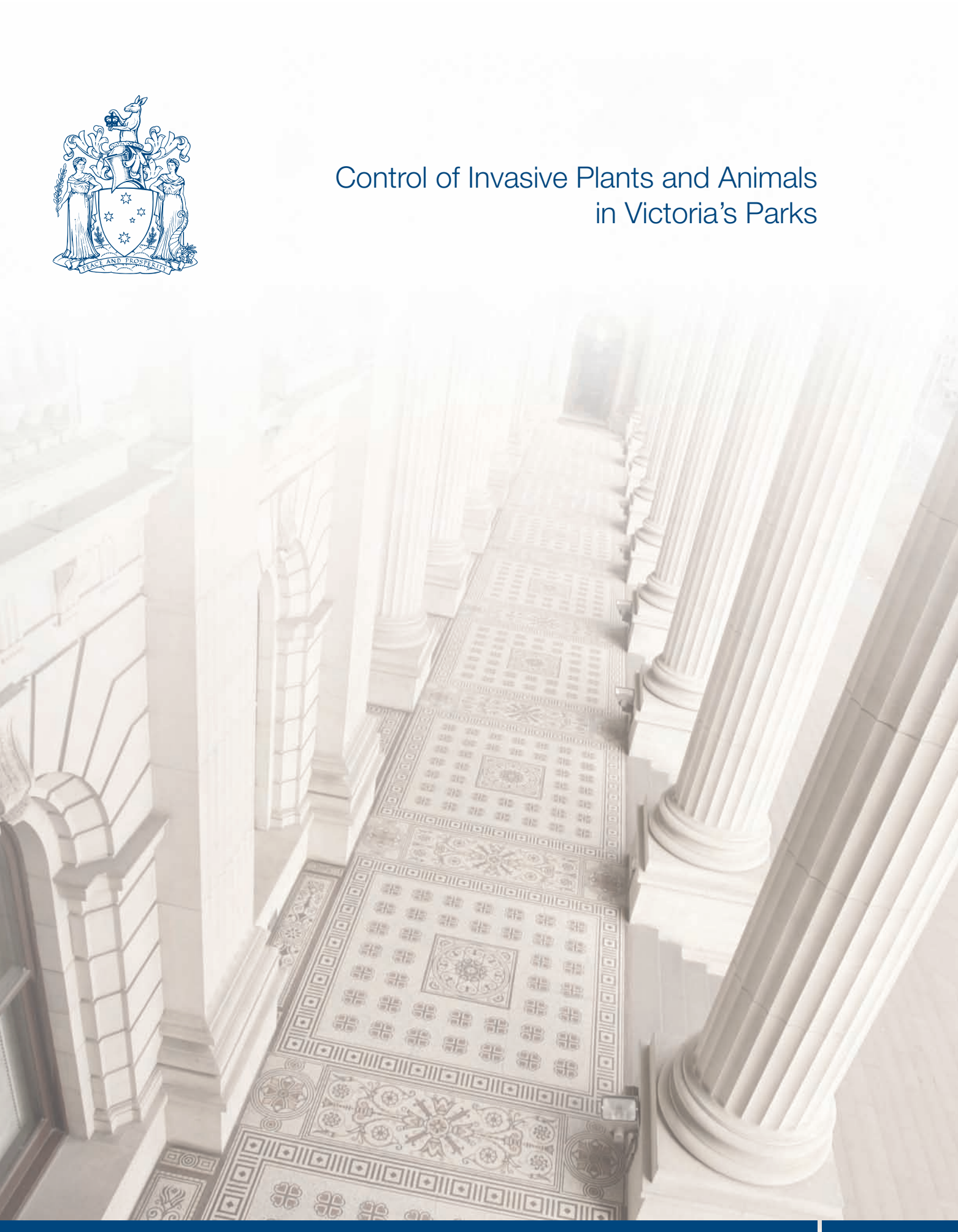
Control of Invasive Plants and Animals in Victoria's Parks



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Control of Invasive Plants and Animals in Victoria's Parks

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Victorian Auditor-General's Office

Auditing in the Public Interest

The Hon. Robert Smith MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Jenny Lindell MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my performance report on *Control of Invasive Plants and Animals in Victoria's Parks.*

Yours faithfully

D D R PEARSON
Auditor-General

26 May 2010

Contents

Audit summary

Victoria reserves about four million hectares of public land, or 20 per cent of the state, for nature conservation. The majority of this is within 68 national and state parks, which significantly contribute to Australia's biodiversity—the multitude of life forms, such as plants, animals, insects and microbes, and the land and water they inhabit.

Several reports, including the State of the Environment report from the Commissioner for Environmental Sustainability, have made it clear that Victoria's biodiversity is in poor condition and declining in most areas. Invasive plants and animals are a major contributor to that decline, and can have substantial economic, environmental and social impacts on parks.

This report examines the effectiveness of invasive species programs in national and state parks. In particular, the audit examined the governance arrangements, information systems, planning frameworks and on-ground activities targeting invasive species across the park network.

Conclusion

Governance arrangements for the control of invasive species across the state are complicated and not well coordinated. There is no single point of focus for oversight or for the responsibility of success or failure.

How well Parks Victoria manages the invasive plant and animal threat in national and state parks is generally unclear. Its planning is not robust, its data is inadequate and increasingly out of date, and its park management plans are also outdated and lack sufficient detail. In addition, monitoring and evaluation of invasive species management activities is inconsistent.

Good progress has been made in managing some invasive species in some parks, but an increasing reliance on short-term initiative funding to address a long-term problem is detrimental to the effectiveness of the effort across the park network.

Given the scale of the problem, if these organisational issues and resource constraints are not addressed, invasive species will continue to pose a major and likely growing threat to Victorian parks.

Main findings

Coordinating invasive species management

The governance arrangements for managing invasive species are very complicated and do not clearly assign roles and ultimate responsibility for success or failure. Recent policy emphasises a landscape scale approach—one that disregards boundaries based on land ownership and use—to manage pervasive threats, such as invasive species. While progress has been made, Parks Victoria (PV) is yet to apply this approach consistently, and no agency is clearly responsible for balancing local and regional issues with statewide management priorities. There are no detailed outcomes that the Department of Sustainability and Environment (DSE) expects PV to achieve nor is there a performance framework to assess how effective PV has been in managing invasive species.

Around 75 per cent of all plant data and 57 per cent of animal data is over 10 years old, while around 30 per cent of plant and animal data is over 20 years old. Data gathering on new and emerging invasive species is not given sufficient emphasis. The lack of universal access to good quality information is hampering coordination between responsible agencies.

Planning by Parks Victoria to control the threat

PV is not systematically applying its own planning frameworks or risk assessment processes to manage invasive species. The reliance on local knowledge, which is generally not recorded or stored, and anecdotal information limits PV's ability to consistently and reliably prioritise threats at the state level.

In recent years, there has been an increasing reliance on short-term initiative funding, with PV reducing the proportion of recurrent funding it spends on invasive species. This represents a mismatch between funding certainty and the necessarily long-term nature of control programs. The way that PV allocates resources is also complicated, lacks transparency and is not well understood by staff in parks.

Planning and control at the park level

There are no park management plans or documents that provide park level detail on threat priorities, the actions to manage these threats or sets out who is responsible for implementing and action. Nearly half of the plans are over a decade old and do not address new and emerging threats—a key element of the current biosecurity approach.

PV's human resources system does not capture the total time spent on invasive species management activities. Monitoring, evaluation and reporting vary depending on location, staff capability and invasive species. Collectively, these differences diminish the ability to perceive wider trends in invasive species, and to assess the effectiveness of management activities across the park network. In recognition of this, PV is implementing the *Signs of a Healthy Park* initiative, which aims to detect change in park health and quantify effectiveness of management.

