



NSW **National Parks  
and Wildlife Service**

# **Kosciuszko National Park Plan of Management (2006)**

## **2007-2008 Implementation Report**



Department of **Environment & Climate Change** NSW



## **Executive Summary**

The Kosciuszko National Park Plan of Management is available on line at:

<http://www.environment.nsw.gov.au/parkmanagement/knpgmtplan.htm>

This Implementation Report, a requirement under the Plan of Management (Chapter 16) charts the trends in condition of the park's values and the progress of the plan's implementation. This report covers the period from July 2007 to June 2008, two years since the plan was adopted and is intended for presentation to the Advisory Committees and key stakeholders.

The plan of management identifies 15 key milestones (Section 4.4). Their implementation will set in place structures and processes to govern many of the efforts directed at protecting, maintaining or improving the significant values (Section 2.2) of the park. They will assist with the achievement of the Key Desired Outcomes (Section 4.3) for the park. They will also provide a framework for the implementation of management objectives, policies and actions over the life of the plan.

These key milestones will be delivered through a series of strategic projects. The ordering of these strategic projects is not an indication of priority. Their timely achievement does not negate the need to undertake ongoing park management tasks. The ordering of these projects relates to establishing the systems that will underpin the implementation of the Plan.

Some key milestones will be delivered through projects specific to Kosciuszko National Park whilst others will be delivered via state-wide programs whose implementation will see achievement of key milestones within Kosciuszko National Park. A key responsibility of the Project Officer managing these projects is to coordinate implementation across three groups responsible for managing Kosciuszko National Park: Snowy Mountains and South West Slopes Regions and the Resorts Section.

The development of a database system has also commenced. The Database will be used to assist with monitoring and evaluating the plan, tracking the implementation of individual actions detailed in Schedule 11 of the plan of management and assisting with meeting the reporting requirements detailed within Chapter 16 of the plan of management.

### **Update on development of key milestones:**

The following key milestones detailed in Section 4.4 of the plan of management are to be completed or substantially underway within two years of plan adoption:

•**Key Performance Indicators, Integrated Monitoring Program and Integrated Evaluation System (Chapter 16).** Draft KPIs and Kosciuszko Database are near completion and will be trialed during the 2008/2009 reporting period.

•**Park Restoration Plan (Section 11.1).** A Project and Planning Officer is managing the project ensuring that the objectives of the plan as detailed in the PoM are being met. To be completed during 2008-2009.

•**Environmental Management Systems (Section 12.1).** EMS for alpine resorts and lessees have been developed. Perisher Range Resorts – The first public PRREMS report was published [Perisher Range Resorts EMS - 2002- 2006 report](http://www.environment.nsw.gov.au/parkmanagement/PerisherRangeEnvironmentalManagementSystem.htm) is available on line at: [www.environment.nsw.gov.au/parkmanagement/PerisherRangeEnvironmentalManagementSystem.htm](http://www.environment.nsw.gov.au/parkmanagement/PerisherRangeEnvironmentalManagementSystem.htm) - 36k.

EMS information for the park will be developed during 2008-2009 in line with the State wide corporate program.

Projects have commenced which will contribute to meeting some of the eleven key milestones detailed in Section 4.4 of the plan of management that are to be completed or underway within five years of plan approval:

- **Visitor Data System (VDS) (Section 8.1).** The development of VDS has commenced and components have been implemented across the park.
- **Limits of Disturbance and Recreation Monitoring Program (Section 8.1).** Monitoring of impacts at horse camps continue. Some information has begun to be captured through the Natrec system.
- **Management Partnerships (Chapter 7).** Management partnerships exist with the Kosciuszko Huts Association. Memorandums of Understanding are currently being negotiated with Aboriginal Communities in the north and south of the park. The Polish community and Park managers have worked together to celebrate early exploration heritage and to facilitate an annual cultural festival in/near Jindabyne.
- **Huts Conservation Strategy (Chapter 7)** The completed strategy is being implemented and can be viewed on line at: <http://www.environment.nsw.gov.au/National%7Barks/parkHome.aspx?id=N0018>
- **Visitor Facility Strategies (Section 8.2).** A Park Facilities Manual has been developed for the NPWS. This is a state wide strategy and objectives are applied to new facilities and redevelopments across Kosciuszko National Park consistent with the Manual. A State wide Signage Manual is being developed and will be completed during 2008-2009.
- **Main Range Recreation Management Strategies (Section 9.1).** The Waste Management Strategy is completed and is being implemented. Walking Track Management Plan is currently in draft.
- **Visual Management System (Section 11.6).** There are currently visual management strategies being implemented. The first edition of the NPWS Rehabilitation Guidelines for the Resorts of Kosciuszko National Park was published. These guidelines have been prepared to assist land managers, lessees and contractors in the ski resorts to plan and undertake rehabilitation work using indigenous species. These guidelines can be viewed on line at: [http://www.environment.nsw.gov.au/aprkmanagement/knp\\_resortrehab.htm](http://www.environment.nsw.gov.au/aprkmanagement/knp_resortrehab.htm).
- **Park Communication Plan (Section 13.1)** A Draft Communication Plan has been completed and is currently being reviewed.

### **Schedule 11 Plan Implementation Priorities:**

The management actions identified throughout the plan are summarised in Schedule 11. These actions are given an implementation priority. Of the 480 actions, 101 have a High priority, 191 have a Medium, 17 Low and 171 have been identified as actions that are ongoing park management tasks often associated with agency-wide policy and procedures. When the Kosciuszko Database is completed it will allow the implementation of these actions to be tracked. Overall progress and a detailed list showing the status of each action against the Key Desired Outcomes (Section 4.3) will appear in future Implementation Reports.

### **Current Research:**

During this reporting period there was a variety of research projects underway in Kosciuszko National Park. The Implementation Report provides a summary of the results of some of these research projects which include

- Spotted Tree Frog recovery project
- Southern Corroboree Frog
- The Alps Vegetation Fire Response Monitoring System
- “Dogs in Space”
- Spotted Tail Quoll
- Mountain Pygmy-possum populations
- Bog mapping project

## **Kosciuszko National Park Plan of Management**

The New South Wales *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each national park. A plan of management is a legal document that outlines how an area will be managed in the years ahead. The Kosciuszko National Park Plan of Management (2006) establishes the scheme of operations for Kosciuszko National Park in accordance with Section 73B of the *National Parks and Wildlife Act 1974*.

The Kosciuszko National Park Plan of Management is available on line at:

<http://www.environment.nsw.gov.au/parkmanagement/knpgmtplan.htm>

The Kosciuszko National Park Plan of Management (2006) details a statement of significance, overarching principles, key desired outcomes, key milestones, management objectives, policies and actions to guide the long-term management of the broad range of natural, cultural and recreational values the park protects. The actions identified in the plan are being undertaken by the National Parks and Wildlife Service and other organisations building upon the legacy of the past six decades of conservation management.

The Kosciuszko National Park Plan of Management (2006) requires the preparation of a report produced on an annual basis that charts the trends in condition of the park's values and the progress of the plan's implementation (see Chapter 16 "Monitoring, Evaluation and Reporting"). This is the second of those reports covering the period from July 2007 to June 2008. The report can be viewed on line at <http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018>.

The information contained in this report is intended for presentation to the Advisory Committees and key stakeholders. For more detailed information please contact the Park Managers.

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2. Snowy Mountains Regional and Resorts Section Office  
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P.O Box 2228 Jindabyne NSW 2627  
Phone: 64505555
3. Additional information is also available through the Australian Alps National Parks Cooperative Management Program by viewing <http://www.australialps.environment.gov.au/>

### **Key Milestones:**

The plan of management identifies 15 key milestones; these are detailed in Section 4.4 of the plan. Their implementation will set in place structures and processes to govern many of the efforts directed at protecting, maintaining or improving the significant values (Section 2.2) of the park. They will assist with the achievement of the Key Desired Outcomes for the park detailed in Section 4.3. They will also provide a framework for the implementation of management objectives, policies and actions over the life of the plan. These key milestones will be delivered through a series of strategic projects. The ordering of these strategic projects is not an indication of priority. Their timely achievement does not negate the need to undertake ongoing park management tasks. The ordering of these projects relates to establishing the systems that will underpin the implementation of the Plan.

