precautionary principle, together with recognition of social and economic aspirations. An adaptable approach is required to ensure that systems are in place to minimise and respond to any risks of serious or irreversible environmental harm arising from both human activities and natural events in the park.

This paper addresses the commitment in the Kosciuszko National Park Plan of Management to investigate mechanisms for establishing, measuring and regulating environmental carrying capacity within the alpine resorts.

The environmental carrying capacity of an area is the scale of human activity that can occur without degrading the environment beyond an acceptable level.

In this sense, the 'environment' includes biological, physical and social factors. For example, waterways, wildlife, habitats, landscapes, cultural heritage values, sustainability outcomes (e.g. for waste, energy, recycling) and visitor experiences.

It is recognised that the current approach of limiting the number of people that can stay overnight in each resort area – referred to as 'bed limits' or 'bed numbers' – may not accurately determine whether current and future visitation and resort operations are compatible with conservation of the park's values.

This paper:

1. examines the background to using bed limits to guide current and future resort operations
2. summarises research and international experiences in setting and managing environmental carrying capacity in national parks
3. outlines the opportunities for alternative performance-based approaches that could be used in the Kosciuszko alpine resorts, and how they could be implemented.

1. Sustainable visitation – how has conservation and visitation been managed in the alpine resorts?

Finding the right balance between visitor use and the protection of the environmental values that attract visitors in the first place is a feature of the Kosciuszko National Park Plan of Management. The plan recognises the full range of outstanding conservation, community and recreational values present in the park, and identifies the alpine resorts as providing recreational opportunities of exceptional significance. The NSW Government is determined to ensure that economic and social benefits continue to flow from visitation to the resorts without comprising the environment.

A primary way sustainable visitation and environmental management in the resorts has been managed is by the use of fixed limits on bed numbers. Bed numbers are a straightforward and easily understood means to control the number of people and their impacts in an area. In addition to this approach, research, monitoring and observation of key environmental attributes (such as water quality and quantity, pest, weeds, erosion and threatened species) have also been undertaken in specific locations. This combination of bed limits and the tracking of key issues has evolved over time, and provided context to the 2006 plan of management. More recently, NPWS has supported the resorts in implementing environmental management systems (EMS) as directed by the plan of management.

Furthermore, assessment of development proposals within the resorts is dealt with through the framework of the *Environmental Planning and Assessment Act 1979* and via the provisions of *State Environmental Planning Policy (Kosciuszko National Park – Alpine Resorts) 2007*. Other environmental protection legislation also applies.

However, the ongoing and day-to-day environmental oversight of resort operations now occurs primarily through the EMS. The requirement for annual EMS reporting in each resort is set out in the current plan of management. Since 2010–11 the National Parks and Wildlife Service (NPWS) has published a combined annual report that outlines the environmental performance, achievements and initiatives of all the resort operators.

In the current plan of management, Schedule 8 provides an overall limit on combined total bed numbers for the resorts, together with limits for each individual resort. The plan of management also sets out a range of matters that need to be addressed before an increase may be considered. This includes a requirement to assess alternative ways of measuring and regulating carrying capacity – the catalyst for this project.

While bed numbers have been a useful and straightforward mechanism to limit the resorts overnight visitation and ecological footprint, they do not necessarily provide a strong indication of the overall environmental outcomes of resort operations. This shortcoming was recognised during development of the 2006 plan of management. Although there is scientific research and monitoring undertaken in and around the resorts every year, the specific relationship between bed numbers and environmental conditions remains unclear. Also, current approaches do not take into account the large number of day visitors.

2. Alternative methods and approaches for establishing carrying capacity – what have others tried?

2.1 History of carrying capacity

The concept of a visitor carrying capacity for natural areas used for recreation has been discussed in conservation literature since the 1930s. By the 1960s it was understood that not only were ecological values at risk from overuse, but so was the quality of the park visitor experience. Over time, further research emerged to expand the consideration of carrying capacity to take account of the resourcing, legal and policy context within which park managers must operate. By the 21st century it was apparent that carrying capacity approaches based solely on visitor numbers were inadequate in addressing the full range of factors affecting the sustainable management of popular conservation areas.

The limitations of an approach based solely on visitor numbers include:

- it assumes a stable and unchanging natural system, and does not account for complex environmental, social and economic factors
- different carrying capacities may be required for different times and places, undermining the practical utility of using a single number as a cap
- in many recreation management situations impacts may be more a function of *visitor behaviour or type of infrastructure development* than just visitor numbers
- it is a technical approach to addressing issues arising from competing values, and may provide little scope for public engagement and understanding
- in a built environment the relationship between visitation and environmental conditions is difficult to discern.