Recommendations

Number	Recommendation	Page
1.	The Department of Sustainability and Environment and Parks Victoria should: • review and update their agreement to clearly assign responsibilities and respective roles for park management • develop a performance framework to assess the effectiveness of Parks Victoria's invasive species management.	13
2.	The Department of Primary Industries, the Department of Sustainability and Environment, Parks Victoria and the Catchment Management Authorities should jointly agree on and implement a landscape scale framework to identify statewide invasive species objectives and priorities.	13
3.	The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should: • update their invasive species databases as a first priority • enable timely input and access to these databases by responsible agencies.	13
4.	Parks Victoria should: • implement planning frameworks that incorporate risk assessment consistently across state and national parks • structure invasive species resource allocation so that it is transparent, and funding matches the extent and ongoing nature of the problem.	21
5.	Parks Victoria should improve its park-level planning so that: • all national and state parks have current park management plans • all plans align with current state policy and reflect the landscape scale approach to invasive species management • specific actions to manage the threats, including targets, performance indicators, monitoring standards and responsibilities for implementing these activities are clearly documented.	27
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Audit Act 1994 section 16—submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to Parks Victoria, the Department of Sustainability and Environment and the Department of Primary Industries with a request for comments or submissions.

The comments and submissions provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Submissions and comments received

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria

The following is an extract of the response by the the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria. The full response is provided in Appendix A of this report.

The Department of Sustainability and Environment (DSE), Department of Primary Industries (DPI) and Parks Victoria (PV) welcome the Audit Report and broadly agree with the Auditor-General's key conclusions and findings. The audit report will be an invaluable resource in formulating the future implementation of the government's Invasive Plants and Animals Policy Framework.

Alignment of the priorities and activities of DSE, DPI and PV will be addressed through joint commitment to the cross-agency invasive plants and animals governance group, and the planned biosecurity standing committee. In addition, DSE has formed a cross-divisional, cross agency Invasive Species Steering Committee to improve the coordination of invasive species management across public land.

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria – continued

All agencies will continue to address deficiencies of underpinning data, monitoring and evaluation processes and information systems consistent with the overarching whole-of government invasive plant and animal monitoring, evaluation and reporting framework. PV and DSE will improve the transparency and accountability for park management outcomes, of which invasive species management is a key aspect, as part of robust business planning.

Recommendation 1

DSE and PV will revise the business governance arrangements to clarify roles, responsibilities and accountabilities for park management. PV, with DSE, will continue to improve its performance management framework, consistent with the overarching whole-of government invasive plant and animal monitoring, evaluation and reporting framework. This will include more outcome based measures for invasive species management as part of the suite of key performance indicators for park management. These will build on the state of the parks management effectiveness evaluation process.

Recommendation 2

Statewide invasive species objectives and priorities are articulated in the recently developed Invasive Plants and Animals Policy Framework which provides the whole of government approach to managing existing and potential invasive species within the context of the Biosecurity Strategy for Victoria. All three agencies will collaboratively agree on statewide priorities for action on weeds and pests on an ongoing basis, reviewed annually. A coordinated approach to asset identification is being developed by DSE under the White Paper for Land and Biodiversity, which identifies thirteen flagship areas that are important for the management of environmental, social and economic values.

Catchment Management Authority Regional Catchment Strategies and subordinate Invasive Plant and Animal strategies are the vehicles for a coordinated landscape scale approach to invasive plant and animal management. These invasive plant and animal strategies will identify high-level priorities for early intervention and asset protection, due for completion by the end of 2010.

The landscape scale approach will continue to be refined over coming years as planned changes to institutional arrangements for natural resource management are implemented in line with the Land and Biodiversity White Paper.

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria – continued

Recommendation 3

The DPI, the DSE and PV will continue to work toward the development of common measures, data collection standards and protocols and information systems that will enable the integration and sharing of data for coordinated planning and whole-of-government reporting. All agencies will support the timely input and access to relevant databases

Recommendation 4

Consistent with the Invasive Plants and Animals Policy Framework, PV will continue to implement procedures that incorporate risk assessments developed to support the prioritisation of invasive species management at statewide, landscape and park scales. These include the Levels of Protection framework, and the Guidelines and Procedures for Managing the Environmental Impacts of Weeds on Public Land in Victoria 2006.

DSE and PV are working together to improve the transparency of the current funding provision and prioritisation process regarding the management of Victoria's state run parks and reserves system for long term ecosystem services and sustainable use.

Recommendation 5

DSE is commencing the development of a forest and parks planning framework in line with the White Paper for Land and Biodiversity. This will build on the work undertaken by Parks Victoria in establishing a contemporary planning approach that considers parks in the landscape and will ensure that plans strongly reflect the conservation of park values and community aspirations.

The plans will align with the aspirations of government invasive species policy, and will address priorities for early intervention and asset protection at scales appropriate to the desired outcome.

Recommendation 6

Parks Victoria has recently implemented new finance, budgeting and human resource modules, consistent with software used by other agencies. This will allow for detailed analysis and the development of full program and project costings including time spent on invasive species management.

Recommendation 7

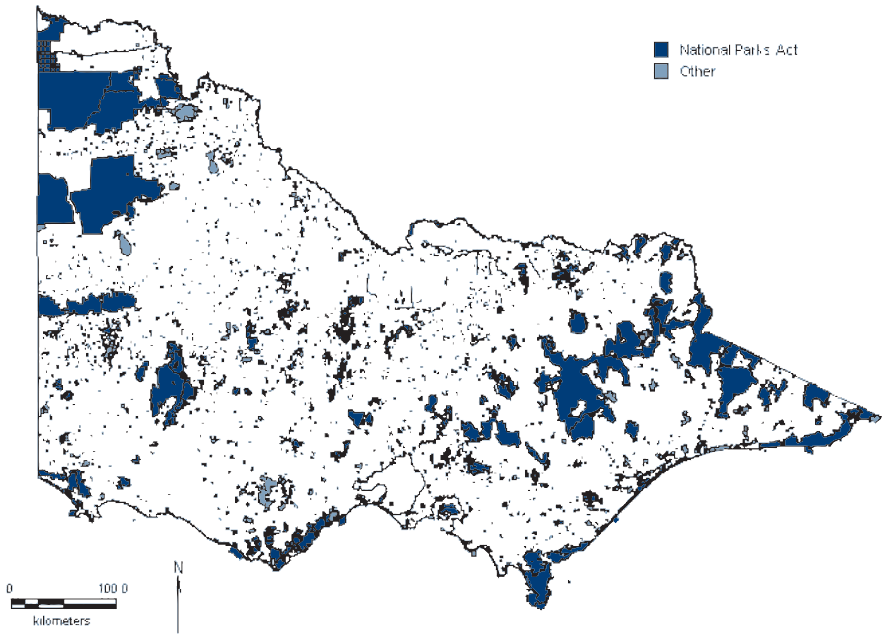
DSE, PV and DPI will continue to invest in and implement the whole of government monitoring, evaluation and reporting framework. Knowledge management initiatives identified in the Land and Biodiversity White Paper will facilitate opportunities for the collection and sharing of data and standards to inform the links and reporting of on-ground actions and changes in natural resource condition over time.

1 Background

1.1 Introduction

Victoria reserves about four million hectares of public land, or 20 per cent of the state, for nature conservation. Depending on the type and value of the land, areas are categorised as national, state, regional, metropolitan or reservoir parks, wilderness areas or reserves. The 41 national parks are extensive areas with outstanding natural environments and diverse landscapes. The 27 state parks contain one or more land types found in national parks and together they form a network of the major land types.

Figure 1A
Victoria's park network



Note: National Park Act parks include all national and state parks
Source: Parks Victoria.

Victoria's parks play a pivotal role in the tourism and recreation industries that rely on the natural environment of parkland and waterways, particularly in regional Victoria. Each year these parks receive around 75 million visits for activities such as camping, walking, rock climbing, boating, fishing and hiking. The economic benefit of parks is significant, contributing around $960 million annually to the economy.

