

# Land and biodiversity at a time of climate change

## Green Paper *Summary*



## About the Green Paper

*The Land and biodiversity at a time of climate change* Green Paper is the second phase in the development of a White Paper planned for release in the first half of 2009. The White Paper will establish policy and program directions, helping to set the Victorian Government's agenda and guide investment decisions in land and biodiversity management over the next 20-50 years.

The Green Paper aims to promote discussion on the best ways to respond to the decline of Victoria's land and aquatic ecosystems and the biodiversity that supports them.

### Scope

The Green Paper:

- outlines the nature and extent of the ecological problems and the policy issues we are facing
- outlines the role of Government and partners in dealing with the issues
- discusses suggested approaches for feedback that seek to address the issues.

### Process

Feedback and discussions generated by the Green Paper will inform the development of the White Paper. The White Paper process provides an opportunity for all Victorians to have a say in the future of the environment that supports our lives and our livelihoods. It will form one element of the Victorian Government's response to the challenges posed by climate change. The *Climate Change Framework for Victoria* will engage Victorians in considering solutions to the broader climate change problem.

*The State's biodiversity is fundamental to the welfare and wellbeing of Victorians. Innovation, creativity and new knowledge will be critical in our future.*

*Gavin Jennings MLC, Minister for Environment and Climate Change*



#### Disclaimer

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# The case for change

## Land

Victoria's land and aquatic systems are a vital resource, fundamental to life and our lifestyles. The way we manage them affects their capacity to provide us with essential goods and services, like those outlined on the following diagram. Population growth and climate change are emerging threats that will compound the problems we face. While we have improved the way we manage our land and aquatic systems in recent decades it is time to take stock of how far we have come and investigate new approaches.

## Biodiversity

Biodiversity underpins ecosystems and the services they provide, upon which we all depend. It supports recreational cultural, spiritual and aesthetic values. Our past actions have reduced Victoria's biodiversity, making our ecosystems vulnerable to change.

## Climate Change

Climate change is real. The scientific evidence shows unequivocally that our planet is warming. This has accelerated over the last 50 years and the Intergovernmental Panel on Climate Change, which advises the United Nations, concluded that it was very likely that human activities were causing this warming and that temperatures will continue rising. Climate change is a long-term threatening process that scientific modelling indicates will magnify land and biodiversity decline.

*The richness of the biodiversity of Victoria's land and aquatic systems has a direct influence on our lives and our wellbeing, right down to producing the clean air we need to breathe.*

*Sir Gustav Nossal, Chair, Green Paper Scientific Reference Group.*

# Services provided by healthy ecosystems

Biodiversity and the ecosystems it supports are fundamental to life and to our lifestyles. They provide a diverse range of goods and services, the value of which is difficult to calculate in dollar terms.

## Indigenous cultural heritage

For Indigenous Australians, ecosystems are intertwined with their cultural, social and spiritual systems. Indigenous people have a long and ongoing association with the natural environment and there are many sites of cultural significance throughout Victoria.

## Prevention and mitigation of natural degradation

Trees, grasses and plant roots help protect landscapes against erosion, salinity, nutrient loss and landslides. Vegetated ecosystems can help absorb floodwaters and prevent coastal erosion.

## Income

Healthy ecosystems are essential to Victoria's economy. Victoria's natural resources underpin primary industries, that were estimated in 2006 to be worth over \$9.3b annually and are important generators of jobs and income. Our parks contribute \$860 million per year to the state's economy and Victoria's commercial fisheries generate around \$100 million per year. Over 70,000 Victorians are employed in agricultural industries and 47,000 in food processing industries.

## Pollination and crop production

Insects and birds transport pollen and seeds that are needed for the pollination and reproduction of many flowering plants, including food crops.