2.2 Evolution of carrying capacity frameworks

A large number of carrying capacity assessment and management frameworks were developed from the 1980s onwards. Mostly emerging in the United States, they were driven by efforts to enhance visitor opportunities in conservation areas while protecting environmental values. Key examples include the following.

- **Recreation opportunity spectrum** was developed by the US Forest Service and Bureau of Land Management in response to legislation that called for an integrated and comprehensive approach to natural resource planning. It is primarily a tool for identifying and determining the diversity of recreation opportunities that a natural area can provide. It does not directly consider impacts on natural values but can be a starting point for analysis. It is based on the idea that visitor experience is best assured by providing an array of opportunities suited to the full range of expected visitors.
- **Visitor activity management process** was developed by Parks Canada in the late 1980s, incorporating the principles of the recreation opportunity spectrum. It primarily provides guidance for new visitor opportunities in new, developing and established parks. It remains in use and is highly regarded.
- **Limits of acceptable change** was developed by the US Forest Service and aims to inform decisions on appropriate and acceptable natural resource and social conditions, especially in remote areas. The framework deals specifically with the issue of how much use of an area can or should be tolerated as informed by visitor survey and stakeholder engagement.
- **Visitor impact management** is a variant of limits of acceptable change developed by the American-based National Parks and Conservation Association. It attempts to

refocus the emphasis on management of impacts and away from visitor number limits.

- **Visitor experience and resource protection** was also developed in the US by the National Parks Service and continues to be used and further developed. It is an analytical, iterative process that attempts to bring both management planning and operational planning together in an integrated way.
- **Tourism optimisation management model** is an Australian approach developed on Kangaroo Island in the late 1990s as a management model for sustainable tourism.

Such frameworks originated to enable optimum levels of visitation to natural areas while mostly maintaining landscape conditions in a state *acceptable to visitors*. A range of shortcomings of these early frameworks have been identified. They include:

- what is acceptable to visitors may not be acceptable to the wider community
- visitor behaviour can be as critical, or more critical, than visitor numbers
- each and every situation is unique and generalities are few
- finding suitable indicators to monitor environmental condition is difficult
- monitoring is expensive and difficult to achieve over long periods
- community consultation is time and resource hungry
- community sentiment can change.

2.3 Current best practice

Approaches to determining environmental carrying capacity in conservation areas have evolved over time as our understanding of visitor expectations and recreation ecology has improved, and our knowledge of the values and benefits that natural areas provide has expanded. This layering of values presents a challenge for park managers who must set appropriate capacity thresholds that are objective, meaningful, capable of practical measurement and are responsive to management actions.

More recently in response to the shortcomings of earlier approaches, carrying capacity frameworks are being revised to include more practical and pragmatic monitoring of parameters which act as viable surrogates for environmental condition. Current protected area research supports the use of these new performance-based approaches to managing carrying capacity in conservation areas. Well-delivered frameworks are crafted to local conditions and incorporate an adaptive approach to management – one that assimilates stakeholder views, reconciles any lack of information and responds to changing conditions.

The International Union for Conservation of Nature (IUCN) acknowledges the benefits of such frameworks. Protected area governance projects supported by the IUCN have emphasised that systems for managing carrying capacity should be designed to suit local conditions, include stakeholder views, aim to overcome information gaps, and be adaptable to changing conditions (Worboys *et al.* 2015).

Park management agencies around the world continue to explore and advance a range of different performance-based approaches to set appropriate carrying capacities to guide human uses in conservation areas.

Specific examples applicable to the alpine environment include:

- ski area planning guidelines in Canada's national parks, which align and integrate ski area expansion and local conservation planning
- environmental management planning for the US Glacier National Park
- park plan of management provisions for Tongariro National Park, New Zealand.

More generally in Australia, park authorities have also sought to develop planning and assessment guidelines to support decision-making on new on-park tourism and visitor facilities. Examples include the Queensland National Parks Ecotourism Guidelines, West Australia's Nature Bank initiative, and the Sustainability Guidelines for Visitor Use and Tourism in NSW National Parks.

Overall, several key themes emerge from the research and practical experiences of setting visitor and recreational management limits in conservation areas. These are the need to be clear on:

- the social, economic and environmental outcomes desired
- mechanisms to be used to find an optimum solution
- measures that support the objectives being achieved
- the adaptive management required to ensure continued success in a changing world.

