an assessment of the...
values of
Kosciuszko National Park
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The Independent Scientific Committee (ISC) presents this report as a contribution to the review of the Kosciuszko National Park Plan of Management and to guide ongoing management of the park. The ISC was formed to report on the park’s values, their significance and condition, the way in which they should be monitored, the pressures on them and knowledge gaps.

This report states why the park is important. The values assessed were natural and cultural heritage, social, recreational, tourism and economic. The natural ecosystems and landscapes are fundamental to the park’s values and, importantly, they provide the setting and the context for the cultural heritage values. The natural and cultural values are the core values on which the social, recreational, tourism and economic attributes depend.

This report includes chapters on the individual values and an integrated statement of its significance. It does not attempt to include all of the vast data on the park, much of which is contained in other documents.

Many of the values identified by the ISC are of international or national significance. The Park has been recognised at international level by listing as a United Nations Educational, Scientific and Cultural Organization (UNESCO) Biosphere Reserve, and by the World Conservation Monitoring Centre as one of the 167 world centres of biodiversity. Blue Lake is a wetland of international importance under the Ramsar Convention.

The ISC found that very few large natural protected areas such as Kosciuszko National Park remain in temperate Australia, where the natural dynamics of ecological processes can still occur without significant human intervention. Kosciuszko National Park forms the central segment of the Australian bioregion that supports all the alpine ecosystems and endemic species found on the Australian mainland. The park forms about half of the area of the Australian Alpine National Parks system and its national significance is enhanced by its connection with other large natural areas in Victoria and the Australian Capital Territory.

The park provides ecosystem services that are nationally valuable: its soils and catchment provide clean water to southeastern Australia, and its large tracts of forest contribute to reduced risk of climate change by sequestering carbon.

There have been significant changes since the 1982 Kosciuszko National Park Plan of Management was developed. These include future climate change, the rate and spread of development within the park, the availability of new technology, socio-economic changes and much greater recognition of cultural values. The ISC found that, while many values were in good and stable condition, various pressures could lead to degradation of significant values if not adequately managed. Such pressures include the expansion of development, imposition of inappropriate fire regimes, increase in summer visitation, possible climate change and introduced plants and animals.

As the ISC undertook its review, a parallel process was underway involving Aboriginal people with connections to the park, to identify the Aboriginal values of the park and their management. Therefore, the ISC has not addressed these values in detail.

The ISC is aware that the park holds much more information than is yet known. This is illustrated by continued recording of previously undocumented plants and animals, and new perspectives on cultural values and the recent International Year of the Mountains (IYM) conference. A process for continual updating of knowledge is needed to assist conservation management.

The importance of Kosciuszko National Park is the sum of all of the values identified in the ISC report, plus others not explicitly discussed here. All of these values are worthy of being conserved.
Map 1.1 Location of Kosciuszko National Park
Kosciuszko National Park

Kosciuszko National Park, which encompasses 690,411 hectares, is the largest national park in New South Wales (NSW) and one of the largest conservation reserves in Australia. It is contiguous with other Australian Alps national parks (refer to Map 1.1). Located in the southeastern corner of the state, the park straddles the Great Dividing Range, here known as the Snowy Mountains. It contains a diverse array of montane landscapes, each of which has been shaped by a series of natural and cultural influences, and each of which holds a range of distinctive natural, cultural, social, recreational and economic values.

The park contains the highest mountains in what is the flattest of continents. Although most of these mountains are subdued and rounded features, with few rising above 2000 metres in altitude, they constitute the principal seasonally snow-covered region in Australia. They also exhibit a suite of glacial features and possess an exceptional diversity of alpine plant communities and species that provide habitats for a number of rare and unusual animal species. Elsewhere, the park contains significant karst systems, deep river valleys and frost hollows, and vegetation communities ranging from snowgum woodlands and subalpine grasslands, to extensive eucalypt forests, pockets of cool temperate rainforest and stands of native cypress pines.

All of these environments have been subjected to varying degrees of human modification for thousands of years. Aboriginal people were supplanted by European explorers and surveyors, graziers, prospectors, miners, timber workers, scientists, construction workers, soil conservationists and recreationists. All have left tangible evidence of their passing including stone artefact scatters, campsites and ceremonial grounds, town and mine sites, dams and fence lines, networks of roads and tracks, power stations, dams, tunnels and aqueducts. Their endeavours have also created a rich legacy of stories, experiences and memories, strands of which have been recorded in literature, poetry, paintings and song. In some cases, the mountains, their people and their exploits have become part of Australian folklore and helped shape national identity.

Kosciuszko National Park is centrally located in the most densely populated part of Australia, with some parts of the park within a 500km radius of about 8 million people (Sydney, Canberra, Melbourne and surrounds). Visitor activities include cross-country skiing, car and bus-based sightseeing, bushwalking, fishing, horse riding, canoeing, cycling, caving, and alpine skiing and snowboarding at the various ski resorts located within the park.

