



# Victoria Naturally Alliance

Connecting people and nature



## Victoria's biodiversity Issues and recommendations on the Victorian Government Land and Biodiversity Green Paper

July 2008



## **Preface**

This submission has been prepared by the Victoria Naturally Alliance of eight peak environment groups. The alliance is working together to reverse Victoria's biodiversity crisis. It is led by the Victorian National Parks Association, and includes the Australian Conservation Foundation, The Wilderness Society, Environment Victoria, Trust for Nature, Greening Australia Victoria, Bush Heritage Australia and the Invasive Species Council.

The Victoria Naturally Alliance welcomes the White Paper process, and congratulates the Victorian Government on its commitment to prioritise policy and investment in natural resource management, land health and biodiversity for the next 20 to 50 years.

The alliance's focus is on biodiversity, therefore this submission largely discusses biodiversity rather than land, although the two are clearly linked.

This submission has been prepared with contributions from each alliance member. Many of the alliance's member organisations are also submitting an individual submission relevant to their areas of work/expertise.

The alliance has identified 20 key issues and provides recommendations to address them.

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## Overview

Victoria has a great opportunity to be a leader in the conservation of Australia's biodiversity, to contribute to global efforts to sustain all elements of our natural environment, and to commit to funding long-term protection programs for the ecological processes and all the species under Victoria's care.

We consider that effective reforms through the White Paper to be crucial, as the evidence shows that Victoria's biodiversity is in crisis:

- Fifty four percent of the state's native vegetation has been cleared.
- Victoria has the most stressed landscapes in the country (National Land and Water Resources Audit 2002).
- According to the CSIRO (Dunlop *et al.* 2004), 44 per cent of Victoria's native plants and 30 per cent of our native animals are extinct or threatened.
- Victoria's land and biodiversity are subject to a range of threats including invasive plants and animals, resource extraction, development, lack of environmental water flows for rivers and streams and inappropriate fire regimes.
- The impacts of climate change add to and magnify these threats.
- The downward trend is continuing, with a range of studies revealing the ongoing decline of Victoria's land and water resources and biodiversity (Dunlop *et al.*; VCMC 2007).

The White Paper process is an excellent opportunity to reverse these trends. Conservation efforts need to be carried out on much larger scales. This will require:

1. **Vision, leadership and investment:** Victoria's investment in biodiversity conservation does not yet match the scale and urgency of the task. If we are to solve the complex challenges facing our natural environment, an order of magnitude shift in resources and political will are needed.
2. **Strategy:** The evidence is clear; we know *why* Victoria should act, now we need a specific, measurable, ambitious, realistic and targeted strategy to show *how* we are going to turn Victoria's biodiversity crisis around. A state strategy should contribute to national goals, for example. the Caring for Our Country program, the National Biodiversity Strategy and federal environmental law.
3. **Policy Toolkit:** A mix of policy instruments are needed to deal with the state's environmental and social complexities. An over-reliance on market-based instruments will not deliver flourishing biodiversity, and healthy and resilient ecosystems.
4. **Science:** Action must be based on good science, information and innovation. It is essential that our efforts take place in the light of the best scientific understanding.

The Green Paper presents many good ideas, however it is disappointing because it is a vague document, lacking clear policy positions and detailed, and comprehensive and integrated proposals. Likewise it does not address the issue of adequate funding. It would have been far preferable to provide much more definite proposals in the Green Paper so that the public are able to comment on and contribute to a proposed framework.

The Green Paper appears to rely on the community and volunteers without provision for additional support or resources. Institutions for natural resource management, ecosystem services and biodiversity protection need to be regarded as fundamental to the state's future. They therefore should be seen as essential services, comparable to education and health, not as peripheral and a matter for the volunteer sector.

The alliance considers that at least a ten-fold increase in government funding is needed for the on-ground work needed to protect, restore/revegetate wildlife habitat across the state.