## Water quality and supply

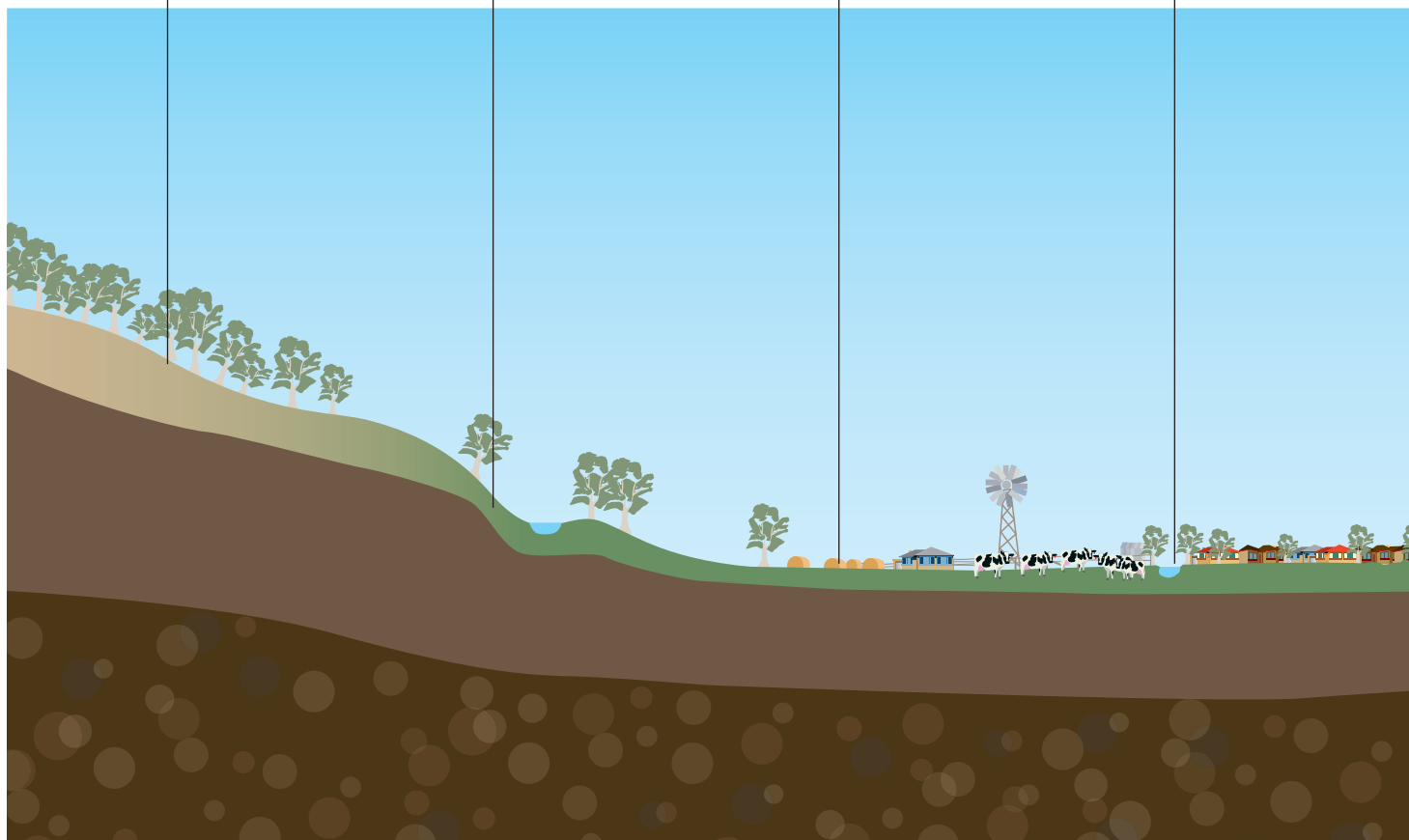
Ecosystems absorb and recycle essential nutrients and help purify water. Vegetation in ecosystems regulates the water balance and also helps prevent erosion and silting of waterways.

## Pest control

Some potential crop pests can be managed by other organisms such as insects, birds and fungi.

## Food security

Agricultural systems rely on ecosystem services such as nutrient cycling to produce the majority of our food. Victoria's commercial and recreational fishing industries depend on the food sources, breeding areas and shelter provided by marine, wetland and estuarine habitats.



### Air quality

As plants grow, they capture carbon dioxide (the main greenhouse gas contributing to climate change) and produce oxygen, as well as filtering pollutants caused by human activities.

### Climate stabilisation

Plants and other organic materials in land and ocean ecosystems absorb carbon, helping slow the build-up of carbon dioxide in the atmosphere. In hot climates, forests release moisture causing rainstorms in local areas and in cold areas they insulate regions.

### Tourism and recreation

Natural spaces in both metropolitan and rural areas are used for a wide range of recreational pursuits that keep Victorians fit and active. The beauty and function of our ecosystems underpin the billions of dollars that tourism contributes to the State's economy.