It is clear that establishing an environmental carrying capacity for a place requires consideration of its specific circumstances and, where possible, should not be reduced to just a single, overall cap or threshold on visitor numbers. Best practice recognises that a hard visitor limit is sometimes required for specific local situations, such as for sensitive natural or cultural heritage sites. However, while a maximum visitor number retains some value as a broad indication of the scale of a proposal and its effect on environmental quality, and is essential to inform requirements for utility infrastructure and managing public safety, it should be complemented by a range of other measures that better reflect the environmental, social and economic context.

3. Future directions

3.1 Moving towards a performance-based approach

The alpine resorts are the most significant built visitor assets in Kosciuszko National Park. NPWS accepts that the resorts need to evolve as new opportunities emerge to provide higher quality visitor experiences, deliver enhanced economic outcomes, and meet current and future environmental standards and visitor expectations. Renewal of the resorts is expected to occur over time, involving retirement of assets no longer fit for purpose, construction of new facilities, and revitalisation of recreation facilities.

Schedule 7 of the Kosciuszko National Park Plan of Management sets out a future context for the alpine resorts that recognises their economic contribution and likely opportunities for enhancement and further development. This is guided by sustainability principles, the need to educate and inform the visiting public on the park's exceptional natural and cultural values and the need to protect these values. It is appropriate then that opportunities to further develop the potential of the resorts along these lines continue to be investigated.

Moving towards a performance-based approach to environmental protection in the alpine resorts would be consistent with current NSW Government commitments to better targeted regulation, taking into account risk to the environment and the economic and social and needs of business and the community. Such an approach should support growth in business investment, regional employment and recreational opportunities. It should better protect the natural environment and improve transparency and availability of information. A move to performance-based environmental management in the alpine resorts should also improve certainty for investors by providing clarity on expected environmental outcomes and compliance regimes.

The dynamic nature of the natural environment and changing community attitudes underscores the need for park management to be capable of adapting and evolving to take

advantage of opportunities and new ways of thinking as they arise. A key challenge in establishing an environmental carrying capacity framework is to identify a suitable set of parameters that adequately represent the environmental health of the resort area, and which can be monitored against acceptable thresholds that are readily measurable and meaningful.

Expanding on the criteria set out in the plan of management, key parameters that merit consideration may include:

- water quality and stream condition
- soil and landscape condition
- native flora and fauna
- Aboriginal and historic heritage
- aesthetic and amenity values
- park visitor enjoyment
- infrastructure capacity
- sustainability, (e.g. management of waste, water, energy and transport).

One current example of an outcomes-based approach to environmental management already being used in the resorts is the maintenance of water quality in rivers and streams passing through resort areas. Because of the significant potential for pollution from fuel storage, stormwater and sewage, thresholds for standard water quality indicators have been set and resort managers are responsible for achieving these via licensing arrangements.

This example highlights the advantage of performance- and outcomes-based approaches, in particular, the clarity they provide on the specific environmental parameters that are to be managed and to what level. Most importantly, they place less emphasis on the process by which outcomes are met, and more on allowing flexibility in applying different management techniques and methods to achieve the end goal. They also provide a clearer basis for public reporting of environmental performance and adaptive responses to monitoring outcomes.

3.2 Possible delivery mechanisms

The environmental management systems (EMSs) currently operated by the alpine resorts offer one obvious mechanism for delivering monitoring and management of any acceptable environmental thresholds. Resort EMSs already effectively manage achievement of waste, energy and water consumption targets and other sustainability objectives. As noted above, NPWS annually collates and reports on the condition of the resorts based on information provided through each resort's EMS. These existing frameworks provide a valuable starting point for building a future comprehensive approach to managing environmental performance and monitoring.

It is recognised that the EMSs are a work in progress. For example, at this time not all environmental parameters have targets, not all are reported on across all areas, and there is sometimes no established baseline to report against.

Performance-based mechanisms that include ways for resort operators, stakeholders and park managers to determine the most suitable approaches to achieving agreed thresholds are preferred. This is consistent with emerging and best practice, which emphasises the selection of thresholds for a range of biophysical and social parameters that are fit-for-purpose, measurable, responsive and achievable in the circumstances.

Regardless of what specific approach to setting and managing carrying capacities in the resorts is decided upon, it is clear that collaboration on environmental management will continue to be required between the NPWS and resort operators. Agreed arrangements for collaboration will also need ongoing refinement to ensure on-ground responsibilities are clear and transparent.

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