## **Issues & Recommendations**

### **Issue 1. Vision framework and guiding principles**

The outcomes, long-term goals and sub-outcomes presented in the Green Paper are vague and broad, and are not commensurate with the scale of the problems. There is no sense of the bold new vision and strength of action that is needed to turn around Victoria's biodiversity crisis. Much more detailed goals with clear timelines (10, 20 and 30 year goals) and targets are needed outlining a future vision for Victoria's land and biodiversity to be in the future are needed.

#### ***Recommendations:***

- ❖ Under a broad vision statement, present a clear description of how Victoria's future landscapes will look in order to sustain ecological processes and ensure that all our species survive and flourish. This should include large-scale habitat enhancement and restoration across the State to link existing habitat.
- ❖ Present detailed goals for the short-, medium- and long-term, and targets for key environmental components.
- ❖ Revise the outcomes and sub-outcomes to acknowledge the value of biodiversity for its own sake and to include: a much larger-scale conservation effort; maintaining all species; sustaining and restoring ecological processes; a comprehensive conservation reserve network; increased ecological connectivity between existing habitat; mitigation of climate change; stopping degradation and loss of native vegetation; science and ecological monitoring; more specifics on the role of government.
- ❖ Modify guiding principles to better reflect the need to maintain and restore ecological processes, the precautionary principle, and the need to reduce Victorian's ecological footprint.
- ❖ Add a principle that applies to all government decisions, which should: “ – avoid or minimise and as a last resort offset negative impacts on biodiversity and land”.

### **Issue 2. Targets and indicators to drive on-ground outcomes**

It essential that targets are set for biodiversity protection and restoration. It is a fundamental requirement that the White Paper and revised Victorian Biodiversity Strategy provide the roadmap to achieve this. Targets must be science-based, SMART (specific, measurable, attainable, realistic and time-bound) and focused on outcomes rather than processes. While some targets will be generational, others must be achievable within five or ten years. Regional targets should sit beneath statewide targets.

Targets are important drivers for ecosystem market-based approaches. For this to be effective, targets require a legislative basis to give all parties greater confidence.

The proposal for headline indicators in the Green Paper is welcomed, however the proposed headline indicators in the Green Paper are too high level, vague, unstructured and not presented in a coherent framework. These need to be improved informed by sound ecological science.

It is important that state indicators and targets align with the national framework of conservation programs, strategies and laws. Otherwise, the problem of poor ability to integrate results from each state into national data collection, analysis and state of the environment reporting will continue.

### **Recommendations:**

- ❖ Set clear, ambitious but achievable statewide targets for biodiversity and land health outcomes, applicable for a range of timeframes from 5 to 50 years.
- ❖ Setting of targets should be required by law and reviewed every 5 years. Bioregional or Catchment Management Authority targets should be nested as a minimum under the statewide targets.
- ❖ Targets should be based on what is required to maintain and restore ecological processes and habitat, ensure sustainable populations of every species and ecological community in Victoria, and ensure ongoing provision of ecosystem services<sup>1</sup>.
- ❖ A roadmap for achieving the targets should be presented in the White Paper and/or the renewed Biodiversity Strategy.
- ❖ Align Victorian biodiversity conservation and natural resource management targets and indicators with national objectives and targets.
- ❖ Establish a coherent framework for headline indicators that are SMART, transparent, with regular public reports and an effective communication strategy to engage with community, business, government agencies and decision-makers on progress.

### **Issue 3. Science, data and monitoring**

Knowledge of the status and trends of land health and biodiversity are essential for their effective conservation and management. Comprehensive baseline data collection and regular public reporting of systematic long term monitoring are essential if we are to know whether or not we are making progress towards our targets. Likewise, good information and knowledge sharing are vital. Adaptive management loops (plan, do, monitor, review) are required to achieve iterative improvement and to capture valuable knowledge in the process. It is vital that Victoria fosters strong ecological science to underpin investment and management decisions.

