

# Securing Our Natural Future

A white paper for land and biodiversity at a time of climate change

## Summary



# The Vision

*“Victorians acting together to ensure that our land, water and biodiversity are healthy, resilient and productive”*



Outlook from Mt Rouse, Penhurst, Grampians. Photo: Tourism Victoria, courtesy of Southern Grampians Shire

## Healthy ecosystems are vital

Healthy ecosystems and our native plants and animals provide us with clean air to breathe, healthy soil to grow food, and assist in the regulation of climate, floods and drought.

Our economy is reliant on a healthy environment. Healthy ecosystems form the basis of Victoria's primary production industries, such as agriculture, forestry and fisheries. Healthy parks, forests and coastlines provide the natural attractions that underpin the billions of dollars that tourism contributes to the State's economy.

## The need for change

Victoria's abundant natural resources have contributed to the prosperity and liveability for which Victoria is renowned. While agricultural, residential and industrial development have brought us great wealth, and will continue to do so, they have come at a cost. Rapid population growth, increasing consumption and development have led to the loss and fragmentation of native habitat, the loss of species, increased levels of salinity, reduced stream flow, poor water quality, erosion, changes to natural fire regimes and increased activity of weeds and pests.

On top of this, the scale and rate of global warming will have significant implications for the health of both terrestrial and aquatic ecosystems. Climate change will alter Victoria's ecosystems causing more intense and frequent disturbances in future which will add to the many existing pressures that already threaten our land productivity and biodiversity.

## We must act now

Despite significant efforts of Government and the community over many decades, the overall health of Victoria's land, water and biodiversity continues to decline.

The impacts of climate and demographic change mean we must change the way we manage land, water and biodiversity to secure our natural future.

The White Paper is a long-term, strategic framework to secure the health of Victoria's land, water and biodiversity in the face of ongoing pressures and a changing climate over the next 50 years.

## The Victorian Government's agenda for land, water and biodiversity at a time of climate change is to:

- Build ecosystem resilience across Victoria
- Manage flagship areas to maintain ecosystem services
- Improve connectivity in areas identified as biolinks.

## Achieving the vision

### Increasing Government effectiveness

<b>Goal</b>	To reform and realign Victorian Government processes and institutions which lead and facilitate sustainable management of Victoria's land, water and biodiversity.
<b>Strategic Directions</b>	<ul style="list-style-type: none"><li>• Restructure natural resource management organisations and associated legislation</li><li>• Improve decision making at the regional level</li><li>• Better target investment processes</li><li>• Improve monitoring, knowledge and information management</li></ul>

### Fostering environmental markets and leveraging investment

<b>Goal</b>	To increase market demand for land, water and biodiversity outcomes
<b>Strategic directions</b>	<ul style="list-style-type: none"><li>• Identify and support regional economic opportunities around sustainable management and landscape repair</li><li>• Leverage biodiversity outcomes from biosequestration for carbon</li><li>• Improve facilitation and promotion of private investment to complement public investment</li></ul>

### Supporting community action

<b>Goal</b>	To encourage all Victorians to work together as responsive and effective stewards of our land, water and biodiversity
<b>Strategic directions</b>	<ul style="list-style-type: none"><li>• Embed consideration of land, water and biodiversity into everyday decision-making</li><li>• Empower Traditional Owners in natural resource management decision-making</li><li>• Increase support for stewardship by private land managers</li><li>• Strengthen the landcare model for community natural resource management</li></ul>

### Building healthy and resilient ecosystems across the landscape

<b>Goal</b>	To restore the ecological processes and resilience that underpin the health of Victoria's land, water and biodiversity
<b>Strategic directions</b>	<ul style="list-style-type: none"><li>• Build climate change adaptation into the management of land, water and biodiversity</li><li>• Better manage public land and the ecosystem services it provides</li><li>• Better integrate environmental and productivity outcomes in rural and agricultural landscapes</li></ul>

# A new framework for action

## Building ecosystem resilience across Victoria

An ecosystem consists of a dynamic set of living organisms all interacting among themselves and with the environment in which they live. Resilience is the key to an ecosystem's capacity to adapt to disturbances such as fire, disease and extreme weather without losing its fundamental structure and function.