The responses of people to this place are many and varied. For visitors, it can evoke a sense of renewal and wellbeing, achievement and satisfaction, exhilaration, connection or wonder. For those with historical connections it may elicit emotions of pride, belonging, loss and lament, or sentimentality. Whatever the attachment, or motivation for visiting the place, many people cherish Kosciuszko National Park as a very special place with significant values worthy of protection.

The review process

In February 2001, the NSW Government announced that the Kosciuszko National Park Plan of Management would be reviewed. The plan has not been reviewed as a whole since its initial preparation over 20 years ago, and in the intervening period there have been significant changes in knowledge about the park, recreation patterns, the social and economic environment, community values and legislation.
The revised plan of management, which will build on the existing plan, will contain the vision for the protection of the park for future generations and be the blueprint for management over the next 15-20 years. It will outline the park’s significance, the pressures it faces and the challenges ahead, allow decisions to be based on the best available knowledge and research, and facilitate and encourage interested organisations and individuals to participate in the planning process.

The Independent Scientific Committee

As part of the review process for the new plan of management for Kosciuszko National Park, an Independent Scientific Committee (ISC) was formed to provide the National Parks and Wildlife Service (NPWS) with independent and objective advice on the values of the park. The committee brought together prominent scientists and experts in disciplines concerning protected areas, who were asked to advise on the natural, cultural, recreational, economic and social values of the park. Expertise from a range of disciplines was needed, given the diverse range of values that Kosciuszko National Park possesses and the new legislative responsibilities for park planning in the National Parks and Wildlife Amendment Act 2000. This report, enhanced by comments from the public, is thus a collective effort that combines the results of individual knowledge and expertise.

The report describes the different values of the park, and provides an independent assessment of their significance, condition, trend in condition, pressures, opportunities, knowledge gaps and indicators. This information will assist the review of the plan of management by providing a reference point from which to work, and by providing key findings and recommendations that should be adopted in the revised plan.

The committee has attempted to articulate in a rigorous manner the values of Kosciuszko National Park. It is hoped that by conveying all of the park’s special values in a single document, the community will be encouraged to continue to protect and enjoy this marvellous place.