Current problems include lack of integration/incompatibility of databases, lack of data collection and lack of data entry. Of particular concern is the need for long term data sets and landscape scale monitoring. Good, up-to-date information systems that make spatial data and conservation management knowledge readily accessible to policy makers, planners, landholders and other resource managers are also needed.

There is not yet a commitment to the level of investment required if we are to base our natural resource management programs and activities on sound, systematic, long-term science and knowledge.

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<sup>1</sup> Natural ecosystems provide a range of services, including soil fertility, nutrient cycling, erosion control, water quality, pest control and pollination.

The alliance places high priority on undertaking comprehensive modelling and mapping of the impacts of climate change on land and biodiversity values on public and private land in order to develop and implement mitigation and adaptation strategies.

As an absolute minimum, the suggestion in the Green Paper of aligning Victorian databases should be implemented.

Some examples of monitoring and data needs include:

1. Finer scale monitoring of changes in native vegetation
2. High resolution modelling and mapping of the extent of ecological vegetation classes, scattered trees and vegetation quality extended statewide
3. Ecology and distribution of threatened species
4. Addressing gaps in data coverage, particularly on private land
5. Provision of data and data management capacity for local government planners and other implementers
6. Long term monitoring showing trends in relation to both 'assets' and ecological processes
7. Scientific research to improve our understanding of the roles, functioning and condition of ecological processes that sustain biodiversity and ecosystem services

### ***Recommendations***

- ❖ As a central component of an adaptive management framework, monitor the performance of conservation actions and management programs, using standardised, objectively measured data collection and storage protocols so data can be aggregated up to regional, and state and national levels for reporting purposes.
- ❖ Establish systematic, long-term ecological monitoring programs with a network of "sentinel sites" across the State to record changes in biodiversity assets, ecological processes and land health, including the responses of biota to management programs and disturbance events. Utilise remote sensing and automatic sensors, as well as professionally managed community-based monitoring as economical means of data collection.
- ❖ Provide adequate resourcing for baseline surveys and ongoing monitoring of threatened species on public and private land.
- ❖ Consolidate existing and new data, and maintain readily accessible, up to date information systems with spatial data and conservation management information for planners, landholders and other resource managers.
- ❖ Foster Victorian-oriented ecological research to support conservation management, eg through Arthur Rylah Institute and universities.
- ❖ Use a review of Victoria's research, data and monitoring systems as a basis for prioritisation of future research and data collection.
- ❖ Develop institutional capability (in government and the research sector) for analysis and synthesis of ecological data to provide big picture analyses of trends and options for policy and public audiences.

#### **Issue 4. Education, extension and community engagement**

The success of biodiversity conservation in Victoria depends on community awareness. While it is clear that Victorians have a high level of concern for the environment, there is a clear need to educate the Victorian community about the needs and benefits of biodiversity conservation.

The need to link awareness and behaviour change has been recognised in the State Government's successful public interest campaigns including drink driving, water and energy. A similar high-profile, sustained education and behaviour change program would greatly assist the achievement of the state's biodiversity goals.

Effective extension programs are essential to deliver the necessary skills and knowledge to improve natural resource management and achieve conservation objectives.

We are living in a period of rapid environmental change, and it is vital that our education system evolves so that we develop the skills and information economy required to respond to and mitigate these changes.

#### **Recommendations**

- ❖ Enhance awareness of the values and condition of Victoria's biodiversity, and achieve behavioural changes through targeted public awareness and education campaigns, modelled on the road safety, water and energy campaigns.
- ❖ Implement a schools-based environmental education initiative, drawing on the recently-completed national environmental education strategy.
- ❖ Develop ecological literacy through specially designed courses for political and public sector leaders, corporate executives, and public servants, supported by online professional education modules.
- ❖ Deliver readily accessible training, web-based tools (such as 'eFarmer'), and ongoing technical support to all landholders for property management planning with a strong component of biodiversity, ecological processes and natural resource conservation.
- ❖ Develop and deliver an effective extension program for conservation-oriented rural land management, including up to date tools and techniques for native vegetation management and restoration.