Some key milestones will be delivered through projects specific to Kosciuszko National Park whilst others will be delivered via statewide programs whose implementation will see achievement of key milestones within Kosciuszko National Park. A key responsibility of the Project Officer managing these projects is to coordinate implementation across three groups responsible for managing Kosciuszko National Park: Snowy Mountains and South West Slopes Regions and the Resorts Section.

**Kosciuszko National Park Plan of Management (2006)**  
**Development of four Key Milestones to be completed or substantially underway within two years of plan adoption.**

<b>Key Milestone</b>	<b>Status</b>	<b>Comments</b>	<b>Time Frame</b>	<b>Responsibility for completion</b>
<p><b>Key Performance Indicators and Integrated Monitoring Program</b> (Chapter 16) - <i>essential to measuring the condition and trends in condition of key attributes over time and the success or otherwise of park management actions in achieving stated objectives.</i></p>	Substantially underway	<ul style="list-style-type: none"> <li>● Following technical workshops held during September, October and November 2007 two reports were presented to the Kosciuszko Plan of Management Steering Committee, namely the “Independent review of the use of key performance indicators and other performance evaluation requirements in the Kosciuszko National Park Plan of Management 2006” and “Preliminary Draft Key Performance Indicators and Integrated Monitoring Program”.</li> <li>● The workshops and subsequent reports identified an opportunity to use the existing State of the Parks reporting process to report on park values identified in Kosciuszko National Park Plan of Management. Once completed the methodology proposed will be trialled within the South West Slopes, Snowy Mountains and Resorts Regions and the results will be presented in the next edition of this report covering the period 2008-2009.</li> </ul>	<ul style="list-style-type: none"> <li>● Reporting will be trialled and results presented in the 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer, Resorts Section, South West Slopes and Snowy Mountains Regions.
<p><b>Integrated Evaluation System</b> (Chapter 16) - <i>sets in place structures and processes to measure the effectiveness of park management in achieving key desired outcomes.</i></p>	Underway	<ul style="list-style-type: none"> <li>● The development of the Kosciuszko Database has commenced. This Database once completed will track the implementation of individual actions detailed in Schedule 11 of the PoM and assist with meeting the reporting requirements detailed within PoM Chapter 16. The Database will store all historical information relating to the key performance indicators, baseline data for each indicator and enable easy access to information for preparation of annual reports and five-yearly assessment and reviews.</li> </ul>	<ul style="list-style-type: none"> <li>● Reporting will be trialled in 2008/2009 and results presented in the 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer, Resorts Section, South West Slopes and Snowy Mountains Regions.

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Key Milestone	Status	Comments	Time Frame	Responsibility for completion
<p><b>Park Restoration Plan</b> (Section 11.1) - <i>provides an overarching framework for the integrated management of site rehabilitation and weed and feral animal control</i></p>	Underway	<ul style="list-style-type: none"> <li>• Work has commenced on the development of this Plan with the establishment of a Technical Working Group to oversee its development. The project will ensure that the objectives of the plan as detailed in the Plan of Management are being met. Workshops were run during July, August and October 2008 to provide Regional and Branch staff an opportunity to provide input and advice during the plan's development. A preliminary draft plan is due for presentation to the Kosciuszko Steering Committee in November 2008.</li> </ul>	<ul style="list-style-type: none"> <li>• To be completed at the end of 2008-2009.</li> </ul>	<p>Planning and Performance Unit Project and Planning Officer. Technical Working Group consisting of representatives from Resorts Section, Snowy Mountains Region, South West Slopes Region and Planning and Performance Unit. Representatives from Cultural Heritage Division and Biodiversity Conservation Section invited to participate during the Plans development.</p>
<p><b>Environmental Management Systems</b> (Section 12.1) - <i>provide frameworks for reducing impacts associated with all operations and infrastructure in the park.</i></p> <p>(Section 12.1) – Alpine resort lessees and licencees</p>	Substantially underway	<ul style="list-style-type: none"> <li>• NPWS formally requested the four major alpine resort lessees to provide evidence of compliance with POM action 10.2.1.1 by June 2008. At the time of writing Charlotte Pass documentation had been submitted and was being reviewed.</li> <li>• Charlotte Pass Village - An independent audit of the natural and cultural values of the Charlotte Pass Management Unit was conducted in accordance with POM action 10.3.1.2. The findings of this audit have been incorporated into the Charlotte Pass EMS. EMS documentation was submitted within the timeframe required by the POM and a formal review by NPWS is underway.</li> <li>• Thredbo – 90% of Kosciuszko Thredbo Pty Ltd staff had received training in preparation for implementation of the EMS in winter 2008.</li> </ul>	<p>To be completed during 2008-2009:</p> <ul style="list-style-type: none"> <li>• Review submitted EMS documentation from four major alpine resort lessees (POM 10.2.1.1).</li> <li>• Request and review first annual EMS and environmental performance report from the four major alpine resort lessees (12.1.1.6-8).</li> <li>• Establish a program for EMS development for minor alpine resort lessees and licencees.</li> <li>• Continually review and upgrade NPWS responsibilities in the PRREMS.</li> <li>• To be completed in</li> </ul>	Resorts Section.

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		<ul style="list-style-type: none"> <li>● Perisher Range Resorts – The first public PRREMS report was published <a href="#">Perisher Range Resorts EMS - 2002-2006 report</a> is available on line at: <a href="http://www.environment.nsw.gov.au/parkmanagement/PerisherRangeEnvironmentalManagementSystem.htm">www.environment.nsw.gov.au/parkmanagement/PerisherRangeEnvironmentalManagementSystem.htm</a> - 36k.</li> <li>● Resort Section Environmental Monitoring Plan in development includes water quality, biodiversity, and pest management.</li> </ul>	2008-2010.	
<p><b>Environmental Management Systems</b> (Section 12.1) - <i>provide frameworks for reducing impacts associated with all operations and infrastructure in the park</i></p> <p>(Section 12.1) – Non alpine resort lessees and licencees.</p>	Not yet underway	<ul style="list-style-type: none"> <li>● Establish a program for EMS development for non alpine resort lessees and licencees.</li> </ul>	<ul style="list-style-type: none"> <li>● To be commenced during 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer. Technical Working Group to be established consisting of representatives from Planning and Performance Unit, Snowy Mountains and South West Slopes Region.
<p><b>Environmental Management Systems</b> (Section 12.1) - <i>provide frameworks for reducing impacts associated with all operations and infrastructure in the park</i></p> <p>(Section 12.1) – NPWS operations.</p>	Not yet underway	<ul style="list-style-type: none"> <li>● Establish a program for EMS development for service operations. The first stage being a gap analysis of NPWS park management policies and procedures against the POM EMS requirements.</li> <li>● Any policies and procedures developed will need to be consistent with the Corporate process currently in preparation.</li> </ul>	<ul style="list-style-type: none"> <li>● To be commenced during 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer. Technical Working Group to be established consisting of representatives from Planning and Performance Unit, Snowy Mountains and South West Slopes Region.

**Kosciuszko National Park Plan of Management (2006)**  
**Development of eleven Key Milestones to be completed or underway within five years of plan approval.**

Key Milestone	Status	Comments	Time Frame	Responsibility for completion
<p><b>Visitor Data System (VDS):</b> (Section 8.1) - <i>provides visitor information that is essential for informed and sustainable management of recreation in the park.</i></p>	Underway	<ul style="list-style-type: none"> <li>● The VDS is a system utilized state wide to provide visitor information at a site level. VDS provides numbers of visitors as well as surveying qualitative factors of their park visit. This information will allow management practises to meet the expectation of visitors. It will allow key visitation sites in the park to be identified.</li> <li>● Strategies to identify individual sites and visitor activities at these sites are currently being developed.</li> <li>● Visitor tour and accommodation numbers are currently being recorded for Yarrangobilly Caves, Caves House and Currango Homestead. Statistics are kept on all Annual, Day and other Park passes sold year round. Manual counting is also carried out in the Rawson's Pass / Mt Kosciuszko area during peak visitor periods.</li> <li>● In Snowy Mountains Region, staff have been trained in data retrieval across a number of sites in the southern end of the park. The VDS system has now replaced the manual counters on the Alpine Way and Kosciuszko Road visitor entry stations and detailed reports will be available shortly.</li> </ul>	<ul style="list-style-type: none"> <li>● VDS Strategy for data collection commenced during 2007-2008.</li> <li>● To be completed during 2009-2010.</li> </ul>	Planning and Performance Unit Planning Officer, South West Slopes, Snowy Mountains Regions and Resorts.