Figure 1.1 Plan of management review process

```
| Background - Define framework for review – NPWAct and previous decisions made by Govt |
| Identify and define natural, cultural values including: economic, social and recreational values |
| Determine the condition of the park’s values, their significance & threats to natural and cultural integrity |
| Define vision & objectives for future management according to the NPWAct, identify issues associated with achieving vision & objectives based on values. Define structure of the Plan. |
| Define options and strategies to address issues |
| Prepare, Finalise and Exhibit Draft PoM |
| Review Submissions and Finalise PoM |
| Ministerial Approval/Gazettal |
| Implementation |
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BROAD COMMUNITY INPUT

INDEPENDENT SCIENTIFIC COMMITTEE

COMMUNITY FORUM

BROAD COMMUNITY INPUT

COMMUNITY FORUM

BROAD COMMUNITY INPUT

NPWS Advisory Council & Committee

NSW Cabinet
The Community Forum

In addition to the ISC, a Community Forum was formed to assist the process of review for the new plan of management for Kosciuszko National Park.

Whereas the role of the ISC was to provide independent expert advice about the park’s values, the Community Forum was formed to provide the opportunity for a diverse range of groups with an interest in the management of the park to listen to each other’s views and provide direction on the plan.

Specifically, the role of the Community Forum was to:

- assist in defining the vision and objectives for park;
- develop strategies for ongoing protection of the park’s values;
- advise on community involvement in the plan’s review; and
- provide advice on matters for which the NPWS wishes to gauge community sentiment.

Community Forum meetings were held in local communities around the park. A representative of the ISC attended Community Forum meetings to facilitate information exchange.

Running parallel to the plan of management review was the development of an alpine resorts plan for the ski resort areas and related infrastructure.
Lorraine Cairnes

Lorraine Cairnes is executive director of Fathom Consulting, which consults in planning, natural resources and heritage management. She has over 30 years experience in management of natural resources, and natural and cultural heritage in Australia. Lorraine has held senior executive positions in both the public and private sectors, including New South Wales (NSW) Fisheries, the National Parks and Wildlife Service (NPWS), Sydney Water, the NSW Department of Planning and the NSW Heritage Council.

Her first employment was at Kosciuszko National Park - Lorraine was Australia’s first female ranger. Her extensive practical field experience includes original investigations for new national parks and nature reserves throughout NSW, including the extensive Wollemi National Park. Her longstanding association with Kosciuszko National Park includes studies related to sustainable uses. She has chaired independent high-level reviews and committees, including the Premier’s Review of the Native Vegetation Conservation Act (NSW), and the NSW Water Conservation Task Force (which produced the NSW Water Conservation Strategy) and the NSW Advisory Panel for the Register of the National Estate (for which she was joint chairperson).

Lorraine is author of the Australian Natural Heritage Charter, Australia’s voluntary standard for natural heritage conservation; she is also a member of the Environment Institute of Australia and its NSW Division Committee. Her role in the Independent Scientific Committee (ISC) included coordination and collation of inputs, and overview analysis.

Dr Alec Costin AM

Alec Costin has more than 40 years experience in research and management of natural resources, especially in high-mountain catchments, through his work with the Commonwealth Scientific and Industrial Organisation (CSIRO), universities and state conservation agencies. Alec was a Senior Research Scientist and Chief Research Scientist at the Division of Plant Industry, CSIRO from 1955 until 1974, and is a fellow of the Australian Academy of Science. He is an international authority on the ecology of high-mountain and high-latitude ecosystems, and is widely acclaimed for his research into alpine vegetation, soils and hydrology.

Alec is a former member of the Kosciuszko National Park Advisory Committee and has published extensively on the flora, soils and ecosystem functions of Kosciuszko National Park, including the definitive Kosciusko Alpine Flora (2000) and A Study of the Ecosystems of the Monaro (1954).
Dr Robert Galloway

Born and educated in Scotland, Robert Galloway researched ‘Periglacial phenomena in Scotland’ for his doctorate. After graduation he conducted postgraduate studies in France, Germany, Arctic Norway and Greenland. From 1958 until 1987, Robert was a research scientist based in Canberra with CSIRO Division of Land Research, and he conducted extensive regional surveys in Queensland and the Northern Territory. He also worked on the Quaternary, focusing on glaciation in the Kosciuszko area, the United States and Argentina. This led to related studies into snow falls and palaeoclimatics in the Snowy Mountains in relation to climate change.

Robert has produced over 62 scientific publications, as well as more than 20 conference papers, and is considered one of Australia’s leading experts in the field of glaciation.

Prof Elery Hamilton-Smith AM

Elery Hamilton-Smith has been a consultant in social research, policy and planning since 1967, with work experience across some 35 countries and with both the United Nations and the Commonwealth Secretariat. Current academic posts in the social sciences include honorary professorships at the International Centre of Excellence, University of Wageningen, Netherlands; Lincoln Gerontology Centre, Faculty of Health Sciences, La Trobe University, Bundoora; and the School of Information and Environmental Sciences, Charles Sturt University, Albury. Elery is also a visiting professor at some 15 overseas universities with over 1000 books, reports, professional papers and other publications to his name.

Elery is a member of the World Conservation Union (IUCN), a member of the steering committee for the World Commission on Protected Areas, chair of the Task Force on Cave and Karst Protection, and a member of the Working Group on Collaborative Management.

Dr Marc Hockings

Marc Hockings is a senior lecturer in the School of Natural and Rural Systems Management at the University of Queensland. Following undergraduate and postgraduate degrees in zoology, Marc worked for the Queensland National Parks Service for 15 years, where he gained experience in diverse aspects of conservation and protected area management. His doctorate was on the evaluation of management effectiveness in protected areas and his current research interests focus on issues of monitoring and evaluation in conservation management. Marc is a vice-chair of the IUCN World Commission on Protected Areas, a World Heritage advisor to the IUCN and a member of the Commission’s Global and Australian Steering Committees. He is a member of the Fraser Island World Heritage Area Scientific Advisory Committee.