#### **Issue 5. Ecological processes**

Natural values and assets, such as native species, vegetation communities, habitats or sites, are maintained by ecological processes. Therefore we must sustain and restore the ecological processes which support them. However a focus on ecological processes does not automatically protect individual species and places: both 'asset' and 'process' based approaches are needed. The Green Paper does not adequately consider the role of ecological processes in land and biodiversity management.

Ecological processes that are fundamental to life include nutrient cycling, flows of water, dispersal of animals and seeds, local adaptations by species to changing climatic conditions, disturbance regimes associated with fires and flooding, and functional interactions between soils, plants and animals such as pollination, decomposition, predation and competition. If these processes are altered and degraded, then the species and habitats that depend on them may change or disappear.

It is vital that our conservation framework explicitly considers the ecological processes that keep our 'assets' functioning. This means that our conservation approach needs to consider the significant processes on which our assets depend as well as the landscape context, including cumulative impacts, time lags, off-site effects, and connectivity requirements of species.

It is necessary to proactively and systematically build the full consideration of ecological processes into legislative and institutional frameworks, policy and planning processes, and on-ground management of land, environment and natural resources.

### **Recommendation**

- ❖ Apply an ecological process-oriented perspective to conservation planning, in addition to an asset-based approach.

### **Issue 6. Species and communities**

Victoria is recognised nationally for having high numbers of threatened species with the dubious distinction of having the most threatened species in any subregion (National Land and Water Resources Audit 2002). In Victoria 586 species and 36 communities are listed as threatened under the *Flora and Fauna Guarantee Act* 1988, along with 36 potentially threatening processes (DSE 2006). However, under the Victorian Department of Sustainability and Environment (DSE) Advisory lists, a total of 204 vertebrates and 1667 plants are recognised as being threatened, taking the total number of threatened species in Victoria to over 1850 (DSE 2003, DSE 2005).

The stated focus in the Green Paper of increasing the resilience of critical habitat to restore broad ecosystem function will be important to general biodiversity outcomes, but will not be sufficient to secure the future of threatened species. Threatened species require specific plans and resources for their recovery.

Approaches to conservation must also provide security for more common species with a particular focus on preventing more species moving into the threatened categories.

Currently funding for implementation of recovery actions equates to only \$3000 of investment for each of the species recognised as threatened under DSE's Advisory Lists (based on figures from the Natural Heritage Trust Annual Report 2005-06). This is inadequate to address current threats, let alone emerging and predicted threats from climate change.

Many of the statements in the Green Paper seem to point to a fundamental winding back of threatened species policy in Victoria. It is therefore difficult not to conclude that the Government is giving up on threatened species as too hard, before any significant attempt has been made in this area.

Targets must be set for threatened species recovery as well as persistence of all species in Victoria. The Victorian Government has the opportunity through the White Paper to commit to and provide sustained funding for a threatened species recovery program that will deliver very real and tangible benefits for threatened species and all Victorians.

### **Recommendations**

- ❖ Recommit to the goal of enabling all threatened species and communities to '*survive, flourish and retain their potential for evolutionary development in the wild*' consistent with the objectives under the Flora and Fauna Guarantee Act; Victoria's Environment

Sustainability Framework; Victoria's Biodiversity Strategy; and the National Strategy for the Conservation of Australia's Biological Diversity.