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<p><b>Limits of Disturbance and Recreation Monitoring Program:</b> (Section 8.1) - <i>sets in place limits of acceptable impact for certain recreational activities and sites and the measurement of disturbance. Essential for informed and sustainable management of recreation in the park.</i></p>	Commenced	<ul style="list-style-type: none"> <li>● Monitoring of impacts at horse camps underway. Continue concentrating on Horse Camps in northern section of the park.</li> <li>● Monitoring Strategy to be developed to determine limits of disturbance.</li> <li>● Utilise information captured through the Natrec system.</li> </ul>	<ul style="list-style-type: none"> <li>● To be continued during 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer. Technical Working Group to be established consisting of member from Resorts Section, Snowy Mountains and South West Slopes Regions.
<p><b>Karst Management Strategy:</b> (Section 6.4) – <i>provides an overarching framework for the protection of all karst areas and values.</i></p> <p><b>Geodiversity Conservation Strategy:</b> (Section 6.3) – <i>creates a framework for the protection of earth science features and processes that are susceptible to disturbance.</i></p>	Not yet underway	<ul style="list-style-type: none"> <li>● Combine the Karst Management Strategy with the Geodiversity Strategy to be in line with State wide strategies.</li> <li>● Technical Working Group to liaise with Karst &amp; Geodiversity Unit during the development of strategies.</li> <li>● Link to strategies and objectives contained within the Fire Management Strategy and Park Restoration Plan.</li> </ul>	<ul style="list-style-type: none"> <li>● To be commenced in 2008-2009.</li> </ul>	Planning and Performance Unit Project and Planning Officer. Technical Working Group to be established consisting of representatives from Planning and Performance Unit, Snowy Mountains and South West Slopes Region.
<p><b>Significant Plant and Animal Management Regimes:</b> (Section 6.7 and 6.8) - <i>guide the management of those parts of the park containing significant plant and animal species and communities so as to optimise their protection.</i></p>	Not yet underway	<ul style="list-style-type: none"> <li>● Information on threatened species can be viewed on line at: <a href="http://www.environment.nsw.gov.au/threatenedspecies/">http://www.environment.nsw.gov.au/threatenedspecies/</a> As detailed in the Kosciuszko National Park Plan of Management Schedule 1.</li> <li>● Link to strategies and objectives contained within Priority Action Statement (PAS), Fire Management Strategy, Park Restoration Plan and Regional Pest Management Strategies.</li> </ul>	<ul style="list-style-type: none"> <li>● To be commenced during 2009-2010.</li> </ul>	Planning and Performance Unit Sustainable Management Officer, South West Slopes and Snowy Mountains Regions and Resorts.

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Key Milestone	Status	Comments	Time Frame	Responsibility for completion
		<ul style="list-style-type: none"> <li>● Resorts Environmental Monitoring Plan in development includes biodiversity.</li> </ul>		
<p><b>Management Partnerships:</b> (Chapter 7) – <i>the Aboriginal Management Partnership provides the basis for Aboriginal involvement in park management.</i></p>	Underway	<ul style="list-style-type: none"> <li>● Two Kosciuszko Aboriginal Working Groups have been established, one in southern and one in northern. They are currently negotiating MoUs with Kosciuszko National Park management. The purpose of the MoU is to work towards cooperative involvement of the Aboriginal community in management issues.</li> <li>● An increase in indigenous employment is planned via the recruitment of two trainee field officers.</li> </ul>	<ul style="list-style-type: none"> <li>● To be completed during 2009-2010.</li> </ul>	Snowy Mountains, South West Slopes Regions and Resorts.
<p><b>Management Partnerships:</b> (Chapter 7) <i>Heritage Management Partnerships formalise local community involvement in heritage management.</i></p>	Underway	<ul style="list-style-type: none"> <li>● The Polish community and Park managers have worked together to celebrate early exploration heritage and to facilitate an annual cultural festival in/near Jindabyne.</li> <li>● All planning, maintenance and construction work on huts is completed in cooperation with the Kosciuszko Huts Association.</li> <li>● An MoU with the Kosciuszko Huts Association (KHA) was agreed in 2007. This underpins the ongoing relationship which facilitates the maintenance of historic mountain huts.</li> </ul>	<ul style="list-style-type: none"> <li>● To be completed during 2009-2010.</li> </ul>	Snowy Mountains, South West Slopes Regions and Resorts.

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<p><b>Huts Conservation Strategy:</b> (Chapter 7) - <i>guide many facets of ongoing hut management in the park.</i></p>	<p>Completed</p>	<ul style="list-style-type: none"> <li>● The Huts Conservation Strategy is currently being implemented and can be viewed on line at: <a href="http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018">http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018</a>.</li> <li>● Liaison with the Kosciuszko Huts Association (KHA) in regard to hut reconstruction work including hut rebuilding guidelines and ongoing maintenance continues.</li> </ul>	<ul style="list-style-type: none"> <li>● Completed</li> </ul>	<p>Project managed by South West Slopes Region with assistance from Snowy Mountains Region.</p>
<p><b>Visitor Facility Strategies:</b> (Section 8.2) - <i>the Visitor Facilities “Signature” Appearance, Site Design Principles and the Disabled Access and Facilities Strategy provide visitor facility design, construction and setting principles that are necessary prerequisites to the development of new visitor facilities and the redevelopment of existing facilities.</i></p>	<p>Underway</p>	<ul style="list-style-type: none"> <li>● A Park Facilities Manual has been developed for the NPWS. This is a state wide strategy and objectives are applied to new facilities and redevelopments across Kosciuszko National Park consistent with the Manual.</li> <li>● Kosciuszko National Park will utilise the architectural documentation detailed in the Park Facilities Manual. A shelter design from the manual will be reengineered to a 1500m above sea level standard and this is being incorporated in the review phase of the Park Facilities Manual. Structures will be selected from the “steel skillion” range within the Manual.</li> </ul>	<ul style="list-style-type: none"> <li>● A Park Facilities Manual has been completed</li> <li>● Re-engineering design for alpine areas to be completed during 2009</li> <li>● DECC Signage Manual to be completed by June 2009.</li> </ul>	<p>Resorts Section, Snowy Mountains and South West Slopes Regions.</p>

Key Milestone	Status	Comments	Time Frame	Responsibility for completion
		<ul style="list-style-type: none"> <li>● DECC Signage Manual and signage design proposed by the Australian Alps Liaison Committee is currently being developed. Once approved the guidelines will apply to new and replacement signage in Kosciuszko National Park.</li> </ul>		
<p><b>Main Range Recreation Management Strategies:</b> (Section 9.2.1.19) - <i>completion of the human waste management strategy.</i></p>	Completed	<ul style="list-style-type: none"> <li>● The Human Waste Management Strategy is completed and is being implemented through the following projects:                             <ul style="list-style-type: none"> <li>▶ Rawson Pass precinct including construction of toilet and rehabilitation works is well advanced and will continue down the summit road towards Seamans Hut.</li> <li>▶ Charlotte Pass Toilet upgrade is underway and will also be completed during summer of 2008-2009.</li> <li>▶ New toilet at Guthega Power Station car park.</li> <li>▶ Some of the Main Range Tour Operators are implementing a waste removal practice.</li> <li>▶ Remote toilets to be installed at Tin &amp; Mawson Huts this summer. These huts receive significant visitation summer and winter.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Major initiatives completed, ongoing minor initiatives.</li> </ul>	Snowy Mountains Region.