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A healthy environment supplies a variety of public goods and services that the economy and communities depend on, including air purification, water filtration, waste decomposition and soil retention. As more people live in urban settings, parks increasingly offer social and health benefits. Research has linked peoples' access to nature with reduced stress, enhanced productivity, improved immunity and enhanced psychological wellbeing. The cultural, recreational and spiritual advantages to park visits cannot be readily quantified but are nonetheless valuable.

1.2 Parks and biodiversity

Victorian parks contribute to Australia's biodiversity—the multitude of life forms, such as plants, animals, insects and microbes, and the land and water they inhabit. Although accounting for just three per cent of Australia's land mass, the state contains twelve per cent of all bioregions. Bioregions are geographically distinct areas with common traits like geology and climate, and also plant and animal communities.

Biodiversity is critical to overall environmental health. Most of the state's pristine natural areas are in national and state parks—93 per cent of native flora and 86 per cent of native fauna species are found in parks. Losing biodiversity makes the environment vulnerable and less able to cope with existing and future pressures such as climate change.

1.2.1 Threats to Victoria's biodiversity

Victoria's biodiversity is in poor health and declining, except in largely intact landscapes. Three quarters of the state's waterways are degraded and almost half of plant species known are extinct or threatened. Much of this decline is due to invasive plants and animals, and increasing levels of transport, tourism and trade are intensifying these threats.

Invasive plants and animals can have major economic, environmental and social impacts on parks and biodiversity. Invasive species can push out native species and undermine the resilience of ecosystems. Second only to habitat loss as a threat to the environment, invasive plants alter ecology and dramatically change fire regimes. Invasive plants, whether environmental or agricultural weeds, can also affect the economic value of nearby land and damage cultural values and park assets.

Pest animals threaten many native fauna. They prey on local species and change their habitat, in some cases causing extinction. Pest animals can degrade water quality, soil stability and vegetation cover with behaviour such as burrowing and grazing. They can also introduce diseases that threaten humans and kill farm livestock and domestic pets. The most significant invasive animals are the red fox, rabbit, wild dog, feral cat, deer, horse and goat. The total cost of invasive species on private Victorian land alone is estimated at over $1 billion each year. The cost to native biodiversity is incalculable.

1.3 Legislative framework for invasive plants and animals

Fifteen pieces of legislation apply to invasive plant and animal management on public land. The key legislation, however, is the *National Parks Act 1975* (NP Act) and the *Catchment and Land Protection Act 1994* (CaLP Act).

Under the NP Act, the state must preserve and protect native flora and fauna, and eradicate or control exotic flora and fauna in parks. The CaLP Act establishes a framework for land managers to maintain and enhance the quality of land and water resources, and their associated plant and animal life, within catchments.

1.4 Responsibilities

Catchment Management Authorities (CMAs) are responsible for developing regional catchment strategies and prioritising actions to tackle invasive plants and animals across their respective landscapes. These strategies should accord with state policy.

Along with the regional role of CMAs, landholders, the Department of Primary Industries (DPI), the Department of Sustainability and Environment (DSE) and Parks Victoria (PV) share responsibility for managing invasive species across Victoria.

In order to unify invasive plant and animal management across both public and private land, Biosecurity Victoria, a division of DPI, was assigned responsibility for overall policy. This change was also designed to strengthen a biosecurity approach to managing invasive plants and animals and minimise the social, economic and environmental risks associated with invasive plants, animals and diseases.

DPI also oversees pest management activities on private land. DSE mirrors this responsibility on public land, with PV delegated responsibility by DSE for on-the-ground management activities across most parks, reserves, and waterways.

The Biosciences Research division of DPI, along with DSE through the Arthur Rylah Institute for Environmental Research, are tasked with invasive plant and animal research aligned to current policy priorities.

DPI and DSE have joint responsibility for managing investment and funding into weed and pest animal control. Oversight and policy direction rests ultimately with the Minister for Environment and Climate Change.

1.5 Policy and program framework

Growing Victoria Together

Invasive plant and animal management is primarily part of the Growing Victoria Together (GVT) outcome of *Protecting the environment for future generations*. This outcome aims to:

- increase and provide greater protection for areas of high conservation value
- improve the health of our catchments, rivers and waterways.

Invasive plant and animal management also supports the GVT outcome of *Promoting sustainable development* by improving the productivity and sustainability of natural resource industries such as fisheries, farming, forestry and mining.

Victorian Pest Management Framework

The 2002 *Victorian Pest Management—A Framework for Action* provided a five-year planning framework for pest management in Victoria to give strategic direction to current and future species strategies. Falling under this framework were specific management strategies targeting weeds, rabbits, wild dogs, foxes, feral pigs and feral goats, and public land management.

1.5.1 Recent policy developments

Biosecurity strategy (2009)

The whole-of-government *Biosecurity Strategy* developed by DPI covers threats to primary industries and the environment across public and private land, freshwater and marine habitats. The strategy emphasises a risk-management approach to prioritise threats and then determine interventions for maximum benefit. It aims to minimise the future impact of new invasive species, while also protecting high-value assets by reducing the impact of established invasive species.

The draft *Invasive Plant and Animal Policy Framework* is part of the *Biosecurity Strategy* and outlines the approach to managing existing and potential invasive species. *Module one* of this framework, also in draft form, is an action plan targeting invasive plant and vertebrate animal species.

Securing our Natural Future (2009)

The *Securing our Natural Future* White Paper for Land and Biodiversity that DSE developed establishes the direction of policy and investment priorities for threatened species, natural resource management, land health and biodiversity for the next 20 to 50 years. The *Victorian Biodiversity Strategy* is currently under review. It links to the White Paper and is designed to provide a more detailed implementation framework over the next five years.

1.6 Audit objective and scope

The audit examined the effectiveness of invasive plant and animal pest programs in Victoria's national and state parks. Specifically, the audit examined:

- how well agencies planned their responses to invasive plants and animals threats
- the actions to manage invasive plants and animals and their impact.

1.6.1 Audit approach

To assess the planning for, and management of, invasive plants and animals, we reviewed the actions of agencies at four parks:

- Alpine National Park
- Greater Otways National Park
- Dandenong Ranges National Park
- Kooyora State Park.

We focused on invasive plants and vertebrate animals, and refer to them as 'invasive species' when discussed together. We recognise that there are other species, such as invertebrate animals, fungi and micro-organisms that may also be considered an invasive threat to parks. These other species were not examined in this audit.

The audit was performed in accordance with Australian Auditing Standards. The total cost of this report was $380 000.

2 Coordinating invasive species management

At a glance

Background

Given the broad range of stakeholders involved, robust governance arrangements, along with integrated and current invasive species databases, are central to achieving effective, coordinated management of activities across the state.

Conclusion

Complicated governance arrangements, combined with a reliance on increasingly outdated and disparate invasive species databases, have hindered effective coordination of efforts to control invasive species. This is particularly pronounced for new and emerging threats.

Findings

- The governance arrangements in place to manage invasive species are complicated and do not clearly assign accountability for success or failure.
- The 'landscape scale' approach, which is better practice in controlling pervasive threats, has yet to be consistently applied.
- There is no single database that comprehensively details the extent and threat of invasive species, with data on invasive species being fragmented, inadequate and increasingly out of date.

Recommendations

- The Department of Sustainability and Environment and Parks Victoria should:
  - review and update their agreement to clearly assign responsibilities and respective roles for park management
  - develop a performance framework to assess the effectiveness of Parks Victoria's invasive species management.
- The Department of Primary Industries, the Department of Sustainability and Environment, Parks Victoria and the Catchment Management Authorities should jointly agree on and implement a landscape scale framework to identify statewide invasive species objectives and priorities.
- The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should:
  - update their invasive species databases as a first priority
  - enable timely input and access to these databases by responsible agencies.

2.1 Introduction

The dynamic nature of the environment and an incomplete understanding of how it works is an ongoing challenge to all land managers. The many laws and stakeholders working in different areas at different scales—be it in an individual park, a catchment or statewide—further complicate the management of invasive species.

Coordinated governance and an integrated information system are central to the control of invasive species. Managing invasive species relies heavily on good quality information. Given its complexity and changing nature, land managers need to collect up to date information on invasive species and make it accessible to stakeholders within and outside government.