Biodiverse ecosystems containing many different species are resilient as they are able to reorganise after disturbances. Building the resilience of ecosystems by sustaining biodiversity and ecological processes will allow ecosystems to adapt and self-organise as circumstances change.

The Victorian Government will focus on building the resilience of ecosystems across the state. This will involve support for individuals, institutions and communities to manage change, the adoption of risk and adaptive management approaches, effective knowledge management and landscape-scale management of land, water and biodiversity.

## Managing flagship areas to maintain ecosystem services

The Government has identified 13 flagship areas that have important environmental, social and economic values. The areas are particularly valuable for the ecosystem services they provide such as water filtration and regulation, carbon storage and soil stability. Their importance to Victoria means that special management and protection is warranted in the face of major climate, land use and demographic changes.

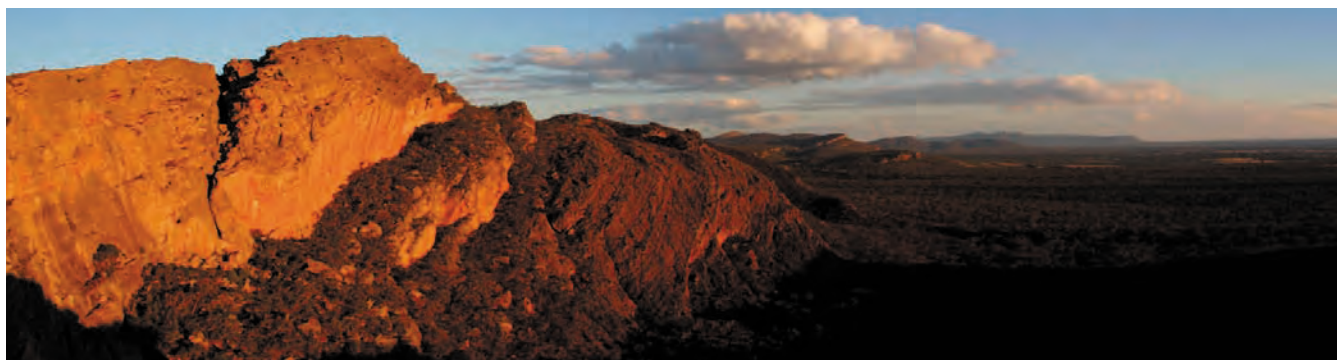
The primary objective for the management of flagship areas is the protection and enhancement of the natural assets within them, focusing on the ecosystem services they provide.

## Improving connectivity in biolinks

Many of the connections between Victoria's natural habitats have been severed by changed land uses, leaving some habitats isolated within a matrix of farmland, urban land and other altered areas. Establishing biolinks and improving ecological connectivity will increase the potential for plants and animals to disperse, recolonise and adapt to climate change.

Biolinks are not solid corridors of bush, but broad geographic areas covering public and private land. In many cases, improving ecological connectivity will involve improving the condition of existing habitat including streams, wetlands, bushlands, and marine and estuarine systems.

A system of regional scale biolinks will be developed to focus activity on restoring connectivity. On private land, biolinks will be implemented through a range of voluntary approaches including conservation covenants and BushTender agreements.



Habitat 141, a community partnership, is a good example of a biolink project which links national parks from the outback to the ocean. It is the largest environmental restoration project ever tackled in Victoria. Grampians at sunset. Photo: Ron Dodds

# Achieving the Vision

## Increasing Government effectiveness

The Victorian Government is responsible for leading the development, communication and implementation of its vision for the environment. A business-as-usual approach to natural resource management will not keep pace with the mounting threats faced by Victoria's land, water and biodiversity assets. The challenge of adapting to climate change and the pressures of population growth increase the urgency of reforming natural resource management organisations and processes.

The reform agenda comprises:

- structural reform of natural resource management organisations
- administrative and enabling reforms,
- improved investment frameworks
- better management of knowledge
- a modern legislative framework

The institutional reforms will deliver better integration in the management of surface water and ground water; coasts, marine and catchments; catchment and water resource management; biodiversity and sustainable land management and action on public and private land.