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<b>Main Range Recreation Management Strategies:</b> (Section 9.1) - <i>completion of the walking track management plan.</i>	Underway	<ul style="list-style-type: none"> <li>Walking Track Management Plan is currently in draft.</li> </ul>	<ul style="list-style-type: none"> <li>To be completed by the end of 2008-2009.</li> </ul>	Snowy Mountains Region.
<b>Main Range Recreation Management Strategies:</b> (Section 9.2.1.17) - <i>site plans for Charlotte Pass</i>	Not yet underway	<ul style="list-style-type: none"> <li>Site Plan for Charlotte Pass visitor node is to be prepared in conjunction with the Charlotte Pass Village lessee. It has been included as action 11 (c) in the 2008 Southern Branch Visitor Management Plan (BVMP).</li> </ul>	<ul style="list-style-type: none"> <li>Subject to funding Plan to be developed by 2011 and implementation commenced in 2012.</li> </ul>	Resorts Section and Snowy Mountains Region.
<b>Main Range Recreation Management Strategies:</b> (Section 9.2.1.17) - <i>site plans for Crackenback Chairlift visitor nodes.</i>	Not yet underway	<ul style="list-style-type: none"> <li>Site Plan for Crackenback Chairlift visitor nodes is to be prepared in conjunction with the Thredbo Village lessee. It has been included as unfunded action 11 (c) in the 2008 Southern Branch Visitor Management Plan (BVMP).</li> </ul>	<ul style="list-style-type: none"> <li>Subject to funding Plan to be developed by 2011 and implementation commenced in 2012.</li> </ul>	Resorts Section and Snowy Mountains Region.
<b>Main Range Recreation Management Strategies:</b> (Section 9.1) - <i>Blue Lake climbing and abseiling impact assessment</i>	Underway	<ul style="list-style-type: none"> <li>DECC has published an ecological character description of the Blue Lake Ramsar site. It contains references to recreational impacts and knowledge gaps pertaining to the site.</li> </ul>	<ul style="list-style-type: none"> <li>To be completed during 2009-2010.</li> </ul>	Snowy Mountains Region.
<b>Main Range Recreation Management Strategies:</b> (Section 9.1) - <i>the introduction of the visitor registration system provide a framework for sustainable visitor use of the Main Range.</i>	Underway	<ul style="list-style-type: none"> <li>The development of a Registration system has commenced and is located at the visitor centres in Jindabyne.</li> </ul>	<ul style="list-style-type: none"> <li>Strategies to be completed by 2011.</li> </ul>	Snowy Mountains Region.

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Key Milestone	Status	Comments	Time Frame	Responsibility for completion
<p><b>Visual Management System:</b> (Section 11.6) – <i>creates a framework for reducing visual impacts associated with existing infrastructure and guiding the development of new facilities.</i></p>	<p>Not yet underway</p>	<p>The following visual management strategies are in place:</p> <ul style="list-style-type: none"> <li>● The Department of Planning must consider any visual impact of proposed development within the alpine resorts, particularly when viewed from the Main Range.</li> <li>● The Department of Planning ensures that built infrastructure within the alpine resorts complies with the alpine resorts SEPP colour and material palette.</li> </ul> <p>● In August 2007 the first edition of the NPWS Rehabilitation Guidelines for the Resorts of Kosciuszko National Park was published and can be viewed on line: <a href="http://www.environment.nsw.gov.au/aprkmanagement/knp_resortrehab.htm">http://www.environment.nsw.gov.au/aprkmanagement/knp_resortrehab.htm</a>. These guidelines have been prepared to assist land managers, lessees and contractors in ski resorts to plan and undertake rehabilitation work using indigenous species.</p> <ul style="list-style-type: none"> <li>● Key viewpoints into and from the Perisher Centre Valley were identified in 2000.</li> </ul>	<ul style="list-style-type: none"> <li>● 2008-2009 - Finalise project plan, consultants brief and secure funding.</li> <li>● 2009-2010 - Engage consultant to develop a Visual Management System (VMS) and Scenic Quality Enhancement Strategy (SQES) as described in management objective 11.6.3 of the POM.</li> <li>● 2010-2011 implementation of the SQES and review and update of the VMS.</li> </ul>	<p>Project managed by Resorts Section with assistance from a technical working group consisting of member from Resorts Section, Snowy Mountains and South West Slopes Regions.</p>

Key Milestone	Status	Comments	Time Frame	Responsibility for completion
<p><b>Park Communication Plan:</b> (Section 13.1) - <i>creates an overarching framework for the integrated provision of all communication materials, facilities and programs across the park. A prerequisite to the production of new communication products and the revamping of existing material and services.</i></p>	Underway	<ul style="list-style-type: none"> <li>● Preliminary Draft Park Communication Plan has been developed.</li> </ul>	<ul style="list-style-type: none"> <li>● To be completed during 2008-2009.</li> </ul>	Project managed by Snowy Mountains Region with assistance from Resorts Section and South West Slopes Regions.

### **Schedule 11 Plan Implementation Priorities:**

A database is being developed to track responsibilities and progress in implementing the 480 actions identified in Schedule 11. Of these 480 actions:

- 101 have a High priority,
- 191 Medium,
- 17 Low and
- 171 have been identified as actions that are ongoing park management tasks or are associated with agency-wide policy and procedures.

The Kosciuszko Database is in its final stages of development and will be accessible across Regional and Branch Offices. The Database will assist with monitoring and evaluating the Plan of Management, tracking the implementation of individual actions detailed in Schedule 11 of the PoM and assisting with meeting the reporting requirements detailed within Chapter 16. The database system will identify the parts of the organisation responsible for delivery of each action. Base line data relating to individual key performance indicators will be stored in the database enabling easy access to information for preparation of these implementation reports, development of Regional Operational Plans and the five yearly assessments required under the plan of management.

Consistent Regional Operational Plans templates were developed for use across Parks and Wildlife Group in 2008-2009. Regional Operational Plans for South West Slopes Region, Snowy Mountains Region and Resorts Section identify projects detailed in the Kosciuszko National Park Plan of Management.

The following sections highlight some other key projects undertaken in 2007-2008 that have contributed to the Key Desired Outcomes identified in Section 4.3 of the plan. This does not represent a full list of all actions completed during 2007-2008.

### **Integrated management of values:**

Management of Park values are integrated through a range of Key documents including:

- The Snowy Mountains and South West Slopes Regional Pest Management Strategies (2008-2011) have been completed and can be viewed on line at <http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018>
- Draft Kosciuszko National Park Horse Management Plan can be viewed on line at: <http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018>  
A Horse Management Community Steering Group helped to write this draft plan and the members of the public were invited to comment.
- The Kosciuszko National Park Fire Management Strategy is completed and can be viewed on line at <http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018>



**Natural values:**

- Fauna and flora monitoring programs continued (see Current Research Section).
- Partnerships with Snowy Hydro Limited and Roads and Traffic Authority and volunteers such as Talbingo and District Bushwalking Group working cooperatively to reduce weeds.
- Routine inspections carried out for new weed incursions.
- Weed control programs undertaken in target catchments, along roads, high visitation recreation areas and areas where certain threatened species are vulnerable from weed invasion.
- Blowering rehabilitation project - 50 ha of former agricultural land has been ripped and prepared for the planting of over 50,000 seedlings in 2008/09. Another 200 ha was ripped and prepared in June and July 2008.
- The rehabilitation of former Snowy Mountains Hydro Electric Scheme construction sites continued. Rehabilitation works has commenced at over 50 sites within Kosciuszko National Park. A range of site rehabilitation works have been completed including weed and pest animal control, waste removal, soil stabilisation and erosion control and revegetation works. To date over 120,000 native trees and shrubs, grown from seed collected within Kosciuszko NP, have been planted on the rehabilitation sites.
- Large numbers of willows have been eradicated from over 30 km of waterways such as Happy Jacks and Tumut rivers. A number of unstable sites impacting on waterways and posing safety risks to staff and visitors have been stabilised and revegetated. Sites rehabilitated include T2 Dogleg spoil dump, Nungar quarry, Tantangara Dam spoil dump and Tumut Ponds spoil dump. Follow-up plantings at Dogleg, River camp, Sand wash, Link Rd quarry, Kings Cross quarry, Snow Ridge and O'Hare's camping ground sites.