2.2 Conclusion

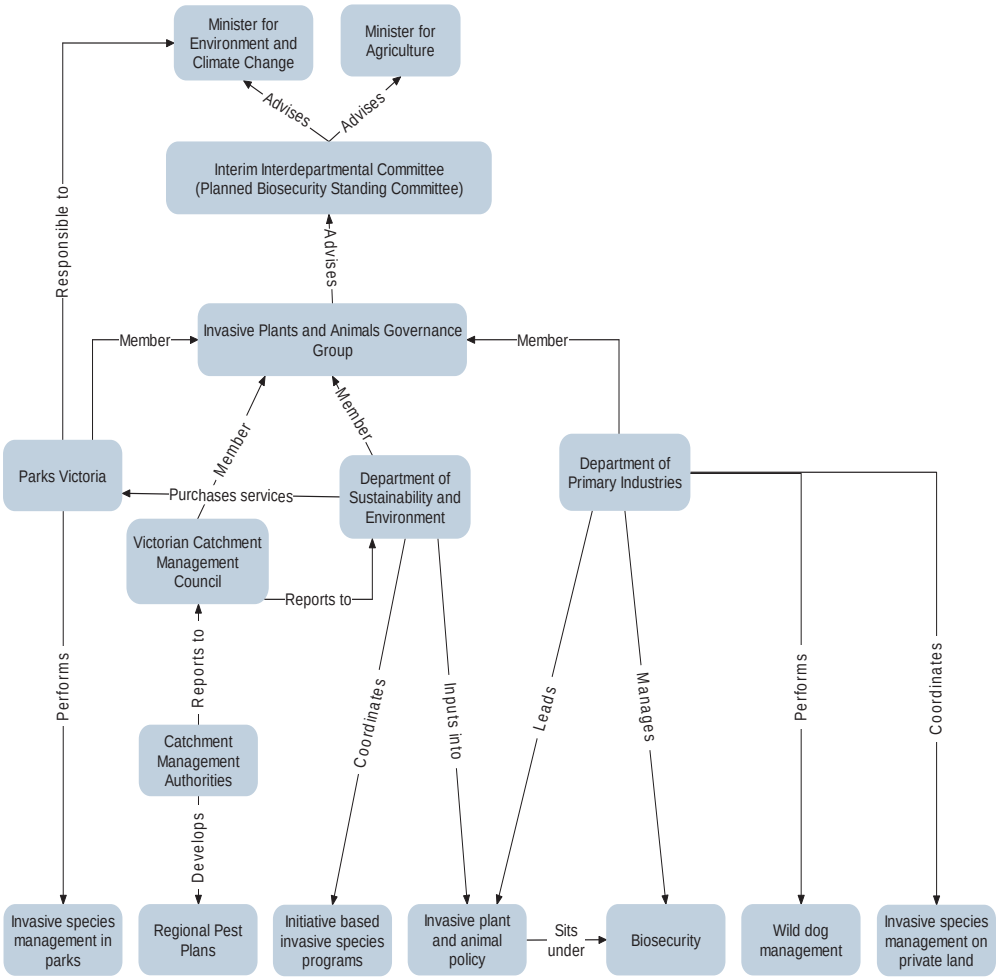
Unnecessarily complicated governance arrangements have hindered coordination and control of invasive species. Reliance on outdated and incomplete data to inform control activities, combined with poorly integrated information management systems, further limits the effective management of invasive species. This is particularly pronounced for new and emerging threats, which is a stated priority under the current biosecurity policy.

2.3 Governance of invasive plant and animals

Given the broad range of stakeholders involved, effective governance arrangements are required to manage invasive species. These arrangements should clearly assign specific stakeholder roles and responsibilities so that they are understood. This reduces the risk of overlap and service gaps, and enhances accountability by clearly attributing responsibility for the success or failure of actions.

The governance arrangements in place to manage invasive species are unnecessarily complex and do not clearly assign accountability for success or failure. As Figure 2A shows, there are multiple stakeholders, with multiple roles and limited integration.

Figure 2A
Governance arrangements for invasive species



Source: Victorian Auditor-General's Office.

Parks Victoria (PV), the Department of Sustainability and Environment (DSE), the Department of Primary Industries (DPI), Catchment Management Authorities (CMAs) and the Victorian Catchment Management Council (VCMC) all have governance roles in the management of invasive species.

DSE is responsible for invasive species management across public land and delegates to PV the conduct of on-ground activities in the park network. This includes the control of a range of invasive plants and animals, such as blackberries, rabbits, goats and pigs. An annual service agreement between DSE and PV documents this relationship. However, neither the agreement nor any other document:

- assigns respective roles and responsibilities for invasive species management
- details outcomes that DSE expect PV to achieve
- sets out a performance framework to assess how effective or efficient PV has been in controlling invasive species.

This has led to overlapping responsibilities which resulted in blurred accountability for performance and achievement of outcomes. Overlapping roles and the insufficient focus on outcomes has also made it difficult to determine the most effective allocation of resources in parks.

Since 2007, DPI has been responsible for statewide invasive plant and animal policy. In 2009, it released the *Victorian Biosecurity Strategy.* Module one of the policy framework focuses on invasive plants and vertebrate animals. DPI also coordinates invasive plant and animal activities on private land. Despite leading the statewide policy and biosecurity responsibilities, DPI has only an indirect relationship with PV.

The VCMC is an advisory committee on land and water management but has no direct authority over CMAs. CMAs have a much more direct regional role, developing regional invasive species management plans. Both the VCMC and CMAs have limited and informal relationships with PV, despite all parks existing within CMA catchments.

The only formal link between the stakeholders is the Invasive Plant and Animal Governance Group, convened in December, 2008. This group considers broad invasive species management issues, such as the coordination of stakeholder programs and future state investment. It functions at an operational level, advising the strategic Interim Victorian Biosecurity Interdepartmental Committee and, if formed, the proposed Biosecurity Standing Committee. This group is critical to building agreement between the stakeholders and coordinating an integrated, statewide approach to invasive species management.

2.3.1 Landscape scale approach

While their boundaries define the geographical extent of parks, factors outside these boundaries can affect what happens within parks. This is particularly so for invasive species, which can and do move across park boundaries and other public or private land. Because of this, land managers need to manage invasive species using a 'landscape scale' approach that disregards boundaries based on land ownership. This approach is consistent with better practice.

A landscape scale approach is not being used to manage invasive species throughout the state—largely because various agencies continue to adhere to traditional management approaches that are not coordinated. No single agency was responsible for coordinating local and regional issues with state management priorities. All the agencies involved in managing invasive species have a different focus:

- PV is responsible for managing parks only, and does not routinely consider invasive plant and animal issues occurring outside the park boundary
- CMAs have a regional, or catchment, focus
- DSE and DPI have a statewide focus.

This approach to invasive species management hinders the effectiveness of statewide strategies and programs designed to reduce the threat of invasive species in parks and other public and private land. While the *Securing our Natural Future* policy and the *Biosecurity Strategy* have both adopted a landscape scale approach, the governance arrangements and management approaches have yet to reflect this change.

2.4 Information management

Planning for invasive species across more than four million hectares of land requires good quality information. Agencies need current, relevant, reliable and timely information on the extent of invasive species and their impact on the environment to guide planning, to evaluate and improve management activities and to measure the effectiveness of effort.

DSE, DPI and PV each individually collect information on invasive species and store this in a range of databases. In consequence, there are limitations to the adequacy, currency, accessibility and compatibility of the information and respective information management systems.

Figure 2B shows the various databases, their purpose and the extent to which the 'owner' shares information with other agencies.