Marc was the principal author of the IUCN’s best-practice guidelines on evaluation of management effectiveness in protected areas. He is currently managing a joint United Nations Educational, Scientific and Cultural Organization (UNESCO)/IUCN project that is applying these guidelines in ten World Heritage sites in Africa, South Asia and Latin America.

Prof Jamie Kirkpatrick AM

Jamie Kirkpatrick is Professor of Geography and Environmental Studies at the Hobart campus of the University of Tasmania. His research is focused on the maintenance of natural values, particularly those relating to vegetation and wilderness, and extends from work on the politics of environment to work on the ecology of natural vegetation. He has had considerable experience in building cases for, and assessing, natural world heritage values in Australia.

Jamie is currently chair of the scientific advisory committee set up under the Threatened Species Protection Act 1995 (Tasmania), vice-president of the Institute of Australian Geographers, and a member of the Tasmanian Wilderness World Heritage Area Advisory Council and the University of Tasmania Council.
Bruce Leaver

Bruce Leaver is currently first assistant secretary in charge of the Heritage Division within Environment Australia. As well as filling the role of executive director of the Australian Heritage Commission, Bruce is responsible for the Commonwealth's role in World Heritage Areas, the Aboriginal and Torres Strait Heritage Protection Act and the Historic Shipwrecks Act. Bruce joined the Commonwealth Government in August 1999. Before that he spent 30 years in heritage management in three states. He was a regional director in the NSW NPWS, director of the South Australia NPWS, and more recently, the Commissioner of Resource Planning and Development in Tasmania.

Bruce's specific contribution to the ISC's report was to co-author the fire management paper. Bruce is a professional forester with extensive experience in bushfire management at all levels of protection and fire suppression, including in Kosciuszko National Park. He has served as a member of the Australian Capital Territory (ACT) Bushfire Council and the South Australia Bushfire Prevention Council, and has developed bushfire protection planning measures for state planning systems.

Dr Ian Mansergh

Ian Mansergh is currently the manager of the Flora and Fauna Directorate for the Department of Natural Resources and Environment in Victoria. He has published more than 60 scientific publications, has conducted innovative research and is an acknowledged expert in alpine ecology, environmental management, threatened species, wildlife modelling, greenhouse issues and Aboriginal knowledge of fauna. Ian has more than 20 years of experience in scientific investigations in the alps, dealing mainly with fauna. This strong zoological base is complemented by his expertise in broader policy development, land use planning and management, particularly in the context of improved biodiversity conservation - evidenced by Ian's contribution as a major author to Victoria's Biodiversity. Ian also has experience in overseas alpine and subarctic environments.

Dr Richard Marchant

Richard Marchant is a freshwater ecologist and has worked for the past 20 years on the ecology of invertebrate communities in streams and rivers in Victoria. He is currently Senior Curator of Terrestrial Invertebrates at the Museum of Victoria. He has 30 years of research experience, starting with his PhD studies on salt lakes in western Victoria and continuing since on river ecosystems, including tropical rivers in the Northern Territory, temperate rivers in Canada and streams on subantarctic Macquarie Island. His major interests centre on the ecology of the aquatic insects that form the majority of species in these running-water ecosystems. Much of Richard's work has been concerned with the effects of various human-caused disturbances (eg. dam building, and discharge of heated water and various other pollutants) on stream invertebrate communities.

He has conducted surveys of these communities in both disturbed and undisturbed rivers; investigated those that live deep within the gravel of the riverbed (the Hyporheic zone); and carried out quantitative studies on the life histories, growth rates and population dynamics of a range of aquatic insects and freshwater crustaceans. Richard has been involved both as a consultant and as a member of various committees in setting minimum flows for regulated rivers and has been an adviser to the federal government for its Monitoring River Health Initiative.

Richard's recent work has been funded and carried out with colleagues from the Cooperative Research Centre for Freshwater Ecology, of which he is an associate member.

Prof Trevor Mules

Trevor Mules is currently the Professor of Tourism at the University of Canberra and a coordinator for the Cooperative Research Centre for Sustainable Tourism, having had previous experience as an associate professor at the Graduate School of Management (Adelaide) and as a senior lecturer in economics at Griffith and Adelaide universities. Trevor's research has focused on tourism, particularly special events, the economics of tourism, tourism expenditure, tourism impact, and economic modelling, especially in relation to input–output models. Trevor is also a member of the ACT Heritage Council and is on the board of the Centre for Australian Cultural Studies.
Dr Alan Newsome

Alan Newsome was educated in zoology, botany and geology at the University of Queensland. He gained early field experience in the Northern Territory, assessing the impacts of pest species on the cattle and sheep industries, describing the distribution and abundance of key species of fauna, and indicating important sites for creating national parks. He was awarded a master’s degree from the University of Adelaide for his subsequent studies on the red kangaroo. Alan’s study at Adelaide University focused on the causes of mouse plagues, the topic for his doctorate. On joining the CSIRO, Alan studied dingoes as pests of cattle and sheep in Central Australia and south-east NSW; this included a Fulbright Fellowship for one year at the University of Berkeley, California, where he studied interactions between predators and their prey in the wild. This led to further research in Australia into links between predation by dingoes and the availability of kangaroos, rabbits, foxes and feral cats. Most recently, Alan has worked with the Pest Animal Control Cooperative Research Centre, based within CSIRO Sustainable Ecosystems in Canberra, understanding the likely responses of pest species to immunocontraceptive techniques and diseases such as rabbit calici virus disease and rabbit haemorrhagic disease.