### Detoxification and decomposition of wastes

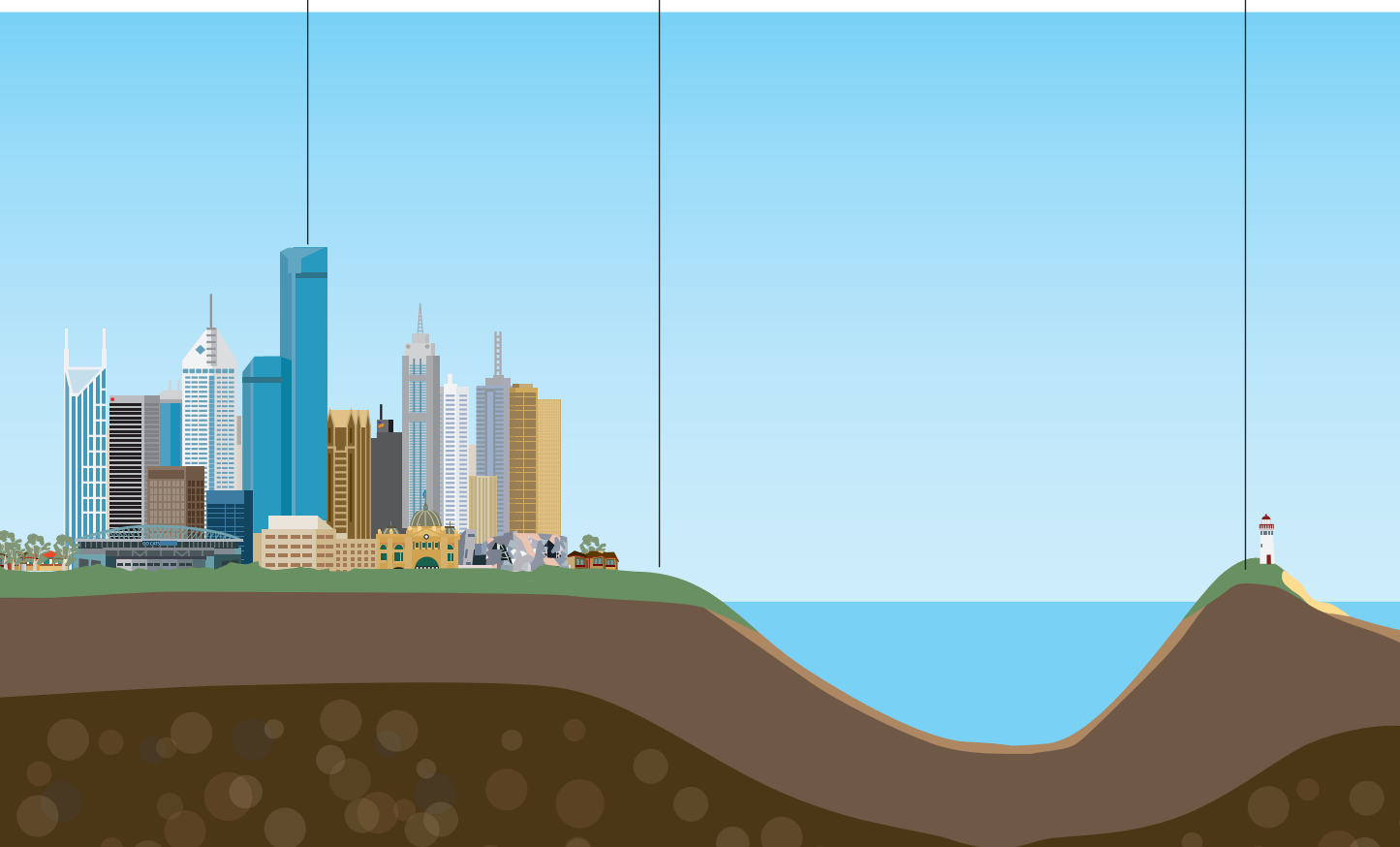
Microbes and organisms living in soils break down organic wastes as well as many industrial wastes, such as detergents and oils.

### Health

The environments we enjoy spending time in are important to our general wellbeing. Studies have found that connecting with nature can help reduce depression and improve overall health and wellbeing.

### Spiritual and cultural value

Just knowing that natural environments exist is important to many people. Natural features help make cities and towns liveable. Many landscapes have important cultural heritage values.