Figure 2B
Information management systems—invasive species

Database	Owner	Purpose	Users
Flora Information System (FIS)	DSE	Records plant species locations and attributes	DSE, DPI, PV
Atlas of Victorian Wildlife (AVW)	DSE	Records animal species' locations and attributes	DSE, DPI, PV
Ecological Vegetation Class typology database (EVC)	DSE	Describes vegetation of EVCs, including characteristic invasive plant species	DSE, DPI, PV
Actions for Biodiversity Conservation database (ABC)	DSE	Identifies invasive plants and animal instances that threaten listed species and communities	DSE, DPI, PV
Integrated Pest Management System (IPMS)	DPI	Records and reports on invasive plant and animal occurrences	DPI
Environmental Information System (EIS)	PV	Provides a tool for capturing, viewing and querying spatial data on environmental assets and records related to management activities	PV
ParkView	PV	Online tool under development; aims to link above databases as well as providing functions of EIS	PV

Source: Victorian Auditor-General's Office.

2.4.1 Adequacy of information systems

None of the seven databases are compatible with each other or are accessible to all of the agencies involved in managing invasive species. Key elements, such as database inputs and outputs from each agency, are different. As a consequence, the integration of data to provide a complete statewide picture of threats is not practicable. In turn, this hinders the development of a landscape scale approach across the state.

Particular issues with the information management systems identified include insufficient:

- Baseline information about the abundance, distribution and behaviours of threatening invasive species in parks. Around 75 per cent of all plant data and 57 per cent of animal data is over 10 years old, while around 30 per cent of plant and animal data is over 20 years old. New and emerging invasive species are not given sufficient emphasis.
- Information that accurately maps these threats to high-value assets. Regional information is often stored separately or is tacit knowledge—local knowledge which is generally not recorded or stored. Such knowledge is not readily available at a state level for planners. This has led to an over-reliance on informal and anecdotal information.
- Monitoring, evaluation and reporting data on the effect of invasive species management. Invasive species management reporting is predominantly based on input activities, such as hectares sprayed or number of baits taken—a measure of management efficiency and not of the effectiveness or impact achieved.

In addition to these databases, individual park staff sometimes maintain separate standalone databases to record infestations, treatments and responses. This further fragments the statewide knowledge of invasive species because there is no single database that can comprehensively detail the extent and threat of invasive species in Victoria's parks.

2.4.2 Accessing information management systems

Timely access to the most recent information on invasive species is an important part of planning responses to the threat they pose. Delays in accessing and updating databases, or incomplete information, limit the ability of planners to develop appropriate and effective responses.

The audit found that:

- DPI uses the Integrated Pest Management System (IPMS) for reporting on invasive species. PV staff do not have access to it, although relationships at the regional level enable informal data sharing.
- While PV staff can access all DSE datasets, they cannot input directly into the Flora Information System (FIS) or Atlas of Victorian Wildlife (AVW) database. This can only occur via DSE staff, and the updated databases have taken between two and three years to be made available to park staff.

- The Environmental Information System (EIS) does not allow staff to readily report new and emerging 'real-time', invasive species occurrences, although its successor ParkView should allow for 'real-time' reporting once it is fully functional. As a result, these invasive species can go unreported.
- Problems of ready access occurred at the district level. Park staff did not have access to EIS data in other districts, even though staff work within adjacent parks.

The lack of access to, and the inability to rapidly update, databases that contain information on invasive species—both within PV and across the agencies—limit PV's ability to plan responses effectively.

Recommendations

1. The Department of Sustainability and Environment and Parks Victoria should:
   - review and update their agreement to clearly assign responsibilities and respective roles for park management
   - develop a performance framework to assess the effectiveness of Parks Victoria's invasive species management.

2 The Department of Primary Industries, the Department of Sustainability and Environment, Parks Victoria and the Catchment Management Authorities should jointly agree on and implement a landscape scale framework to identify statewide invasive species objectives and priorities.

3 The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should:
   - update the invasive species databases as a first priority
   - enable timely input and access to these databases by responsible agencies.

3 Planning by Parks Victoria to control the threat

At a glance

Background

Planning to control invasive species is challenging. If undertaken well it increases the likelihood that resources are appropriately allocated to address the most significant threats in areas where the natural values are highest.

Conclusion

Planning by Parks Victoria for invasive species management is not adequate, being limited by inconsistent application of the planning frameworks and risk assessments, poor data and the implications of an increasing incidence on short-term funding.

Findings

- Parks Victoria does not systematically use its planning frameworks or risk assessment processes in planning to manage invasive species.
- The reliability of threat prioritisation is diminished by the lack of data and the need to rely on tacit knowledge and anecdotal information.
- There is a trend of a greater reliance on short-term funding and an overall decline in the proportion of recurrent funding directed to invasive species management in parks.
- Parks Victoria allocation of resources is complicated, it lacks transparency and is not well understood by staff.

Recommendation

Parks Victoria should:

- implement planning frameworks that incorporate risk assessment consistently across state and national parks
- structure invasive species resource allocation so that it is transparent, and funding matches the extent and ongoing nature of the problem.

3.1 Introduction

Planning for invasive species management involves making decisions around the most productive and efficient use of available resources, having regard to the often vast areas to manage and uncertainty about the extent and nature of the problem being managed. Sound planning increases the likelihood that planners appropriately allocate resources to address the most significant threats in areas where the natural values are highest.

3.2 Conclusion

Planning is not robust. A planning framework and risk assessment processes are in place to guide how Parks Victoria (PV) prioritises its parks, based on their value and the invasive species threat. However, these are not consistently used or integrated at the park level.

In addition, poor data underpins planning. Significant gaps in the information on invasive plant threats means that staff rely on tacit knowledge and anecdotal information for their planning. This limits their ability to adequately control invasive species across parks.

Further limiting the planning for, and management of, invasive species is the increasing reliance on short-term initiative based funding. This type of funding does not match the ongoing challenge of invasive species management.

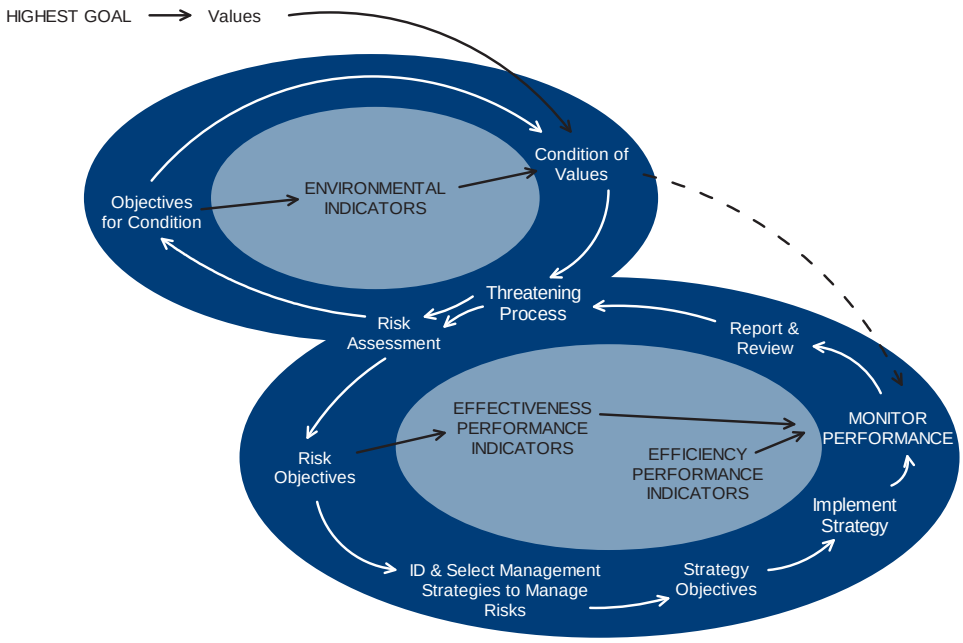
3.3 Planning framework

To achieve the objective of controlling invasive species, PV has developed the Environmental Management Framework (EMF). PV designed the framework for use across different landscape scales, from a park focus to a statewide focus. Elements of the EMF include:

- identifying the condition of natural assets within parks
- setting the objectives to be met within each parks to protect their natural values
- describing and prioritising threats to these values
- implementing targeted actions
- measuring the effectiveness of those actions in meeting objectives.