These studies have led to a PhD from the University of Queensland. Alan has been a member of several state, national and international committees: Australian Vertebrate Pest Committee; Cane Toad Advisory Committee; Threat Abatement Plan for Rabbit, Fox, Feral Cat, Feral Goat and Pig; ACT Vertebrate Pest Management Committee; Advisory Committee to Minister, NPWS, Coordinator, Mouse Plague Research, South Australia; Endangered Species Advisory Committee; Marsupial Specialist Group; IUCN Species Survival Commission; IUCN Commission on Ecology; and the Northern Territory Wildlife Advisory Council.

Dr Catherine Pickering

Catherine Pickering leads the Mountain Tourism Subprogram for the Cooperative Research Centre for Sustainable Tourism. This interdisciplinary research team examines issues in the sustainability of mountain tourism.

Catherine has had a long interest in research in the Australian Alps, from theoretical ecology through to tourism and environmental management. Currently, she is a senior lecturer in the School of Environmental and Applied Sciences at Griffith University. Previously, she was a postgraduate fellow on a National Science Foundation project in the United States. Catherine has a PhD and a BSc (Honours) from the Australian National University.

Dr David Shorthouse

David Shorthouse has a PhD from the Australian National University, a master’s degree in conservation from University College, London and a science degree from the University of Newcastle (UK). He taught ecology and conservation planning at the Canberra College of Advance Education from 1971 to 1980, and has extensive experience in environmental planning and management in the ACT and elsewhere through employment with the (former) National Capital Planning Authority, the Commonwealth Department of Environment (World Heritage Unit), and the ACT Parks and Conservation Service.

David currently manages the Wildlife Research and Monitoring Unit of Environment ACT and is responsible for biodiversity survey and monitoring programs in the ACT, including identification and protection of threatened species, wildlife research and conservation planning. He was closely involved with the establishment of Namadgi National Park in 1986 and with the preparation of its first plan of management.

Andy Spate

Andy Spate was employed for over 20 years by the NPWS as Natural Heritage Officer, Karst and as Senior Project Officer, Water Reforms. His professional career has been largely with the CSIRO Division of Land and Water Research and at NPWS. At CSIRO he was involved in research into dryland salinity, catchment dynamics, groundwater systems, plant–soil–water relationships and landscape rehabilitation.

Andy’s appointment to the NPWS was as the first professional karst specialist in Australasia, with responsibilities for cave and karst management, and for research into karstic terrains. He has been involved in many other aspects of land management and land-use planning, representing the service in many forums and community involvement activities. Andy’s main interest, when he gets the time, is in hydrologic processes in karst terrains and in the development and management of karst landscapes, including caves. A more recent research interest has been in the field of groundwater-dependent ecosystems - particularly their fauna.
Andy has published or written more than 150 environmental and consultant reports, environmental impact statements, major in-house reports and peer-reviewed scientific papers in the field of cave and karst management and processes, including groundwater issues, and on land management generally. He has lectured at a number of universities and has presented many courses on karst geomorphology and hydrology. Andy now runs his own environmental consultancy business - Optimal Karst Management - which is undertaking projects in Australia and Asia.

**Prof Sharon Sullivan**

Sharon Sullivan has an MA (Hons) and a BA (Hons) in history, with over 30 years experience in heritage place and land management. She is deeply involved in the development of cultural heritage management systems in Australia. Sharon was previously the deputy executive director of NSW NPWS; then executive director, Australian Heritage Commission and first assistant secretary, Australian and World Heritage Group for the Commonwealth Department of Environment and Heritage, and Australian Government Leader of Delegation, World Heritage Committee. She is also a fellow of Australian Academy of the Humanities, a member of the Australian Institute of Aboriginal and Torres Straight Islander Studies, and a member of the National Executive Committee of Australia, International Council on Monuments and Sites.

Sharon is an adjunct professor, School of Anthropology, Archaeology and Sociology at James Cook University of North Queensland, and adjunct professor, School of Natural and Rural Systems Management, at the University of Queensland. She has been a consultant the Getty Conservation Institute, the World Monument Fund, the World Bank, and the World Heritage Committee on various aspects of cultural heritage management. Sharon is the author of a range of publications including, jointly with Michael Pearson, *Looking After Heritage Places* - a university textbook on heritage place conservation and management. She has done extensive planning and teaching work with site managers in Australia, the United States, Cambodia, Africa and China on cultural heritage assessment and management issues. In her spare time, Sharon and her partner run a cattle farm on the Nymboida River in northern NSW.

**Dane Wimbush**

Dane Wimbush MSc (Sydney), now retired, worked as an alpine ecologist with CSIRO Division of Plant Industry from 1957 to 1986, based first at Island Bend, then Waste Point, and for the last six years in Canberra.

Together with Alec Costin, he conducted research in a number of fields, including the measurement of vegetation on permanent reference areas over long periods; studies on the hydrology of *Sphagnum* bogs, various aspects of snow accumulation, soil erosion and run-off, and the effects of sheep grazing; and a seven-year study of the effects of feral rabbit populations in a subalpine frost hollow. His interests extend to bird-banding, sailing and flying. He is a co-author of *Kosciuszko Alpine Flora*, recently in its second edition.

Since his retirement, Dane has worked as a consultant with NPWS, carrying out broad-scale vegetation mapping from Landsat Thematic Mapper imagery of southern NSW with his wife, Robyn, for the Murray-Darling Basin Commission, which involved extensive field work. He followed this up by conducting a search for rare and endangered species along the Alpine Way and, more recently, has looked at riparian vegetation for the Snowy River Inquiry.

**Graeme Worboys**

Graeme Worboys (M.App.Sci.) is chief executive officer of Green Globe Asia Pacific, and principal consultant to the Cooperative Research Centre for Sustainable Tourism. He is the Deputy Vice Chair, Mountains for the World Conservation Union's World Commission on Protected Areas. He has contributed to environmental management for 30 years and was previously an executive director with the NSW NPWS. Graeme has a long history of involvement in tourism and recreation planning and management, particularly in Kosciuszko National Park. He is the author of the NSW NPWS 1997 Draft Nature Tourism and Recreation Strategy and principal author of *Protected Area Management Principles and Practice*, a university text published by Oxford University Press in 2000.