## Fostering environmental markets and leveraging investment

In the face of increasing financial and environmental challenges, there is a clear need to increase investment, both public and private, in protecting and restoring the environment.

Market-based mechanisms are being developed around the world to work alongside traditional approaches to help solve environmental problems by rewarding actions that benefit the environment. Market-based mechanisms establish or redefine the incentives facing firms and individuals so that the social benefits of improved environmental outcomes converge with private interests.

Environmental markets offer new opportunities for landholders to receive payments for making environmental improvements to their land and selling the outcomes such as habitat improvement or carbon sequestration to government and corporations.

The Victorian Government's priorities are to:

- improve market signals that support sustainable resource use and allow the full costs of production to be factored into decision-making
- develop mechanisms that reward people for good practices and for producing environmental goods and services
- identify gaps in knowledge and understanding that hinder informed decision-making
- identifying opportunities for co-investment and leveraging private investment to support public good outcomes, in particular biodiversity

## Supporting community action

Improving the health of our land, water and biodiversity requires action from all Victorians. A sustainable future needs us all to play our part.

The aim is to build on the successes of our long history of community action to ensure that all Victorians have the knowledge, skills and capacity to consider land, water and biodiversity in the decisions they make in their daily lives.

Increasing the capacity and opportunities for participation of Traditional Owners in natural resource management will ensure their knowledge and experience help to improve Victoria's land, water and biodiversity.

Victorians have a long and successful history of community involvement in Landcare groups and networks, Coast Action/Coastcare groups, Waterwatch groups, Friends groups, recreational and industry associations, conservation management networks and volunteer committees of management.

The Victorian Government will continue to support groups and networks to improve their ability to achieve outcomes and to capture the knowledge and enthusiasm of their local communities.

Victoria's farmers produce the essential food and fibre that we rely upon, and manage many of our land, water and biodiversity assets. Farmers have an important role in safeguarding the health of Victoria's natural environment.

Through improved environmental management and the adoption of sustainable practices, farmers can increase the resilience and long-term productivity of farm ecosystems.

# Resilient ecosystems

There will be a focus on building the resilience of ecosystems across the whole state. This will involve support for individuals, institutions and communities to manage change, the adoption of risk and adaptive management approaches, effective knowledge management and landscape-scale management of land, water and biodiversity.

## The Wimmera and Mallee



Flagship areas include the Mallee (B) and the lower reaches of the Mega Murray (A).

The Mallee flagship area, in particular, requires management of pest species and fire to build resilience and to protect the flora and fauna values.

Biolinks provide major north-south connectivity and connectivity between flagship areas. This will allow for regeneration and recolonisation of native biota, and provide environmental pathways in anticipation of climate change.