- ❖ Set targets with timelines for the recovery of threatened species and ecosystems.
- ❖ Commit in the order of \$50 million per year for the next five years for a threatened species and communities recovery program specifically for implementation of recovery actions.
- ❖ Establish and fund a dedicated threatened species research and monitoring program that will focus on addressing the knowledge gaps in threatened species recovery, monitor trends in populations of threatened species and other species in decline, and support an adaptive management approach to implementation of recovery actions for threatened species.
- ❖ Factor climate change assessments into both the listing process for threatened species and the development and implementation of recovery actions; and establish a process for identifying and addressing emerging threats that may result from climate change.
- ❖ Strengthen the protection of threatened species and their habitats under the land use planning and development approvals system through greater consideration of threatened species in planning and approvals processes. Require consideration of the provisions of the Flora and Fauna Guarantee Act in planning decisions under the Planning and Environment Act 1987.
- ❖ Ensure planning for large scale restoration projects includes priorities for all threatened species and ecosystems in that region.

### **Issue 7. Native vegetation**

The historic excessive clearing of much of Victoria has had major impacts on biodiversity and ecosystem services. It is not yet possible for humans to fully replace an ecosystem hence clearing controls and protection of threatened ecosystems are vital. Victoria's Native Vegetation Management Framework (NVMF) sets out the goal of reversing the decline in extent and quality of native vegetation, and prioritising protection of existing remnant vegetation.

The recently published *Native Vegetation net gain accounting first approximation report* (DSE 2008) reports a net loss of native vegetation extent of 4000 hectares per year (largely illegal clearing of native grasslands) between 1994 and 2004. The report also shows that the condition of native vegetation is declining. The suggestion in the Green Paper of “ensuring compliance with clearing controls” and a priority focus on grasslands is welcome and crucial. A mixture of policy tools including regulation, strategic planning, use of varied incentives, proactive education, technical advice, resourcing of major community-based revegetation projects, monitoring and enforcement are essential.

The NVMF is valuable, but its implementation requires considerable improvement. The uncertainties generated as a result of the implementation of the NVMF as one policy amongst many under the Victorian Planning Provisions (VPPs) are substantial, and in practice, greatly reduce its effectiveness. In almost every instance that the preservation of very high conservation significance native vegetation has been considered at the Victorian Civil and Administrative Tribunal (VCAT), the Tribunal has either granted a permit to clear native vegetation, or indicated that it would be prepared to do so.

The NVMF's key principle of ‘avoiding’ clearing of native vegetation needs to be rigorously implemented. In practice, there is inadequate emphasis on avoiding clearing, with over-

reliance on ‘offsetting’ instead. Exemptions under Section 52.17 in the Victoria Planning Provisions (VPPs) still result in loss of native vegetation, and should be more tightly defined.

Avoiding clearing is particularly important for medium-very high conservation value native vegetation. Where clearing does occur either by permit or exemption, offsets should be required. There should be a strong preference for local, ‘like for like’ offsets (tenure, EVC, security and condition). Offsets by management and security gains alone result in further loss of biodiversity, therefore extent gains are also needed. Security, monitoring and enforcement of offset arrangements are required.

### **Recommendations**

- ❖ Provide a stronger legal basis for the Native Vegetation Management Framework, for example through a separate Native Vegetation Act, or as part of new consolidated biodiversity legislation.
- ❖ Review municipal planning schemes, including zones and overlays, to reflect data on native vegetation, and to support local and regional biodiversity plans and catchment strategies.
- ❖ Support the implementation of the NVMF through more proactive communication with landholders with native vegetation, about vegetation values, clearing controls and penalties, and assistance available for vegetation management. Landholders with native grasslands are an urgent priority.
- ❖ Increase the area of native grassland permanently protected in conservation reserves and under covenants, including establishment of new grassland reserves in and around Melbourne.
- ❖ Utilise a mixture of policy tools including regulation, strategic planning, varied incentives including land tax and rate rebates, BushTender, education, technical advice, resourcing of major community-based revegetation projects, monitoring and enforcement to achieve the Victorian Government’s policy goal of Net Gain in native vegetation.
- ❖ Reinstate the statewide Roadsides Conservation Committee and resource the implementation of municipal roadside conservation plans.
- ❖ Require native vegetation offsets for any clearing on public land; and for vegetation cleared under exemptions.
- ❖ Ensure a strong preference for local, ‘like for like’ offsets (tenure, and EVC, security and condition), and ensure there are gains in extent, condition and security. Provide security, monitoring and enforcement of offset arrangements.
- ❖ Publish annual native vegetation Net Gain accounting data.
- ❖ Operationalise and make publicly accessible the long-awaited Native Vegetation Permit Tracking System.
- ❖ Ensure that DSE adopts a greater role in monitoring and enforcement action in relation to illegal clearing.
- ❖ Increase the natural resource management (including native vegetation) content in tertiary training courses for land use planners and civil engineers.