Graeme’s work for the past three years has focused on applications for environmentally sustainable tourism for companies and communities throughout the Asia-Pacific region, including establishing environmentally and socially sustainable performance levels.
Doug Young

Doug Young leads the Natural Resource Economics team in Rural Solutions South Australia (formerly PIRSA Rural Solutions), where he commenced in January 1999. He previously worked for the South Australian Centre for Economic Studies and the Australian Bureau of Agricultural and Resource Economics. Much of his recent research has been directed towards the economic evaluation of projects and policies, particularly those involving interactions between irrigated agriculture and changes to environmental attributes and regional communities.

Doug holds a master's degree in economics from the University of Adelaide and an honours degree in biological sciences from the Flinders University of South Australia. He is also a former president of the South Australia Branch of the Australian Agricultural and Resource Economics Society.

Mark Adams

Mark Adams was executive officer for the Independent Scientific Committee (ISC), a planner in the Kosciuszko Plan of Management Review team and he facilitated and coordinated the ISC’s program. His assistance to the ISC was invaluable, with his extensive knowledge and experience of the park’s values, management issues and the operations of the Service. His project management skills were important in the successful completion of this report within demanding timeframes.
This chapter looks first at the purpose and management principles of national parks in New South Wales (NSW), then outlines the tasks of the Independent Scientific Committee (ISC), its terms of reference and its approach to assessing the values of Kosciuszko National Park.

**Purpose and management principles of national parks in New South Wales**

In evaluating the values of the park, the ISC took into account the purpose of a national park established under New South Wales (NSW) legislation, and the management principles that are the basis for management of NSW national parks.

The National Parks and Wildlife Amendment Act 2000 provides (s.30E(1)) that:

> "The purpose of reserving land as a national park is to identify, protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor use and enjoyment so as to enable those areas to be managed in accordance with subsection (2)."

The Act requires that national parks be managed in accordance with the following principles (s.30E (2)):

- a) the conservation of biodiversity, the maintenance of ecosystem function, the protection of geological and geomorphological features and natural phenomena and the maintenance of natural landscapes;
- b) the conservation of places, objects, features and landscapes of cultural value;
- c) the protection of the ecological integrity of one or more ecosystems for present and future generations;
- d) the promotion of public appreciation and understanding of the national park’s natural and cultural values;
- e) provision for sustainable visitor use and enjoyment that is compatible with the conservation of the national park’s natural and cultural values;
- f) provision for the sustainable use (including adaptive reuse) of any building or structures or modified natural areas having regard to the conservation of the national park’s natural and cultural values; and
- g) provision for appropriate research and monitoring.

The Act also requires that the following matters be taken into consideration in the preparation of a plan of management:

- relevant management principles;
- conservation of biodiversity, including the maintenance of habitat, ecosystems and populations of threatened species;
- protection and appreciation of objects, places and structures of cultural significance, and tracts of land;
- protection of landscape values and scenic features;
- protection of geological and geomorphological features;
- protection of wilderness values and the management of wilderness areas;
• maintenance of natural processes;
• rehabilitation of landscapes and the reinstatement of natural processes;
• fire management; in the case of a plan of management for a national park, nature reserve or karst conservation reserve, the prohibition of the execution of any works adversely affecting the natural condition or special features of the park or reserve;
• potential for the reserved land to be used by Aboriginal people for cultural purposes;
• provision of opportunities for public understanding, enjoyment and appreciation of natural and cultural;
• heritage values, including opportunities for sustainable visitor use;
• adaptive reuse of buildings and structures;
• appropriate (including culturally appropriate) and ecologically sustainable use of the reserved land, including use by lessees, licensees and occupiers of the land;
• preservation of catchment values;
• encouragement of appropriate research into natural and cultural features and processes;
• including threatening processes;
• identification and mitigation of threatening processes;
• statutory natural resource management, land use management plans and land management practices of land surrounding or within a region of the reserved land;
• regional, national and international context of the reserved land, the maintenance of any national;
• and international significance of the reserved land and compliance with relevant national and international;
• agreements, including the protection of world heritage values and the management of world heritage properties;
• benefits to local communities;
• social and economic context of the reserve so as to ensure, for example, that the provision of visitor facilities is appropriate to the surrounding area or that pest species management programs are coordinated across different tenures;
• protection and management of wild rivers; and
• impact of the management and the use of land acquired under Part 11 on the reserved land's management.

Terms of reference for the ISC
The terms of reference required the ISC to:
• Identify, describe and report on the condition, and trend in the condition, of the park’s natural, cultural, recreational, economic and social values;
• Prepare a statement of significance of the values of the park including review of the “Schedule of significant natural features”;
• Identify and report on key pressures on the park’s values including any works that adversely affect these values;
• Identify and report on key opportunities for the park’s values to be protected including the quality and adequacy of NPWS’s strategies to foster public appreciation, enjoyment and understanding of the park’s natural and cultural values;
• Identify appropriate research, monitoring and key performance indicators required for the management of the park’s natural and cultural features;