Figure 3A shows the framework that PV follows in assessing the threats that invasive plants and animals pose to natural values, such as native animals, vegetation and geological sites.

Figure 3A
Environmental Management Framework



Source: Parks Victoria.

PV determines the threats to these values, such as an invasive species found in a particular park, using risk assessments, and assesses the range of possible actions to manage the threat for likely efficacy and cost.

Environmental indicators measure any change in the condition of the values. The results are then reviewed to improve management actions and ultimately the natural values within the park network.

3.3.1 Application of the framework

The EMF is not applied consistently across the park network. Better resourced parks, such as the Greater Otways National Park, and relatively well funded programs, such as the *Ark* and *Eden* initiatives, use the framework with good results. The *Ark* and *Eden* initiatives have been successful in reducing the impacts of foxes and weeds, respectively, through large scale programs that can continuously adapt to optimise management responses to such threats. Less well resourced parks—the majority across the state—however, have no access to such programs nor are they using the framework systematically.

While different parts of the framework are used to some extent, overall there was piecemeal application of the EMF depending on park staff capabilities and park resourcing. In particular risk assessments and performance monitoring were inconsistently applied.

To be effective, the EMF needs objective and comparable data. Over the last five years, less than 1 per cent of the operating budget for natural values management was spent gathering baseline information on the condition of park assets.

3.4 Prioritising responses

The national and state parks network is extensive, and numerous invasive species threaten their natural value. Given finite resources it is not possible to control all invasive species in all of Victoria's parks. To protect the highest value assets, PV applies a risk-based approach to target its management activities.

3.4.1 Levels of protection

PV has a good model for assessing the value of its parks. The Levels of Protection (LoP) framework enables PV to assign values to natural assets within individual parks and rank them across the park network to determine their relative importance and priority. Assessment against the following criteria determines the value and condition of the parks:

- number of rare or depleted ecological vegetation classes (EVC) and species
- diversity of the park EVCs and species
- likelihood of sustaining the environmental condition of the park
- extent of threatening processes and likelihood of successful management.

The LoP framework considers all assets, or natural values, in the park network, which results in a consistent method for park categorisation. This way of valuing parks and their natural values details conservation aims and the likelihood of achieving them, while also recognising that PV cannot protect all parks from all invasive species. Parks classified as A1 are scheduled under the National Parks (NP) Act. These contain a very high diversity of EVCs, have high viability and a very large number of species, including threatened species. They are given the highest conservation status. A2 parks are also mostly scheduled under the NP Act, but have a lower diversity of EVCs, viability, number of species and conservation status. This classification continues down to C parks, which have the lowest conservation status. Figure 3B shows the levels of protection and the number and types of parks for each category in Victoria.

Figure 3B
Levels of protection for Victoria's parks

Protection level	National parks	State parks	Other parks
A1	17	2	1
A2	8	5	13
B	8	12	82
C	4	7	251
Total	**37**	**26**	**347**

Source: Victorian Auditor-General's Office.

3.4.2 Risk assessment

Risk assessments at both a statewide and park level have a range of limitations and vary in their application. The variability is exacerbated by the lack of data on the extent and nature of invasive species across much of the state. This diminishes PV's ability to effectively prioritise responses.

A range of risk assessment processes, which aim to identify and prioritise threats, are used across both the state and individual park level. At the statewide level, risk assessments determine the potential impact of specific invasive species to park natural values across the state. At the park level, risk assessments determine the potential impact of invasive species on specific natural values within that park.

At the parks visited during this audit, risk assessments focussed more on identifying and prioritising threats that invasive animals posed. There were significant gaps in identifying and prioritising invasive plants.

The way staff perform risk assessments varies significantly across parks. There are limited examples of well resourced and effective risk analysis frameworks that informed threat prioritisation and resource allocation. In the Greater Otways National Park, the current *Ark* and *Eden* initiatives have led to a decrease in impact of foxes and invasive plants respectively. Other parks, such as Kooyoora State Park, do not have the resources or staff numbers to apply statewide risk analyses.

Multiple layers of risk analysis were evident across the park network, making it difficult to fully comprehend risk management and its effectiveness. Further, there is great variation at the park level in terms of the extent of risk analysis applied during the decision making process. Without adequate data detailing the extent of invasive species across the parks, threat prioritisation is done in an ad hoc manner. Planning decisions are often based on tacit knowledge and anecdotal evidence, rather than on a reliable evidence base and systematic application of management frameworks.

A new environmental risk assessment (ERA) process was developed in 2004 that uses an academically validated risk assessment approach. It is undertaken at the park level to consider all known risks. PV prioritises all risks to identify what work they will undertake, and while they do not use this process exclusively for managing invasive plants and animals, it is compatible with the current biosecurity policy.

The ERA process is more comprehensive, and requires less time and fewer resources than the statewide and park-level approaches. Despite the streamlined process, consisting primarily of a two day workshop, PV has yet to apply the ERA to the majority of parks. From 2004 to 2010, PV has completed ERAs in 26 national and state parks, although this has not been priority driven. For instance, the parks with the highest levels of protection, the A1 and A2 parks, have not been given priority. These parks should be given preference as they contain the highest number and diversity of assets needing protection.

3.5 Resources for managing invasive species

Given limited resources, their allocation assumes even greater importance when planning for invasive species management. A clear and transparent resourcing process is required that can adapt readily to the changing nature and scale of the invasive species threat.

However, the way funding is currently allocated lacks transparency and the majority of funding does not match the long-term nature of the problem.

3.5.1 Funding

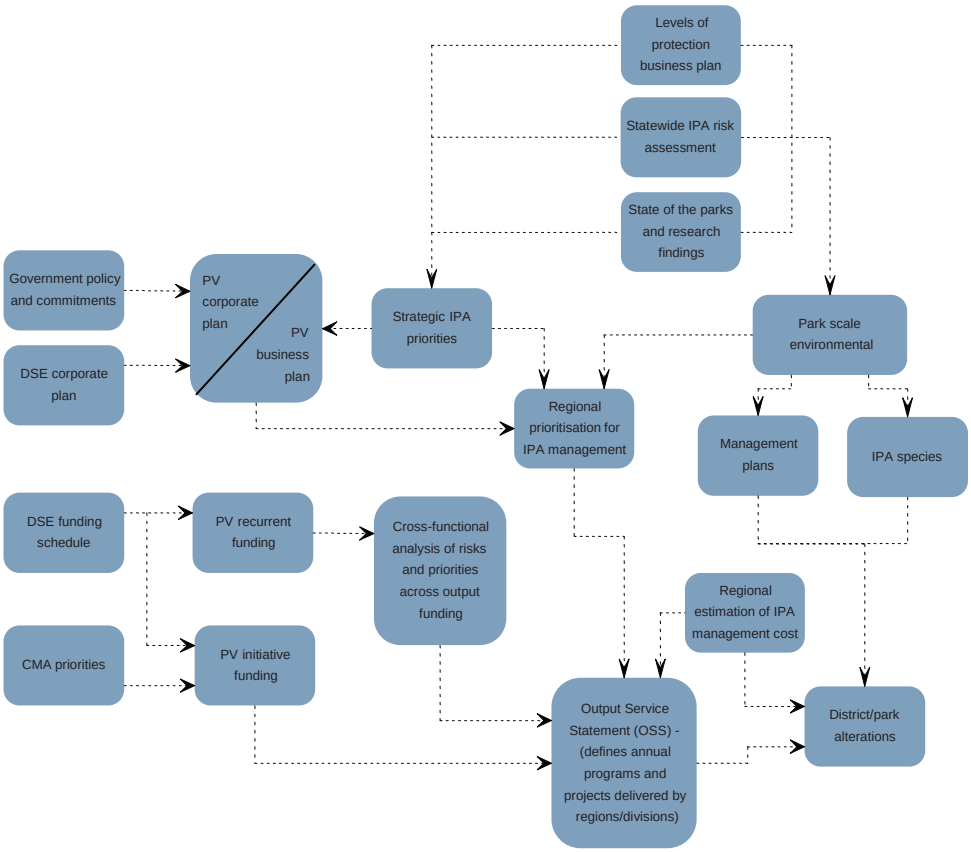
There is broad agreement across the sector that the treatment of invasive species, an ongoing challenge, requires long-term programs to be most effective. Assessments that PV have undertaken demonstrate that the effectiveness in reducing invasive species impacts increases when the program is ongoing. This is particularly true of invasive species that have become established and require containment.

