



7. Park planning and knowledge

7.1 Park Planning and knowledge

Indicators

- Percentage of parks estate with a park management plan
- Park research to improve knowledge and effectiveness
- Participation in citizen science and other knowledge partnerships

Context

Effective park management requires a ‘learning by doing’ approach informed by clear plans, evidence and shared knowledge. As the manager of the parks network, Parks Victoria seeks to build partnerships to gather, analyse and share this knowledge to inform its management actions for nature and heritage conservation and provision of services for our visitors and community.

The adaptive management approach is outlined in Figure 7.1.1 below.



Figure 7.1.1 Parks Victoria’s adaptive management framework

Park management plans

Park management plans identify priority park assets and values, risks and strategies to conserve and manage those values and priorities for action. Many management plans were prepared during the 1980s and early 1990's and with drivers such as climate change, social and demographic change many parks now require new contemporary plans.

As of the end of 2013, while most parks reserved under the National Parks Act had a management plan, around one-quarter of the parks estate had an approved management plan that was less than 15 years old. However a number of draft plans were near completion including plans for the Greater Alps area (including the Alpine, Mt. Buffalo, Snowy River, Errinundra and Baw Baw national parks, and the Ngootyoong Gunditj Ngootyoong Mara South West Management Plan (including Lower Glenelg, Cobobbenee and Mount Eccles national parks). Planning programs had commenced for other landscapes including River Red Gum Parks.

Park research

Effective park management needs to be underpinned by a strong base of knowledge and evidence. A targeted research program enables park managers to fill key knowledge gaps, address uncertainty and test assumptions. For environmental management this can include understanding of how ecosystems, communities and species function, how well they are being managed and the best techniques for managing them. Additionally a social research program informs park managers about the profile, activities and motivations of visitors and the benefits of parks to society.

To access high-quality environmental and social research, Parks Victoria has established an innovative collaborative partnership known as the Parks Victoria Research Partners Program (RPP). The RPP includes a formal panel of ten university and other research organisations, as well as a variety of other informal research associations that brings together park managers and scientists for the purpose of undertaking applied research that solves real park management problems and improves understanding of environmental and social park management issues.

Since 2010 the RPP has completed or commenced around 140 partnership projects. These include being a partner/collaborator on 13 Australian Research Council Linkage projects. Each one dollar of Parks Victoria's research funding has leveraged more than six dollars of additional funding. Many of these research projects involve land management and policy partners from both government and non-government organisations.

The RPP has addressed such diverse environmental issues as:

- Existing and potential distribution and management of weeds, introduced predators and introduced herbivores
- Identifying key habitats for threatened flora and fauna
- Better understanding of fire ecology requirements (in partnership with DELWP)
- Understanding the diet and impacts of native and introduced herbivores
- Better understanding coastal and catchment processes,

- Mitigating impacts of pathogens
- Managing the impacts of over-abundant native fauna
- Improving habitats for native flora and fauna (such as ecological thinning)
- Marine habitat mapping
- A large body of flora, fauna and habitat inventory to guide management planning

It has also addressed social science issues such as testing new spatial technology for community involvement in park planning, development of tools to measure visitor and community benefits of parks and assessment of visitor impacts.

Types of research in parks

Based on an analysis of research permits for parks, research activity in parks included the following:

- Permits were held by 67 different research institutions/ organisations and universities accounted for 34% of these;
- There were around 200 scientific research permits managed each year;
- Nearly 90% of the permits were for terrestrial landscapes with 17% in alpine areas and 7-9% in coastal, freshwater/ aquatic environments, tall wet forests, box ironbark, the Murray River floodplain and western grasslands;
- Three quarters of permits were for biological research with nearly 50% of all research permits issued for parks and reserves collecting baseline information on the flora, fauna, habitat and the landscapes of our parks and reserves;
- Two-thirds of permits were predominantly about fauna (mostly vertebrate fauna), with 36% are predominantly about flora;
- Around 25% of permits were to better understand threatening processes, with fire (bushfire and prescribed burning) and pollution of water and soils the most commonly researched threatening process.

Traditional cultural knowledge

While western scientific knowledge has been very valuable in helping to understand park values, their threats and inform park management, the opportunities for sharing knowledge between park managers and Traditional Owners is beginning to be recognized through increased through Joint and co-management agreements and other partnerships. Cultural knowledge has been an important component of new park planning approaches such as the through the Ngootyoong Mara South West Management Plan.

Citizen science and other knowledge partnerships

Since 2007 the role of citizen scientists and community volunteers in gathering information to improve baseline knowledge of park values has increased dramatically. Partnerships to improve alignment of research and monitoring questions with park management priorities and agreed methods have increased. New and extended monitoring and research partnerships with groups such as Victorian Field Naturalists Club, Victorian National Parks Association, Conservation Volunteers Australia, Museum Victoria, several catchment management Authorities and Earthwatch have both added to the baseline knowledge of parks and increased community engagement and awareness of park values.

With rapid changes in technology, there are many further opportunities to develop knowledge partnerships with citizen scientists and other organisations to build baseline knowledge and help evaluate the effectiveness of park management programs.

Monitoring of park condition and threats

With finite resources, clear strategic priorities need to be established on what and where monitoring should be undertaken in parks.

Figure 7.1.2. Status of monitoring

Purpose of monitoring	Improvements	Challenges
Nature conservation-habitat and species condition and status of key threats	<ul style="list-style-type: none"> • ‘Signs of healthy parks’ monitoring program established – approx 60 priority parks across each major landscape type • Interim monitoring plans developed for 45 terrestrial and 15 marine parks • Monitoring protocols established for most key threats as well as wildlife survey • Robust monitoring of foxes and rabbits as part of cross tenure ‘Ark’ and emerging weeds under ‘Edens’ programs in partnership with DELWP • Victorian Forest Monitoring Program established across 600 sites (approx. 300 in parks) for baseline vegetation surveys • New monitoring partnerships established with volunteer, community and government organisations • Targeted threatened species monitoring at priority sites • Increased monitoring of fire impacts (through DELWP programs such as ‘Hawkeye’) • Marine biodiversity monitoring programs established in most marine national parks and sanctuaries 	<ul style="list-style-type: none"> • Need for greater alignment of monitoring plans, priorities and park monitoring programs across different organisations • Capacity constraints for staff to implement monitoring programs • More monitoring data collected but challenges in data storage systems, and data analysis and interpretation to inform park managers
Visitor and community	<ul style="list-style-type: none"> • Robust parks network scale monitoring of visitor numbers • Targeted site-based visitor number monitoring at highest priority (high use) parks • Long term robust visitor satisfaction monitoring • Improved visitor benefits monitoring • Long term community perception monitoring 	<ul style="list-style-type: none"> • Need for more site based visitor number monitoring
Historic heritage values		<ul style="list-style-type: none"> • Limited place condition assessment and monitoring increase but increased number of assessments planned for 2015/16
Aboriginal cultural values	<ul style="list-style-type: none"> • Increased surveys resulting from fire recovery programs 	<ul style="list-style-type: none"> • Limited place condition monitoring