• Provide advice on the strategies developed by the Community Forum for managing the park.

Approach to the task
The ISC met during 2002 and 2003, to undertake an objective assessment of the park’s values and provide independent advice about those values. The committee developed a methodology that was sufficiently flexible to be applicable to all of the disciplines and areas of expertise involved, and sufficiently consistent to meet the standards of rigour and integrity necessary for scientific and technical studies. In their individual assessment of particular values of the park, each member of the committee addressed the terms of reference. Chapter 4 explains how the terms of reference were addressed in considering each of the individual values. Following exhibition of an interim report, public comments were considered and the final report was produced.

Criteria for evaluating significance
No single set of criteria could embrace all of the core and derived values that the ISC has identified for Kosciuszko National Park in response to the requirements of the National Parks and Wildlife Act (NSW). In evaluating the nature and level of the values, criteria have been used appropriate to the type of value under consideration. The significance summary and the topic chapters provide advice on the rationale for the identified significance of each of the parameters evaluated.
International significance criteria

Values for international significance were assessed using criteria appropriate to the value under consideration.

Internationally recognised criteria are established for areas listed under various international agreements and conventions. These criteria can apply to the themes and specific areas of the listings without necessarily applying to all values of the park. Examples are the criteria used for listing the park as a United Nations Educational, Scientific and Cultural Organization (UNESCO) biosphere reserve, and those for listing the Blue Lake and its environs as a wetland of international importance under the Ramsar Convention.

Kosciuszko National Park is not part of a World Heritage Property; thus, the World Heritage criteria for natural and cultural heritage are not fully appropriate here, although it can be argued that aspects of the park would meet these criteria if the park were to be nominated.

For most values, this assessment used an adaptation of criteria indicated by the draft national criteria recently adopted for Australia (see below) and criteria put forward by the United Nations Environment Programme (UNEP) World Conservation Monitoring Centre (WCMC) (1996).

Biosphere reserves

Biosphere reserves are areas of terrestrial and coastal ecosystems promoting solutions to the problem of how to reconcile the conservation of biodiversity with its sustainable use. Collectively, such reserves form a global network within which exchanges of information, experience and personnel are promoted.

Biosphere reserves are internationally recognised and serve in some ways as ‘living laboratories’ for testing and demonstrating integrated management of land, water and biodiversity. Each biosphere reserve is intended to fulfil three complementary and mutually reinforcing basic functions:

- a conservation function, to conserve landscapes, ecosystems, species and genetic variation;
- a development function, to foster economic and human development that is socio-culturally and ecologically sustainable; and
- a logistic function, to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.

World Conservation Monitoring Centre criteria

A useful tool that was used by the ISC is the set of criteria developed by UNEP WCMC (1996) to assist in assessing sites for inclusion in protected areas, which can be adapted to help identify globally and nationally significant sites. The WCMC criteria state that sites containing the following species or ecosystems are likely to be globally significant:

- endemic threatened species;
- globally threatened species for which the country holds a significant part of the world population;
- other globally threatened species;
- ecosystems unique to the country; and
- ecosystems for which the country holds a significant part of the world total.

International application of Australian criteria for national heritage places

The criteria for national heritage places developed by Environment Australia in 2002 were adopted by the ISC to identify values with international significance where this was appropriate to the values under consideration, as shown below:

1 A place that is a component of the natural or cultural environment that is of outstanding international value for future generations and the present community because of any of the following:

   a) its importance in the course, or pattern, of the Earth’s natural or cultural history;
   b) it possesses uncommon, rare or endangered aspects of Australia’s natural or cultural history that are important at an international level;
   c) it has potential to yield information that will contribute to an understanding of the Earth’s natural or cultural history;
   d) its importance in demonstrating the principal characteristics of: (i) a class of the Earth’s natural or cultural places; or (ii) a class of the Earth’s natural or cultural environments;
   e) its importance in exhibiting particular aesthetic characteristics valued internationally;

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1 In 1988, the independent, non-profit World WCMC Conservation Monitoring Centre was founded jointly by IUCN, WWF the World Wildlife Fund and UNEP. The UNEP World Conservation Monitoring Centre (WCMC) was established in 2000 as the world biodiversity information and assessment centre of the United Nations Environment Programme UNEP.
f) its importance in demonstrating a high degree of creative or technical achievement at an international level at a particular period;

g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;

h) its importance as part of the developing traditions and customary law of Indigenous peoples;

i) its special association with the life or works of a person, or group of persons, of importance in the Earth’s natural or cultural history.

National significance criteria

The criteria that have been used to establish national significance include the WCMC criteria, and the criteria for national heritage values developed in 2002 by Environment Australia and the Australian Heritage Commission.

World Conservation Monitoring Centre national criteria

The WCMC (1996) criteria state that, as a general guide, protected area sites that are large (by national standards) can be regarded as being at least of national significance. Nationally significant sites are likely to contain:

- nationally threatened populations of globally non-threatened species;
- endemic non-threatened species; or
- species-rich ecosystems.

Criteria for national heritage values

The most recent criteria developed by Environment Australia and the Australian Heritage Commission were adopted as a consequence of legislation passed in 2003. This legislation provides for a special list of national heritage places to be developed comprising natural, historic and indigenous places that are of outstanding national heritage value to the Australian nation.