Over the last decade, the incidence of short-term, initiative program funding has risen, while at the same time PV has reduced the proportion of recurrent funding it spends on invasive species. The result is that 84 per cent of natural values management (NVM) funds in 2009–10 are tied to initiatives of one to four years' durations, with recurrent funding for NVM expected to remain constant over the next five years. This raises uncertainty at the park and regional level about the resourcing of invasive species management and compromises long-term planning.

3.5.2 Resource allocation

PV uses an annual 'bidding' process for those funds that are not tied to an initiative or commitment. The NVM managers from each region in the state meet to propose and rank invasive species priorities for funding through the next year. These proposals are rated against proposals from other services, such as tourism. Senior management then decide which proposals they will fund that year. Figure 3C shows the NVM budget allocation process, which includes the allocation of invasive species resources.

Figure 3C
Parks Victoria's Natural Values Management budget allocation process



Source: Victorian Auditor-General's Office.

This process is complicated. It is difficult to comprehend where it begins, and where the real drivers and decision points are. It is unclear what weighting each of the elements has and how competing pressures alter the district and park allocations in the final step. It is not transparent to, or well understood by, the local park staff interviewed for this audit. The cross-functional analysis stage ranks outputs, such as tourism, against invasive species management, a part of NVM. No evidence was provided for a structured, consistent process applied at this critical stage of decision making.

Recommendation

4. Parks Victoria should:
   - implement planning frameworks that incorporate risk assessment consistently across state and national parks
   - structure invasive species resource allocation so that it is transparent, and funding matches the extent and ongoing nature of the problem.

4 Planning and control at the park level

At a glance

Background

Sound invasive species management relies on implementing the actions detailed in plans to respond to the identified threats and priorities. It also relies on systematic monitoring, evaluation and reporting to assess the effectiveness of on-ground management activities.

Conclusion

While national and state parks have management plans, many are outdated and they lack sufficient detail to be useful for managing invasive species. A lack of regular monitoring and robust evaluation means that there is little assurance that the management of invasive species has been effective or represents value-for-money.

Findings

- Neither park management plans for national and state parks, nor any other document, detail actions to manage invasive species.
- Almost half of all national and state park management plans are over a decade old and do not deal with new and emerging threats.
- Parks Victoria's human resources system does not capture the total time spent on invasive species management activities.
- At many parks, monitoring, evaluation and reporting was anecdotal and informal, limiting the ability to assess the effectiveness of activities.

Recommendations

- Parks Victoria should improve its park-level planning so that:
  - all national and state parks have current park management plans
  - all plans align with current state policy and reflect the landscape scale approach to invasive species management
  - specific actions to manage the threats, including targets, performance indicators, monitoring standards and responsibilities for implementing these activities are clearly documented.
- Parks Victoria should improve its human resources system to accurately capture all invasive species management activity.
- The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should implement a framework to monitor, evaluate and report on invasive species management across public and private land.

4.1 Introduction

Sound invasive species management relies on describing and implementing the detailed actions needed to respond to the identified threats and priorities. It also needs systematic monitoring, qualitative and quantitative evaluation to properly assess the effectiveness of these actions.

4.2 Conclusion

While park management plans have been developed, they lack sufficient detail to be useful for managing invasive species. Further, almost half of all the national and state park management plans are over a decade old—a significant limitation given the current policy focus on identifying new and emerging threats. Consequently, many of these plans are unlikely to reflect the current reality of the threats and priorities in many of Victoria's parks.

On-ground activity to manage invasive species by Parks Victoria (PV) staff is generally performed efficiently. However, the lack of robust monitoring and evaluation means there is little assurance that the management of invasive species has been effective or represents best value-for-money.

4.3 Park management plans

The *National Parks* Act (1975) requires land managers, in this case PV, to develop park management plans for each national and state park. The aim of the plans is to establish how land managers will protect the natural assets within parks. This includes protection from invasive species.

The park management plans examined in this audit did not detail actions to manage invasive species. Specifically, they did not:

- prioritise invasive plant and animal threats
- identify specific actions to manage the threats
- include targets, performance indicators and monitoring standards for invasive species programs
- identify responsibilities for implementing activities in this area
- integrate well with PV's strategic planning or strongly link with corporate priority setting and resource allocation.

The plans are general guiding statements, tending to focus on aims and strategies, without prioritising actions. There is no clear link between overall objectives, the on-ground activities and results in a particular park. It is also unclear how planned activities contribute to the aim of improving or maintaining the condition of the environment.

While PV advised us that the management plans were intended to be high-level, there were no underlying detailed plans that identified what actions park staff were to undertake when managing invasive species.

The currency of the park management plans was also an issue. Nearly half of all national and state park management plans are over a decade old. Of those parks examined, two had draft management plans and one had three parts to its management plan, each over 10-years old. Only one park had a current management plan.

The older management plans predate the previous policy document, the 2002 *Victorian Pest Management Framework.* As these plans briefly identify the main invasive species threats within the specific park, their lack of currency has significant implications for the identification and management of new and emerging threats—a key element of current policy, the 2009 *Biosecurity Strategy.* Also, because of their age, park management plans do not reflect the increasing emphasis by all stakeholders on a landscape scale approach to invasive species management.

4.3.1 On-ground management

On-ground management is the activity in parks to control invasive species. At each of the parks examined, staff undertook a range of on-ground activities, such as biological controls, spraying herbicides, laying poison baits and destroying rabbit warrens.

The extent and nature of on-ground management varied according to the funding source of the activity. For example, where the activities were part of initiative funding, the control effort was more effectively planned, structured and implemented compared to recurrently funded activities. For recurrently funded activities, on-ground management activities are determined by identifying priorities. These generally relate to the invasive species that are visible, accessible and that are likely to successfully eradicated, rather than the invasive species posing the greatest risk.

In addition, PV's human resources management system does not enable accurate reporting on the time spent on invasive species management activities, as it does not differentiate between invasive species activities and other tasks that PV staff routinely undertake. This is important as invasive species management requires intensive use of human resources. As a consequence, PV could not provide assurance that adequate management activities were occurring, particularly in terms of time spent.

4.4 Assessing the effectiveness of on-ground activities

Reporting, monitoring and evaluation of park management are all important. If conducted well this should enable PV to:

- determine the current environmental condition, and future outlook, at the park and state level
- identify trends in invasive species distribution and abundance, and their impact on park assets
- quantify the effectiveness of management actions and programs
- provide early warning of impending threats
- influence future decision making.

PV's 2007 *State of the Parks* report noted that although park staff and external groups had made efforts, there were few examples where monitoring and evaluation could reliably show that park condition had improved, and that management programs had been effective.

4.4.1 Monitoring and evaluation

There were few examples where the effectiveness of on-ground management activities had been rigorously monitored and impacts evaluated. As a consequence, there is little assurance that the investment to manage invasive species represents reasonable value-for-money.

Standard monitoring, encompassing data collection, analysis and reporting procedures, was introduced in 2004. This aimed to remedy variable monitoring, reporting and the high degree of uncertainty about the accuracy of information at the park level. Part of standardised monitoring was the development of monitoring protocols, which were designed to measure changes in the level of threat for the majority of invasive species.

Adaptive management programs, such as the *Southern Ark* that targets foxes in East Gippsland, have effective program monitoring and evaluation components. This enables PV staff to change or adapt activities based on results. Well resourced parks, such as the Greater Otways National Park, also have sound monitoring and evaluation capability. These programs and parks, however, are the exception.