**Photo: Rehabilitation works at Blowering (Matt White DECC)**

### Cultural values:

- Implementation of Kosciuszko National Park Huts Conservation Strategy available on line at: <http://www.environment.nsw.gov.au/NationalParks/parkHome.aspx?id=N0018>

This plan outlines how the park's huts will be conserved. The Huts Conservation Strategy recommends rebuilding and reconstruction of identified huts where social values could be enhanced. All planning, maintenance and construction work on huts is completed in cooperation with the Kosciuszko Huts Association. These plans were placed on public exhibition and endorsed by the Kosciuszko Huts Association. Broken Dam Hut has been rebuilt and was opened in mid December 2007 with over 100 people attending the opening. Last summer Patons and Delany's Hut were also rebuilt and their openings attracted over 150 people.



**Photo: Delany's hut opening on 5 April 2008 - Auntie Marg Berg giving a "welcome to country" attended by over 100 people including family descendants (E.Peach DECC)**

- In addition the following heritage projects have been undertaken;
  - ▶ Heritage Action Statements completed for eight historic huts.
  - ▶ Coolamine Homestead - Conservation Management Plan placed on public exhibition, comments reviewed and ready for adoption. Funding has been secured for key actions in 2008-2009.
  - ▶ Currango Homestead - new horse yards constructed.
  - ▶ Minor works (drainage and cladding) at various huts.
  - ▶ Wolgals Hut - new patio and roof strengthened;
  - ▶ Pattinsons Hut – floor repaired and hut painted.
- Heritage Action Statements (HAS's) have been completed for 7 huts and another 7 are planned to be completed during in 2008-2009.
- Maintenance works undertaken on Seaman's hut during the summer of 2007-2008 included:
  - ▶ Partial installation of fire protection systems
  - ▶ Minor structural improvements to fire and flue
  - ▶ Strengthened eaves
  - ▶ Resetting paving at entrance porch
  - ▶ Hardened surface and seating on the eastern side of building.
  - ▶ Other minor building repairs

Works scheduled for this summer include finalisation of fire protection installation and painting.

- Planning work has commenced for the Kiandra courthouse with the following background reports being finalised:  
Courthouse/Chalet Building Code Assessment; Courthouse/Chalet Structural Engineers report; Courthouse/Chalet Asbestos report; Courthouse/Chalet Conservation Strategy, Precinct plan review.
- Following consultation with user groups and key stakeholders a plan was developed to upgrade the Cooinbil campground to ensure improved facilities for all users while better protecting the important natural and cultural values of the site. Improvements include; protection works including, bollarding, fencing, installation of a new toilet, modifications to existing horse yards and an upgrade of the road surface.
- The refurbished Caves House associated with Yarrangobilly Caves was opened for overnight accommodation on the 7<sup>th</sup> October 2007 with about 550 community members and children enjoying the celebrations. The opening was held as part of the NPWS 40<sup>th</sup> Birthday celebrations. The accommodation is proving to be very popular with strong bookings since the opening.



**Photo: Caves House opening and NPWS 40th Birthday celebrations  
(South West Slopes Region DECC)**

**Recreational values:**

- Thredbo Valley shared-use track. A feasibility study was completed and a community based reference group provided valuable input. A concept has been developed for a multi-use track and a route has been selected. The Review of Environmental Factors has been completed and placed on public exhibition from 28th July to the 22nd August. It will be presented by Snowy River Area Manager and Snowy Mountains Regional Manager to Environment Protection and Regulation Group Director Southern for determination in October 2008.
- The hand rail project and the lighting installation plan for South Glory Cave at Yarrangobilly Caves continued with the installation of new lights this year.
- Two new lookouts were constructed in Kosciuszko National Park. The lookouts provide views over Landers Creek falls and gorge and Talbingo Reservoir. Access to the lookouts is via the Cumberland Trail which was upgraded with 300 metres of new track. The Cumberland Trail now provides safer access onto the Snowy Mountains Highway. The sealing of the first 40 metres of track and sign installation will be completed in 2008-2009.



**Photo: Landers Creek Falls Lookout and view (Simon Allender DECC)**



**Photo: Talbingo Reservoir Lookout and view (Simon Allender DECC)**

- Installation of signage at Wallace Creek lookout completed.
- Walking path to Blue Waterholes lookout completed.
- The Bicentennial National Trail is a cross border multipurpose trail predominately utilised by horse riders. The sealing of the Alpine Way has resulted in an increase in traffic and as a result the safety of users of the Bicentennial National Trail needed to be considered. The realignment of the Bicentennial National Trail from Tom Groggin through to Geehi avoids the need for riders to use that section of the Alpine Way. Consultation with key stakeholders has been completed and a proposed route has been mapped. The Review of Environmental Factors is virtually complete and will be determined this year. Subject to funding approval, works will commence next financial year.

- Southern Cloud Lookout: In conjunction with Tumbarumba Shire a new lookout, complete with interpretation, has been constructed near Tooma. This lookout provides extensive views into the western side of Kosciuszko National Park including the crash site of the ‘Southern Cloud’ – a passenger aeroplane which disappeared in 1931 and was not located until 1958.
- Reconstruction of Main Range Walking Track to Mt Kosciuszko. This is a long term project with the work over the last year completed within the Rawson Pass precinct.

### **Alpine Resorts:**

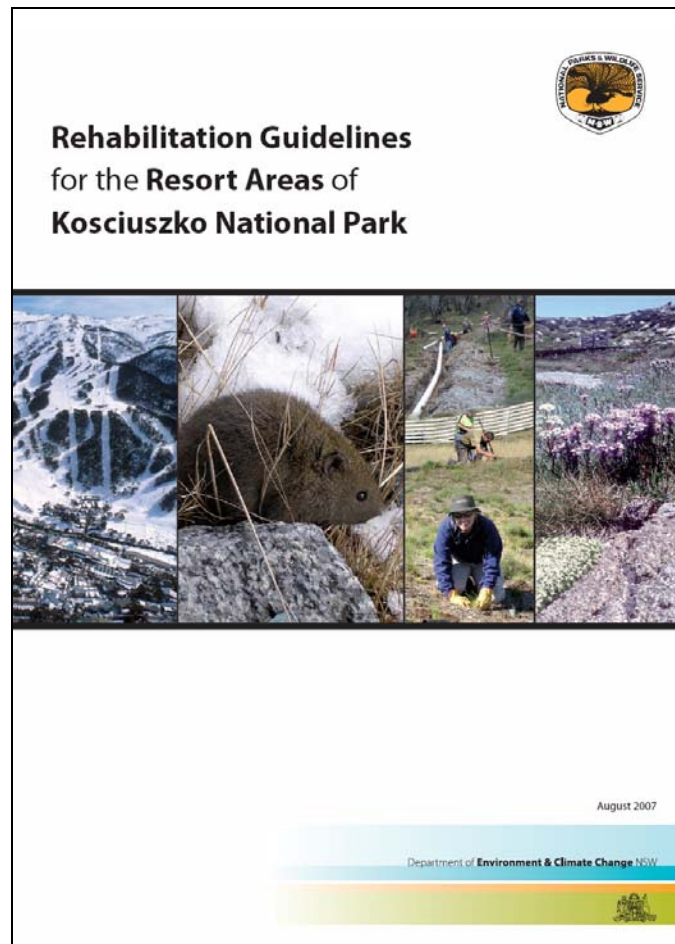
- Perisher Historical Society: On 6 August 2007 the Perisher Historical Society was registered with the Department of Fair Trading. This group was established by two members of Ku-ring-gai Alpine Lodge with assistance from volunteers and collaboration with Perisher Blue and the NSW National Parks and Wildlife Service. The focus of the group at present is attracting membership and collation of memorabilia. The Perisher Historical Society is also collecting oral history from various personalities, rekindling memories of their time and experiences in the snow and the development of snow sports.
- Kosciuszko Chalet Hotel: During last summer, restoration of the historic and iconic Kosciuszko Chalet Hotel at Charlotte Pass Resort commenced. Works included structural repairs identified by a building audit conducted as part of the consent to the Charlotte Pass head lease.
- Perisher Range Resorts Infrastructure Upgrade Program include:
  - ▶ After many years of operation the Sawpit Creek Landfill has ceased operation, with waste now being disposed of at the Jindabyne landfill. Rehabilitation of the site is planned to commence in 2008-2009.
  - ▶ Stormwater drainage, utility services and road resheeting were completed for approximately 1.5km of roads in Guthega and West Smiggins in preparation for future concrete sealing.
  - ▶ Five bridges in Perisher Valley were upgraded to reinstate the timber decking and improve the approaches for skiers, pedestrians, wheeled and oversnow vehicles.
  - ▶ Design work continued for future projects including a workshop at Waste Point, improvements to the Perisher Valley Sewage Treatment Plant and water supply pipelines for Perisher Valley.
  - ▶ Continuation of a program to make redundant septic tanks and trenches safe. Twenty-seven sites have been rehabilitated to date.
  - ▶ Revegetation of former sewage ponds at Smiggin Holes and route of the water rising main from Pipers Creek to Kosciuszko Road with thousands of grasses, forbs, shrubs and trees.
- The CSIRO Lodge Roof water Harvesting Pilot Project, Perisher Valley: The CSIRO Lodge Roof water Harvesting Pilot Project is being undertaken to trial the use of rain and snowmelt from the roof of a lodge as a potable water supply. The project involves the following work:
  - ▶ Installation of proprietary snow gutters.
  - ▶ Installation of a 40,000 litre underground fibreglass tank to store roof water.
  - ▶ Mains “top-up” connection to tank.
  - ▶ Pump and ultraviolet disinfection system.
  - ▶ Plumbing and connection of reclaimed roof water line to CSIRO lodge.
  - ▶ Associated backflow prevention, water meters, valves and automatic switching between mains and tank.
  - ▶ Electrical supply and telemetry to advise of faults.