## **Issue 8. Fire**

Fire in the Australian environment is complex, challenging, sometimes necessary, and often dangerous. Along with our nation's aridity, it is probably the most difficult aspect of our environment to deal with. Scientific predictions that climate change will make the south of Australia hotter and drier exacerbate this problem.

The outstanding work of firefighters on the front line needs to be backed up with the best available knowledge, planning and resources to ensure operations are as effective as possible in protecting people, property and nature.

The Alliance acknowledges the role of fire in the landscape, however, there is still significant scientific debate about the effectiveness and appropriateness of much of the current fuel reduction burning program and far more knowledge is needed of desirable fire regimes for different vegetation types, and particularly for fauna as well as monitoring of post-fire responses of fuels and biodiversity (especially fauna) in a range of ecosystems.

The suggested approaches to fire in the Green Paper are extremely alarming because of their likely ecological impacts. The suggestion of annual prescription burning up to 10% of the landscape, or even the 5% suggested by the recent Parliamentary Inquiry, is extreme. It would take Victoria's flora and fauna beyond its ecological tolerance of fire, especially those species requiring longer fire-free periods.

At present, with about half of all public land burnt in the last 5 years there is instead a need to wind back burning in many regions until fire regrowth matures sufficiently to support a wider range of fauna species. Fourteen of the 32 draft 'Ecological Vegetation Divisions' (EVDs) into which all Victoria's vegetation has been recently divided for the purpose of working out fire tolerances, cannot tolerate repeat fires of less than 20 years (with longer requirements for some fauna), even if these are low intensity.

Logging is an important consideration in relation to fire and Melbourne's water catchments. Not only does logging reduce water quality and yield, dense regrowth post-logging also increases fuel loads. If we are serious about protecting Melbourne's water catchments, logging of them should cease.

Strategic fuel breaks, while they do little or nothing to stop a fierce fire because of spotting, may have a role if they are immediately adjacent to an asset being protected by firefighters. However, their role is particularly debatable in wetter forests where backburning is difficult or impossible.

Strategic fuel breaks result in direct loss of native vegetation, fragmentation of flora and fauna populations and increase the likelihood of weed and feral animal invasion.

There are significant questions over the current strategic fuel break establishment program given;

- uncertain benefits in reducing the extent, frequency and severity of fire, and
- lack of impact assessment of these fire breaks on biodiversity.

## **Recommendations**

- ❖ Any expansion in the extent of prescribed burning must be scientifically based, both in terms of the effectiveness in reducing fire risk and impacts on flora and fauna
- ❖ The Victorian Government must invest heavily in scientific research for ecologically based fire management, including the requirements of fauna, monitoring of the effects of fire on biodiversity, and the effectiveness of fuel reduction burning in reducing fire

risk. A decision support system should also be established to ensure this knowledge can practically support fire management decisions – particularly regionally.

- ❖ Enhance remote sensing and surveillance capability for early detection of wildfires, and rapid response capability to fight fires.
- ❖ Undertake full environmental assessments of any proposed extensions to strategic fire breaks and access networks, and offset any vegetation loss.
- ❖ Review Planning Schemes and utilise approvals processes to minimise future subdivisions and residential development in fire-prone areas.
- ❖ Increase the resistance of native forests to mega-fires by protecting old growth forests, rainforests and water catchments from wood chipping and logging.