## South-western Victoria

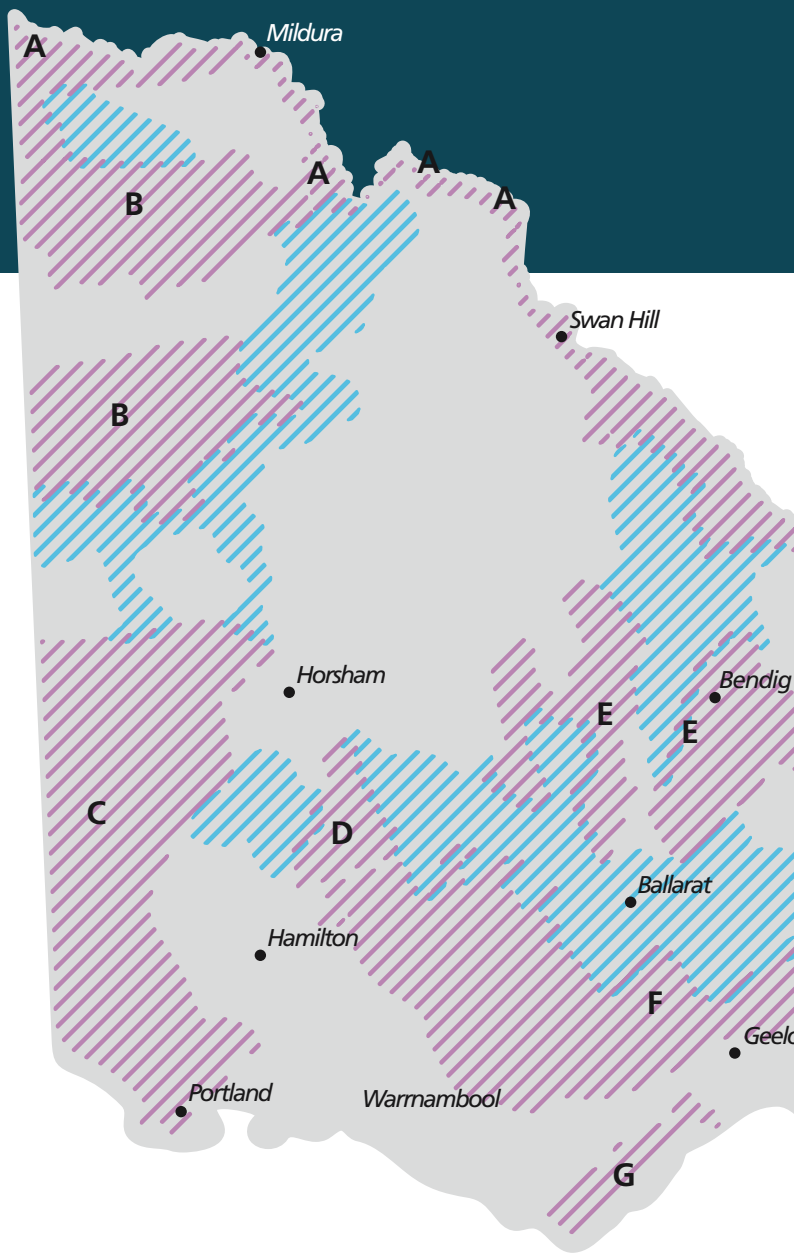


The Western Volcanic Plain flagship area (F) will be managed to protect a large number of flora and fauna species, while accommodating expanded cropping and intensification of agriculture.

The Greater Grampians and South West flagship areas (D and C) provide significant habitat, water quality and nature-based tourism and recreation services.

The Otways flagship area (G) provides largely intact habitat with a high diversity of flora and fauna.

Biolinks include a major riparian link between the Greater Grampians and South West flagship areas.



## North and Central Victoria

The Goldfields flagship area (E) has been identified for its habitat values as well as its significant tourism and cultural heritage values.

The region also contains the middle reaches of the Mega Murray flagship area (A).