► Prior to winter 2008 on-site works were completed. The system will be commissioned in September 2008 and will operate as a pilot under the management of NPWS until the end of winter 2010.

- Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park:  
In August 2007 the first edition of the *Rehabilitation Guidelines for the Resorts of Kosciuszko National Park* were published. These guidelines have been prepared to assist land managers, lessees and contractors in ski resorts to plan and undertake rehabilitation work. They focus on the characteristics and requirements of the Kosciuszko resorts; however, the guidelines will also be useful to Country Energy, Telstra, Snowy Hydro and others working in the alpine, sub alpine and/or montane areas of Kosciuszko National Park and other areas of the Australian Alps. The guidelines provide a baseline for best practice rehabilitation in the environments encountered in resort areas, focusing on six key elements for a successful rehabilitation program, including a site by site approach to rehabilitation, the use of indigenous species, management continuity, skilled rehabilitation crews, consideration of timing constraints, and monitoring.

Using photographs, diagrams and case examples to facilitate good techniques and practices, the Guidelines explore a range of aspects including site preparation and soil management, types and choice of materials, appropriate plant species, mulching for alpine conditions, managing weeds and maintenance of rehabilitated sites after planting. A PDF version of the Guidelines can be downloaded online:

[http://www.environment.nsw.gov.au/parkmanagement/knp\\_resortrehab.htm](http://www.environment.nsw.gov.au/parkmanagement/knp_resortrehab.htm).



### **Education and interpretation:**

- 43,000 people visited the Visitor Centre in Tumut. The MOU between Tumut Council and DECC for the Tumut Regional Visitor Centre was renewed for another 5 years.
- Tumut Region Visitor Centre won the Canberra and Capital Region Tourism Award for the third year running and was a finalist in the Australian Tourism Awards.
- Approximately 21,000 persons were recorded participating in tours at Yarrangobilly Caves with a total of 45,000 persons visiting the precinct area.
- Media familiarisation conducted with 5 journalists attending resulting in two page promotional spreads in the Sun Herald Sunday - VIC, The Australian Senior, The Land and the Courier Mail – QLD. The Tumut Regional Visitor Centre hosted three media, Tourism NSW and Snowy Valley Way staff familiarisations.
- The Mound and Mount cultural festival arranged by the Polish community was officially opened at the Snowy Region Visitor Centre on 19<sup>th</sup> April 2008.
- The Snowy Region Visitor Centre received a Commendation in the Canberra and Capital Region Tourism Awards 2007.
- The Snowy Region Visitor Centre hosted exhibitions from:
  - ▶ Aboriginal artist Cheryl Davison,
  - ▶ local landscape photographer Ray Killen,
  - ▶ DECC Women and Landscape Touring Exhibition,
  - ▶ historical photos display from the Snowy River Shire Historical Society and
  - ▶ numerous exhibitions by local artists.
- Discovery Program:
  - ▶ 6918 primary, secondary, tertiary students participated in a variety of programs run within the Snowy Mountains Region. Over 97% of teachers surveyed said that these programs were either ‘very good’ or ‘excellent’ at meeting the needs of their students.
  - ▶ A further 2769 people visited the Kosciuszko Education Centre or participated in the summer or autumn school holiday programs. It was the first time that 80% of participants surveyed joined a Discovery activity and 100% of participants surveyed responded that they thought these activities were ‘good’, ‘very good’ or ‘excellent’.
  - ▶ Discovery Rangers were also rostered on to work in the alpine area on peak visitation days from December through to April. These rangers provided information and acted as a safety net in this high visitation relatively remote area of extreme weather conditions.
- Aboriginal Discovery Program:
  - ▶ 698 primary, secondary, tertiary and other park visitors participated in activities featuring Aboriginal culture. These activities included guided walks featuring indigenous plant use, traditional skills demonstrations, art and craft.
  - ▶ 154 indigenous school students from an Aboriginal community group and five schools (Redfern, Brewarrina, Goodooga and two Western Australian remote area schools) participated in Discovery for Schools programs. These programs included both local Aboriginal culture and generic programs.
  - ▶ ‘Wiradjuri Wonders’ is a new Aboriginal Discovery Cultural tour focusing on bush tucker, bush craft and traditional pathways through Kosciuszko National Park.
  - ▶ South West Slopes Region conducted various Discovery and NAIDOC events in Kosciuszko NP during the Easter and Christmas periods and NAIDOC week and conducted numerous Discovery events with schools, community groups and local festivals and fairs over the year. Over 1650 adults and 2050 children participated or attended these events.



**Photo: Easter Discovery (South West Slopes Region DECC)**



**Photo: Aboriginal Discovery (South West Slopes Region DECC)**





**Photo: Blowering Cliffs (DECC)**

### **Current Research:**

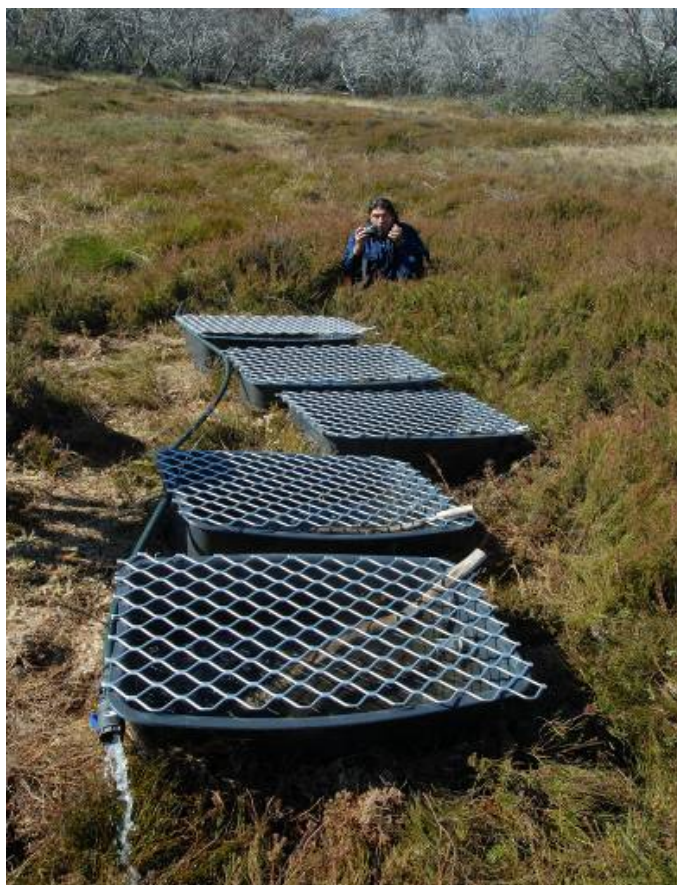
During this reporting period there were a variety of research projects underway in Kosciuszko National Park including:

**Spotted Tree Frog recovery project in Kosciuszko National Park** conducted by the Department of Environment and Climate Change and the Victorian Amphibian Research Centre. The future continues to improve following the 12 months survival of the released 40 captive bred near extinct Spotted Tree Frogs into Kosciuszko National Park. The original population had been almost completely wiped out by disease almost ten years ago. Monitoring has shown that as many as 20% of the one year olds released in January 2005 survived. The males in the first cohort of released frogs attained sexual maturity in spring 2007 and at least twelve individuals were heard calling. The females take an additional year to attain sexual maturity, so it won't be until spring 2008 that the first matings from this re-established population may occur. Another cohort of frogs were also released along a new section of stream and by autumn 2008, it was estimated that the Kosciuszko National Park population of Spotted Tree Frogs was now in excess of 150 individuals.

**Southern Corroboree Frog:** Exciting results were obtained for the Southern Corroboree Frog in January 2008, as five captive reared and released frogs came back to breed two years after their release. These individuals were reared in captivity for five years (one year as a tadpole and four as a frog), and were identified by their unique belly markings (see photo 1A). The fact that they didn't come back one year after their release is likely to be due to the severe drought conditions experienced during 2006-2007. Another release trial was also initiated during 2008, which involves releasing eggs and tadpoles back into artificial pools which ensure that the tadpoles make it through to metamorphosis without contracting the deadly amphibian chytrid fungus (see photo 1B). Given the recent captive breeding success for this species at the Victorian Amphibian Research Center, it should only be a matter of time before larger scale releases can be undertaken to re-establish or bolster wild populations of this spectacular frog species.



**Photo 1A: Southern Corroboree Frog showing unique belly markings (David Hunter, DECC)**



**Photo 1B: Artificial pools where eggs and tadpoles are released (David Hunter, DECC)**

**Mountain Invasion Research Network (MIREN) global survey of exotic plants** in mountain environments. Australia is continuing to participate in a global project to identify patterns of plant invasion in mountain areas and then investigate the processes influencing invasion.

Department of Environment and Climate Change hosted a **post-graduate student** from Switzerland in 2006. Publications relating to her thesis investigating the distribution of exotic plant species along an altitudinal gradient in Kosciuszko National Park (Kosciuszko Rd) and the factors influencing invasion are currently in preparation.

**Dendroecology of *Podocarpus lawrencei*.** The fire of 2003 burnt the habitat for the Mountain Pygmy Possum at Mt Blue Cow, killing many plants of *Podocarpus lawrencei*, a long-lived shrub. A project in collaboration with the Department of Environment and Climate Change and the Australian National University is determining the age of *Podocarpus lawrencei*, using conventional cross-dating techniques. The project is planned for completion during 2009 and will give us an indication of fire frequency over the past 300 or so years (and hopefully an indication of climate, especially snow fall, during that period).

**The Alps Vegetation Fire Response Monitoring System** The Alps Vegetation Fire Response Monitoring System was initiated in 1996 with the support of the Australian Alps Liaison Committee. It is an ongoing, long-term monitoring project established to investigate the effects of fire on vascular plant species and communities in the Australian Alps National Parks (AANP) (Forward & Hall, 1997). Permanent monitoring plots are located in four main areas of the three AANPs (Kosciuszko National Park (NSW) Alpine National Park (Victoria) and Namadgi National Park (ACT)). In total 40 sites were selected to cover the main vegetation communities with a variety of fire histories. Kosciuszko National Park monitoring has been completed in these plots after both fuel reduction burns and wildfire. Data is held in an electronic database and holds all the data collected for the three states. This system is updated and maintained on a regular basis by Department of Environment and Climate Change. There are 11 sites scheduled for re-monitoring later this year that did not burn in 2003. A project to check the database for errors, complete data entry where required, and undertake preliminary analyses across the ACT, NSW and Victoria is underway.

**Survey of uncommon and poorly sampled vegetation communities.** A number of the vegetation communities identified in the Southern Comprehensive Regional Assessment were poorly sampled in Kosciuszko National Park, with only one or two vegetation survey plots. Extra permanent survey plots were placed in these poorly surveyed communities during the first half of 2008 by Planning and Performance Unit. These vegetation types included Black sallee woodlands, Black scrub, Bogong Gum, Southern Sassafras and Weeping Snowgum. In addition in the Byadbo area three sites were sampled in White Box/Yellow Box/White Cypress Pine Woodland, and in the Bogong Peaks area two sites were placed in *Eucalyptus camphora* woodland. All sites were marked with a galvanised steel post, and the location recorded using a Global Positioning System (GPS) so that they can be re-located for monitoring in the future, for example after fires. The following table shows the number of new plots in each vegetation type. Sites were sampled in March 2008.

Vegetation type	Number of plots	Location
Black sallee	4	Tom Groggin, Long Plain
<i>Eucalyptus camphora</i>	2	Bogong Peaks
Weeping Snowgum	2	Currango Plain
Black scrub	3	Byadbo (Paupong)
White Box	4	Byadbo (Paupong)
Bogong Gum	2	Geehi Valley
Southern Sassafras	2	Geehi Valley

**“Dogs in Space”** funded by Department of Environment and Climate Change with support from the Australian Alps Liaison Committee. The aim of the “Dogs in Space” tracking initiative is to assist public land managers in making management decisions by providing objective information about how wild dogs utilise their habitat.

Wild dogs were tracked in Alpine National Park in Victoria, northern and southern Kosciuszko National Park in New South Wales, and Namadgi National Park in the Australian Capital Territory. Overall, 18 wild dogs were successfully tracked across the Alps. The project has revealed some of the long hidden secrets on where wild dogs live and travel. Home range sizes for most wild dogs tracked appear to be much larger than previously determined by conventional telemetry studies. The only exceptions to this generalisation were in sites where the abundance of native prey items such as kangaroos, wallabies and rabbits were high.

Following on from satellite tracking work which established that most wild dogs have large home ranges, travelling consistently within these areas but not straying too far from their home range, the project will assess the genetics of wild dogs across Kosciuszko National Park. A series of questions hoped to be answered, including the level of dingo genes in the wild population, as well as genetic relationships among individuals from different areas of the park. This work will commence in late 2008, and involves collaborators from the University of New South Wales”

Further Information is available in the Australian Alps Fact sheet “Dogs in Space Tracking Initiative”. Please contact [www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au) or [www.australianalps.deh.gov.au](http://www.australianalps.deh.gov.au).



**Photo: A pure bred dingo fitted with a satellite-tracking collar. (A. W. Claridge DECC)**



**Photo: Wild dogs across the Australian Alps are ‘mostly dingo’ by virtue of their genetic makeup. (A W. Claridge DECC)**

**Spotted Tail Quoll: establishing broad scale monitoring for the species:** A broadscale monitoring program for the threatened spotted-tailed quoll has been established across Kosciuszko National Park, with an emphasis on areas subject to wild dog control. Since 2002, quolls have been monitored using a combination of live-trapping, latrine-site searching and remote infra-red camera detection. The latter two methods have proven particularly useful in the Byadbo Wilderness Area, south of Jindabyne, where a robust population of the species has been recorded. Other records of the species have been recently confirmed elsewhere in the park, though not to the same extent as in Byadbo. This monitoring program will continue into the foreseeable future.