# The vision for Victoria's land and biodiversity

The proposed 50 year vision for land and biodiversity in Victoria is:

***Victorians actively conserving and restoring ecosystems to ensure our land, seas and waterways are healthy, resilient and productive.***

This vision encompasses the directions agreed to in the Victorian Government's Environmental Sustainability Framework, *Our Environment, Our Future* (DSE, 2006) and focuses on the need for partnerships across government, business and industry and communities. The vision provides the starting point for Victorians to consider the long-term aims for land and biodiversity as well as how to achieve them.

## Vision framework

The proposed long-term vision paints a picture of the resilient natural ecosystems, agricultural systems and communities we want to see in Victoria in the future, and how we can work together to achieve them.

<b>Outcome 1</b>	<i>Victoria's catchments, coasts and marine environments are underpinned by healthy ecosystems</i>
<b>Long-term goal</b>	<i>To maintain and enhance natural capital</i>
<b>To succeed we must ensure that</b>	<ul style="list-style-type: none"><li>- <i>Ecosystems continue to produce important ecosystem services</i></li><li>- <i>Victoria has more and better quality native vegetation</i></li><li>- <i>Targeted species and ecological communities are secured</i></li><li>- <i>Victoria's environmental water needs are met</i></li><li>- <i>Threats to natural values are avoided or managed</i></li><li>- <i>Victoria's reserve system is relevant to a changing climate</i></li></ul>

<b>Outcome 2</b>	<i>Victoria's economy is viable and sustainable</i>
<b>Long-term goal</b>	<i>To use ecosystem resources and services more sustainably</i>
<b>To succeed we must ensure that</b>	<ul style="list-style-type: none"><li>- <i>Ecosystems contribute economic and social as well as environmental benefits to the community</i></li><li>- <i>Resources remain available for future generations</i></li><li>- <i>Productivity is increased without environmental harm</i></li><li>- <i>Primary producers provide public goods within a market framework</i></li><li>- <i>The sustainable limits of our ecosystems are understood</i></li><li>- <i>Long term community wellbeing is enhanced</i></li></ul>



## Outcome 3

*Victorians respond and adapt to climate and environmental change*

### Long-term goal

*To assist Victorians to make decisions that protect long term well being*

### To succeed we must ensure that:

- *People incorporate biodiversity protection, ecosystem services and sustainability into their everyday decision making*
- *People have access to knowledge to inform their actions*
- *Victorians know what they can do to improve land health and biodiversity*
- *The nature and impacts of change are understood by planners, decision makers and the community*
- *New environmental challenges and threats do not reduce community wellbeing*

## Outcome 4

*Victorians work together as active stewards of the environment*

### Long-term goal

*To promote active community stewardship*

### To succeed we must ensure that:

- *Environmental volunteerism and private sector investment is increased*
- *Governments, businesses, industries and communities are actively involved in improving our land health and biodiversity*
- *Strong partnerships are developed to address land health and biodiversity challenges*
- *The knowledge, skills and perspectives of Indigenous communities are valued and inform land and biodiversity management decisions*
- *Communities are involved in determining priorities for their local area*
- *Communities develop innovative solutions to local problems*



## Have your say

We want to hear your feedback on the suggested approaches to achieve the vision set out in the Green Paper. By making a submission, you will have the opportunity for your views to be considered in development of the White Paper - the Government's stated policy on land and biodiversity for the next 20-50 years.

A number of questions are highlighted with a Q throughout the Green Paper. You may structure your response around these questions or provide other suggestions. The Government will consider all submissions when developing the White Paper.

### How to submit

You can make a submission online at  
<http://www.dse.vic.gov.au/landwhitepaper>

Or post a hard copy to:

**Project Director, Land and Biodiversity White Paper  
Team Department of Sustainability and  
Environment  
PO Box 500  
East Melbourne VIC 3002**

Submissions must include your name and address. They will become public documents published on the Department's website. If you would like your submission to remain confidential, please provide a separate written request.

**Submissions are invited on the Green Paper until 30 June 2008.**

All Green Paper documents are available for download on the website below. If you need more hard copies of the Green Paper or this summary brochure, please call DSE's Customer Service Centre on 136 186.

You can also register to attend a regional workshop in your area to talk to key people involved in the process and provide feedback. Keep an eye on the website above or email [land.whitepaper@dse.vic.gov.au](mailto:land.whitepaper@dse.vic.gov.au) if you want to be kept informed about regional workshops.

### White Paper process timeline