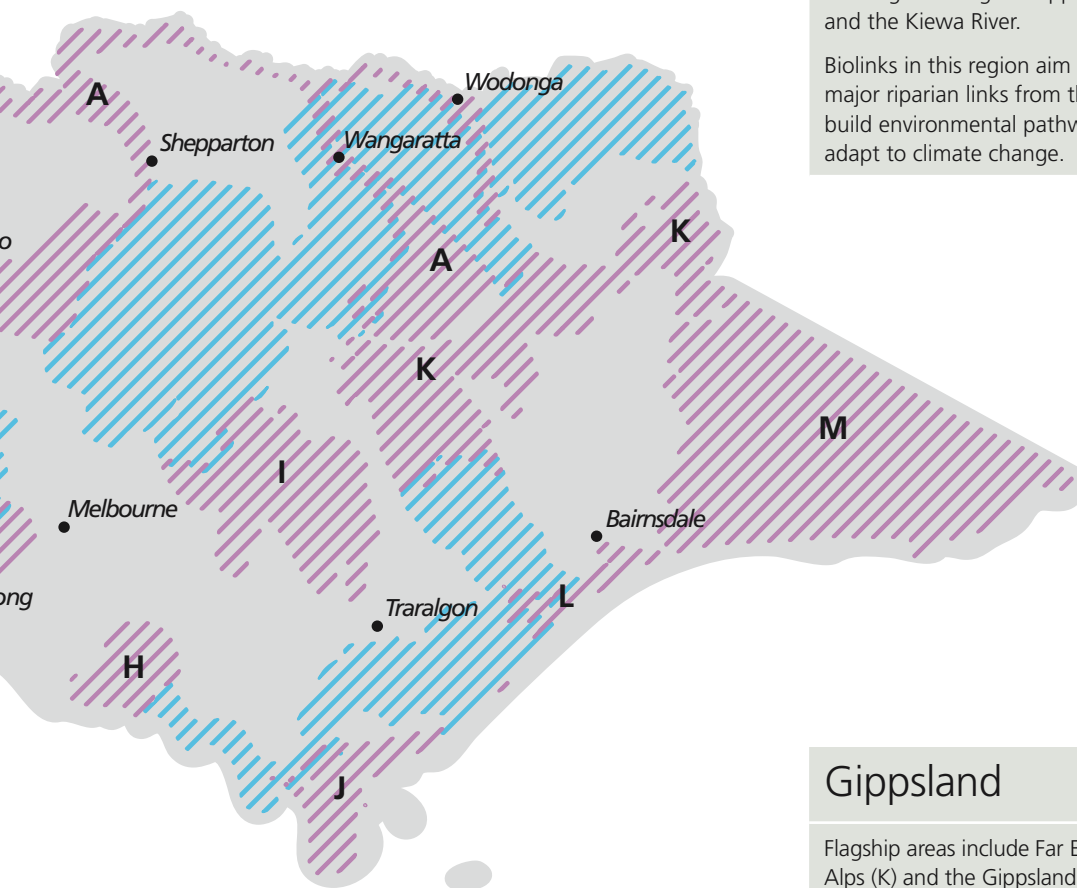
Biolinks include a major riparian link between the Mega Murray and Goldfields flagship areas focussed on the Loddon and Goulburn Rivers and 'foothill to mountain' links providing environmental pathways southward towards the Central Highlands.

## North-eastern Victoria

The Victorian Alps flagship area (K) recognises the important services provided by the alpine and sub-alpine ecosystems including water quality and quantity, carbon storage and habitat.

The Mega Murray flagship area (A) begins in the North east region along the upper reaches of the Ovens River and the Kiewa River.

Biolinks in this region aim to improve connectivity along major riparian links from the north to Alpine areas and build environmental pathways to enable species to adapt to climate change.



## Metropolitan Melbourne and the bays

The Western Port flagship area (H) is characterised by a wide variety of marine habitats ranging from deep channels to extensive sea grass flats, fringing mangroves and saltmarsh and wide tidal mudflats, which guard against erosion and support fish nurseries. It also has marine protected areas and important Ramsar sites.

The region includes part of the Western Volcanic Plains flagship area (F). This area forms a nationally threatened landscape with high numbers of threatened flora and fauna.

## Gippsland

Flagship areas include Far East Gippsland (M), Victorian Alps (K) and the Gippsland Lakes (L). The Wilsons Promontory flagship area (J) recognises the importance of the iconic Wilsons Promontory National Park and Victoria's largest Marine National Park.

The biolink between the Alps and Gippsland Lakes is a major riparian link and, combined with the biolink between the Gippsland Lakes and Wilsons Promontory through to the Strzelecki Ranges, provides movement between climate gradients and enhances coastal connectivity.

# Victoria's approach to building ecosystem resilience

## Building healthy and resilient landscapes across the landscapes

The new framework for action has broad implications for Victorian Government policies, programs and actions on the ground.

The scale, pace and range of climate change will have far-reaching effects on Victoria's environment.

This is a critical point in time to build options for the future by increasing and sustaining the resilience of our ecosystems. An increased emphasis on risk and adaptive management and a landscape scale approach will be adopted to help maintain ecological processes and ecosystem services.

### Outcome 6.7

Urban, peri-urban and green wedge areas host diverse values and resilient ecosystems

### Outcome 6.2

Public land is managed as the core of resilient ecosystems

### Outcome 6.6

Rural and agricultural landscapes contribute to ecosystem resilience and support productive industries

### Outcome 6.1

Natural resource management strengthens resilience and productivity



### Outcome 6.4

Riparian lands protect waterways and increase productivity, connectivity and amenity

### Outcome 6.5

Coastal and marine environments are healthy and productive

### Outcome 6.3

Rivers, wetlands and estuaries are managed so they continue to provide ecosystem services

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