The criteria for the national heritage values are:

1. A place that is a component of the natural or cultural environment of Australia is eligible for entry to the National Heritage List if it is of outstanding national value for future generations and the present community because of any of the following:
   a) its importance in the course, or pattern, of Australia’s natural or cultural history;
   b) it possesses uncommon, rare or endangered aspects of Australia’s natural or cultural history;
   c) it has potential to yield information that will contribute to an understanding of Australia’s natural or cultural history;
   d) its importance in demonstrating the principal characteristics of: (i) a class of Australia’s natural or cultural places, or; (ii) a class of Australia’s natural or cultural environment;
   e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
   f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
   g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
   h) its importance as part of the developing traditions and customary law of Indigenous peoples; and
   i) its special association with the life or works of a person, or group of persons, of importance in Australia’s natural or cultural history.

Additional national criterion for non-heritage values

The values of Kosciuszko National Park include some ‘non-heritage’ values, including the recreational and economic values. The criterion adopted by the ISC for identifying the national significance of these non-heritage values is: ‘Other nationally important values that contribute to the social and economic well-being of Australia.’

State or regional significance criteria

The criteria used to define significance at state or regional level are primarily derived from the National Parks and Wildlife Act (NSW) and the Heritage Act (NSW).

The definition of ‘state’ is clear, but the concept of ‘regional’ is more abstract and has been used as appropriate in the sense of the park in its landscape setting, as a bioregion, the ecosystem service delivery area immediately around the park, or the local government areas surrounding the park.

The key to the significance levels is the context of the values; for example, regional movement of Aboriginal people or regional consideration of pastoral history imply different regional boundaries to each other and to the bioregion boundary.
State criteria from the National Parks and Wildlife Act
The NSW state criteria are derived from the National Parks and Wildlife Act, Division 2 Management principles, which are set out elsewhere in this report. They are broad criteria and principles that extend beyond the traditional natural and cultural heritage values.

State criteria from the NSW Heritage Act
‘State significance’ has been defined in the Heritage Act (NSW) as the basis for listing places on the State Heritage Register. The criteria in the Act have been used to assist in assessing the type and level of significance of ‘items’ (the term used in the Act) in the Kosciuszko National Park.

State heritage significance, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific/cultural, social, archaeological, architectural, natural or aesthetic value of the item (S.4A(1), Heritage Act 1977).

To be assessed for listing on the State Heritage Register an item, in the opinion of the Heritage Council, is required to meet one or more of the following criteria:

- an item is important in the course, or pattern, of NSW’s cultural or natural history;
- an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history;
- an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;
- an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons;
- an item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history;
- an item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history; or
- an item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places; or cultural or natural environments.

Additional state or regional criterion for non-heritage values
The values of Kosciuszko National Park include some ‘non-heritage’ values. The criterion adopted by the ISC for identifying the state or regional significance of these non-heritage values is:

‘Other important values that contribute to the social and economic well-being of NSW or the region.’

Local or park significance criteria
The criteria used by the ISC were derived from local dependencies, expert opinion or other knowledge. Sites and values of essentially local or park significance are likely to:

- be relatively small;
- relate to core values that are well represented or better protected in other larger protected areas within the country; or
- other attributes that contribute to the social and economic well-being of the park and its local communities.

Interaction with the Community Forum
The interaction between the ISC and Community Forum was recognised by the committee as critical in the success of the plan of management review process. A series of ‘envoys’ and a joint meeting facilitated information transfers between the two groups. A member of the ISC has attended each Community Forum meeting in order to facilitate this information transfer. The chair of the Community Forum and representatives preparing the Alpine Resorts Plan were also invited to ISC workshops and meetings. The ISC made itself available to receive and respond to referrals for information from the Community Forum. In addition, the ISC requested data sources and information on the values of the park from the Community Forum in order to consolidate the collective knowledge of the two groups.
The Submission Process

The Independent Scientific Committee (ISC) produced an ‘Interim Report’ in December 2002 and public comment was invited. 79 submissions were received by the ISC from a range of geographic locations and sectors, with the majority being from Sydney.

Submissions were discussed in detail at an ISC meeting in March 2003 with individual authors responsible for incorporating relevant changes into their chapter. The majority of submissions and comments supported the information present on the values assessed by the ISC and the knowledge gaps, findings and recommendations. The ISC’s approach of evaluating all values within the Park, ie: natural, cultural, social, recreational and economic, was also strongly supported. Critical comments related to:

- the perception that the ISC believed summer activities were more popular than winter or snow sport activities,
- the assessment of values associated with snowfields; or
- additional references, minor corrections and additions.

These issues have been addressed in this final report. It is also important to note that some comments referred to matters outside the ISC’s Terms of Reference and were referred back to the National Parks and Wildlife Service for consideration within the Plan of Management review process.

The Independent Scientific Committee would like to extend thanks all those who took the time to read and comment on the ‘Interim Report’.