While there was evidence of monitoring, it varied depending on location, staff capability and invasive species. These differing methods offer little consistency between and within parks. The PV *State of the Parks* report found that 'some' monitoring was conducted in 84 per cent of parks, while overall 21 per cent of monitoring conducted was based on standard PV monitoring protocols. No parks undertake routine monitoring of goats or pigs. There is a reliance on staff memory, field notes and stand alone spreadsheets and databases. PV staff consider many of the monitoring protocols not practical, difficult to follow and overly scientific.

Variable monitoring practices and subjective assessments mean PV staff are unable to perceive trends and are uncertain about the real impact of invasive species management across parks.

PV advised during the course of the audit that, in recognition of the monitoring and evaluation limitations, it has started to develop a new monitoring program. The *Signs of a Healthy Park* initiative aims to develop an 'integrated monitoring program based on good science, to detect change in park health and quantify effectiveness of management action across representative landscapes within Victorian parks'. A framework, which includes a monitoring guide for PV staff, is being piloted in several parks.

Recommendations

5. Parks Victoria should improve its park-level planning so that:
   - all national and state parks have current park management plans
   - all plans align with current state policy and reflect the landscape scale approach to invasive species management
   - specific actions to manage the threats, including targets, performance indicators, monitoring standards and responsibilities for implementing these activities are clearly documented.
6. Parks Victoria should improve its human resources system to accurately capture all invasive species management activity.
7. The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should implement a framework to monitor, evaluate and report on invasive species management across public and private land.

Appendix A.

Audit Act 1994 section 16—submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to Parks Victoria, the Department of Sustainability and Environment and the Department of Primary Industries with a request for comments or submissions.

The comments and submissions provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Submissions and comments received

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria

Department of Sustainability and Environment

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Ref: SBR004759
File:

Mr Des Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson

JOINT RESPONSE TO PROPOSED AUDIT: CONTROL OF INVASIVE PLANTS AND ANIMALS IN VICTORIA'S PARKS

Thank-you for the opportunity to make a submission on the proposed audit report: Control of invasive plants and animals in Victoria's Parks. Attached is a joint response from the Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria.

We would like the response to be included in the final report to be tabled in Parliament. I understand that the Mr Richard Bolt, Secretary of the Department of Primary Industries will reply to you directly with the same joint response.

If you have any questions or clarifications please contact Dr Peter Appleford, Executive Director Forests and Parks, on (03) 9637 8367.

Yours sincerely

Greg Wilson
Secretary

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria

General

The Department of Sustainability and Environment (DSE), Department of Primary Industries (DPI) and Parks Victoria (PV) welcome the Audit Report and broadly agree with the Auditor-General's key conclusions and findings. The audit report will be an invaluable resource in formulating the future implementation of the government's Invasive Plants and Animals Policy Framework.

Alignment of the priorities and activities of DSE, DPI and PV will be addressed through joint commitment to the cross-agency invasive plants and animals governance group, and the planned biosecurity standing committee. In addition, DSE has formed a cross-divisional, cross agency Invasive Species Steering Committee to improve the coordination of invasive species management across public land.

All agencies will continue to address deficiencies of underpinning data, monitoring and evaluation processes and information systems consistent with the overarching whole-of-government invasive plant and animal monitoring, evaluation and reporting framework. PV and DSE will improve the transparency and accountability for park management outcomes, of which invasive species management is a key aspect, as part of robust business planning.

The Auditor-General recognises that the current funding does not match the extent or nature of the problem. DSE and PV are working to address this issue through a review and consolidation of current funding provision and resource prioritisation models, and ongoing review of evaluation frameworks.

Specific responses to recommendations

	VAGO recommendation	***Government response***
1	The Department of Sustainability and Environment and Parks Victoria should: • review and update their agreement to clearly assign responsibilities and respective roles for park management • develop a performance framework to assess the effectiveness of Parks Victoria's invasive species management	DSE and PV will revise the business governance arrangements to clarify roles, responsibilities and accountabilities for park management. PV, with DSE, will continue to improve its performance management framework, consistent with the overarching whole-of-government invasive plant and animal monitoring, evaluation and reporting framework. This will include more outcome-based measures for invasive species management as part of the suite of key performance indicators for park management. These will build on the State of the Parks management effectiveness evaluation process.
2	The Department of Primary Industries (DPI), the Department of Sustainability and Environment, Parks Victoria and the Catchment Management Authorities should jointly agree on a landscape scale framework to identify statewide	Statewide invasive species objectives and priorities are articulated in the recently developed Invasive Plants and Animals Policy Framework which provides the whole of government approach to managing existing and potential invasive species within the context of the Biosecurity Strategy for

1

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria – continued

	invasive species objectives and priorities.	Victoria. All three agencies will collaboratively agree on statewide priorities for action on weeds and pests on an ongoing basis, reviewed annually. A coordinated approach to asset identification is being developed by DSE under the White Paper for Land and Biodiversity, which identifies thirteen flagship areas that are important for the management of environmental, social and economic values. Catchment Management Authority Regional Catchment Strategies and subordinate Invasive Plant and Animal strategies are the vehicles for a coordinated landscape scale approach to invasive plant and animal management. These invasive plant and animal strategies will identify high-level priorities for early intervention and asset protection, due for completion by the end of 2010. The landscape scale approach will continue to be refined over coming years as planned changes to institutional arrangements for natural resource management are implemented in line with the Land and Biodiversity White Paper.
3	The Department of Primary Industries, the Department of Sustainability and Environment and Parks Victoria should: • update their invasive species databases as a first priority • enable timely input and access to these databases by responsible agencies.	The DPI, the DSE and PV will continue to work toward the development of common measures, data collection standards and protocols and information systems that will enable the integration and sharing of data for coordinated planning and whole-of government reporting. All agencies will support the timely input and access to relevant databases.
4	Parks Victoria should: • implement planning frameworks that incorporate risk assessment consistently across state and national parks • structure invasive species resource allocation so that it is transparent, and funding matches the extent and ongoing nature of the problem.	Consistent with the Invasive Plants and Animals Policy Framework, PV will continue to implement procedures that incorporate risk assessments developed to support the prioritisation of invasive species management at statewide, landscape and park scales. These include the Levels of Protection framework, and the *Guidelines and Procedures for Managing the Environmental Impacts of Weeds on Public Land in Victoria* 2006. DSE and PV are working together to improve the transparency of the current funding provision and prioritisation process regarding the management of Victoria's State run parks and reserves system for long term ecosystem services and sustainable use.

2

RESPONSE by the Secretary, Department of Sustainability and Environment on behalf of the Secretary, Department of Primary Industries and the Chief Executive Officer, Parks Victoria – continued

5	Parks Victoria should improve its park level planning so that: • all state and national parks have current management plans • all plans align with current state policy and reflect the landscape scale approach to invasive species management	DSE is commencing the development of a forest and parks planning framework in line with the White Paper for Land and Biodiversity. This will build on the work undertaken by Parks Victoria in establishing a contemporary planning approach that considers parks in the landscape and will ensure that plans strongly reflect the conservation of park values and community aspirations. The plans will align with the aspirations of Government invasive species policy, and will address priorities for early intervention and asset protection at scales appropriate to the desired outcome.
6	Parks Victoria should improve its information systems to accurately capture time spent on invasive species management in parks.	Parks Victoria has recently implemented new finance, budgeting and human resource modules, consistent with software used by other agencies. This will allow for detailed analysis and the development of full program and project costings including time spent on invasive species management.
7	The Department of Sustainability and Environment, the Department of Primary Industries and Parks Victoria should implement a monitoring, evaluation and reporting framework suitable to invasive species management across private and public land.	DSE, PV and DPI will continue to invest in and implement the whole of government monitoring, evaluation and reporting framework. Knowledge management initiatives identified in the Land and Biodiversity White Paper will facilitate opportunities for the collection and sharing of data and standards to inform the links and reporting of on-ground actions and changes in natural resource condition over time.

3

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Report title	Date tabled
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