**Photo: Spotted Tail Quoll( Doug Mills, DECC)**

**Alpine Ash *Eucalyptus delegatensis*** in monospecific stands and in association with several other Eucalypts occupies around 105,000 ha on the southern tablelands of NSW, with about 80,000 ha being in Kosciuszko National Park. The species is fire sensitive, and is likely to die if the crown is severely scorched or consumed by fire. Lower intensity fires, particularly in the understorey are tolerated, although survival of regeneration or saplings is dependant on the local fire intensity.

About 65,000 ha of alpine ash in Kosciuszko National Park were burnt in the fires of January 2003. Fire severity mapping produced after the 2003 fire shows that around 36,000 ha of the alpine ash were killed, and 29000 ha survived the 2003 fire. It takes between 10 and 20 years for a stand of regenerating alpine ash to produce sufficient seed to be able to regenerate after another high intensity fire.

One of the predictions of climate change research is that drier spells in the southern tablelands are likely to occur more often. Severe and extensive wildfires usually occur after these conditions. For example the 1939 and 2003 fires were each preceded by long periods of below average rainfall. Alpine ash is likely to be adversely impacted by such changes in climate.

A project is being established to determine the current status of alpine ash in KNP, and structured to facilitate monitoring in future so that changes (or not) over time may be assessed. Presently there are some 24 permanent plots in KNP that were established in 1996 and 1997 to examine species fire response, floristic and structural changes in montane and sub-alpine vegetation post fire. Only one of these plots is in alpine ash. To adequately represent the alpine ash community across Kosciuszko National Park a considerably greater number is required. We anticipate sampling around 120 plots across the range of alpine ash forests in KNP during the coming year.

**Mountain Pygmy-possum populations** have been monitored at the end of November each year on 4 sites since 1987 (2 in resorts Blue Cow and Charlotte Pass and 2 outside- Paralyser and Summit Road), and more recently on Mt Kosciuszko. Populations in the resorts began to decline in the late 1990's and reached critically low levels in 2004. It is suspected that an increase in feral cat numbers in the resorts was largely responsible. Cat control has been undertaken in the resorts each winter since 2002 by trapping, with a total of 76 cats removed from Perisher Blue and 7 from Charlotte Pass up to spring 2007.

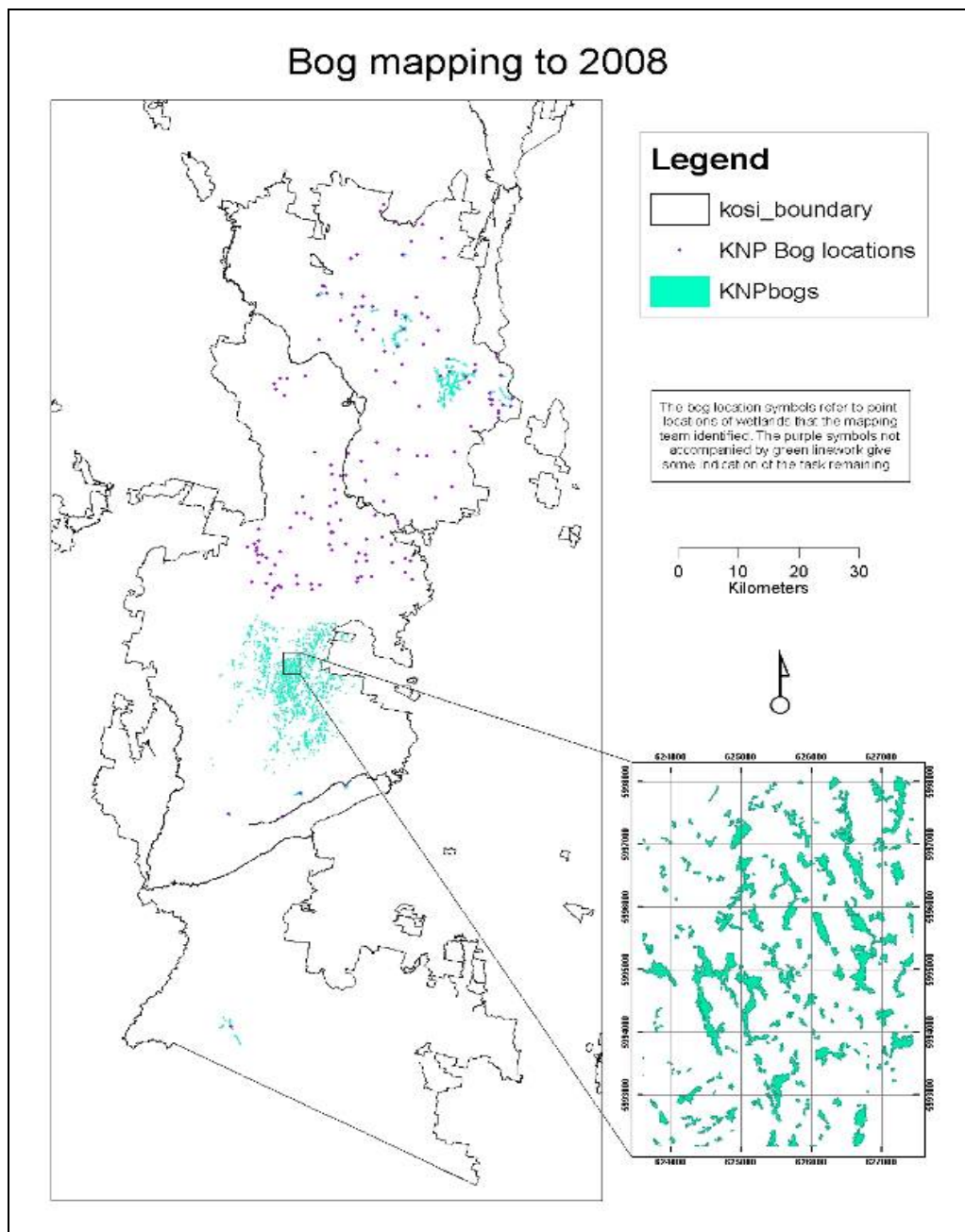
A slight recovery in resort possum populations occurred in 2005 and 2006 but numbers had declined again by spring 2007 (only 4 females trapped at Blue Cow and 9 females at Charlotte Pass in November 2007, compared to pre-decline averages of 29 and 26 respectively). Populations in the 2 sites outside resorts have remained relatively stable, averaging 10 and 11 females since monitoring began. Ten females were trapped at both sites in 2007. Mt Kosciuszko appears to have the only remaining large population of possums in KNP (>30 females). None were trapped on Mt Townsend in 2006. Cat control needs to be continued within the resorts and the impact of cats outside resorts requires assessment. Monitoring of key food resources has also occurred annually (Bogong moths in November and Mountain plum-pine seeds in autumn).

An honours student project, analysing the diet of the possums on the monitored sites for the last 13 years, was completed in 2007. A surprising result was the discovery of high pollen loads on possum faces and in their scats and eager licking of nectar from flowers by captive possums. These results reflect a degree of nectar foraging not previously recognised for Mountain Pygmy-possum and a suggestion that their diet is more similar to other pygmy-possums than had previously been known. Possums were captured in flowering shrubs outside the boulder field habitats, where they would be extremely vulnerable to prowling cats.



**Photo: Mountain Pygmy Possum**  
**(LOCHMAN TRANSPARENCIES Digital & Transparency Stock Photo Library)**

**The bog mapping project** The bog mapping project was established to determine the number of functional peatlands and sphagnum bogs and fens (collectively “bogs”) in Kosciuszko National Park (KNP). The extent and distribution of bogs is of interest intrinsically, but are also significant within the Mountain catchments, through their role in the storage and slow release of large volumes of water to the streams and rivers and for the habitat value they possess for other organisms, such as the endangered corroboree frog. Parts of the community also fall within a listed endangered ecological community (EEC) “Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions”. Appropriate management of this EEC and its associated reliant species requires a good understanding of the distribution and location of bogs. Mapped areas were delineated using a series of topographic maps (with elevation and orthophoto data) and aerial photographs both pre and post 2003 fires. Considerable additional fieldwork was completed to ground truth these identified areas. To date in KNP 2361 patches have been captured, with these totalling 1611 ha in area. Twenty two of an estimated 140 bog complexes have been mapped. The mapping is shown in the figure below:



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