### **Issue 9. Invasive species**

Invasive species have wrought havoc on biodiversity in Victoria. Most introductions to Victoria have been deliberate - about two-thirds of plants (Carr 1993) - and harmful introductions continue to occur. There are currently 576 listed environmental weeds in Victoria (DSE 2008). At least two-thirds of Victoria is mostly or predominantly covered in exotic vegetation and about 28% (>1200) of the plant species listed in *Flora of Victoria* are exotic (Carr 1993). Weeds and pests are a major threat to native species and ecosystems.

As the Green Paper notes, foxes and cats have already caused extinctions. Along with rabbits and trout they continue to threaten the survival of rare and threatened species: deer, carp and rabbits degrade habitats and displace native species; and exotic marine organisms dominate Port Phillip Bay. Climate change will exacerbate many of these threats.

In general, the Green Paper appropriately acknowledges that invasive species are a major threat to biodiversity, as well as agriculture and the potential for climate change to worsen weed and pest problems. However, there are gaps in its coverage – invasive pathogens and invertebrates in particular – and it is also important to focus specifically on invasive species threats to marine and aquatic environments, as they are often ignored in invasive species policies.

Commendably, the Green Paper recognises that reactive approaches to pest and weed management are largely ineffective, and stresses the importance of prevention and early intervention.

Nurseries have been the source of many of Victoria's environmental weeds, and continue to sell weeds without even being required to label them as such. The need for more controls over sale of weedy garden plants is recognised by government weed experts, but the Green Paper fails to adequately address this issue.

The alliance draws the Government's attention to the sensible approach to prevention in Western Australia, where the government regulates the introduction of new exotic species to the State or to particular regions by not allowing introductions unless species have been assessed as low risk and are placed on a permitted list.

### **Recommendations**

- ❖ Identify which invasive species are likely to benefit from climate change in Victoria, and develop strategies to minimise the harm this may cause.
- ❖ Require invasive species risk assessments before permitting or supporting the development of new crops in a region.

- ❖ Replace the current Prohibited List system with a Permitted List system which only permits the entry into the State or region those species assessed as low-risk.
- ❖ Require that nurseries and pet shops/aquariums sell only low-risk species, and that all products with potential to spread carry appropriate warnings.
- ❖ Develop strategies to minimise the risk of accidental introductions of invasive pest animals, plants and pathogens (including through introduction of pests in ballast water, on fouled boat hulls, contaminated seed, plant materials or machinery etc).
- ❖ Invest in dedicated rapid response capacity (personnel, resources) to control populations of harmful invasive species to minimise threats to threatened species or ecosystems and protected areas.
- ❖ Legislate for a general duty of care to prevent the spread of invasive species, with bonds to be paid for the introduction and/or commercial use of high risk species.

### **Issue 10. The role of ecosystems in combating climate change**

The global community needs to massively reduce greenhouse gas emissions to avoid dangerous climate change. At the same time, we must increase the resilience of our ecosystems in the face of climate change that is already occurring.

Climate change has profound implications for the natural environment. The CSIRO predicts that climate change will make Victoria warmer and drier, significantly increasing the threats to ecosystems and placing further pressures on water availability and the agricultural systems that underpin our way of life (Jones & McInnes 2004)

According to the Intergovernmental Panel on Climate Change (IPCC) (2007a), 20-30% of species are likely to be at increased risk of extinction with temperature rises above 1.5-2.5°C, along with major changes in ecosystem structure and function and species' geographic ranges (IPCC 2007b).

According to the IPCC (2007b), to even stabilise atmospheric CO<sub>2</sub> levels between 350-400 parts per million (ppm) we must reduce emissions by 50-85% of 2000 levels by 2050. Even with deep cuts and stabilisation in emissions, the IPCC projects that this would still result in an increase in global temperature of 2-2.4°C.

Ecosystems play a key role in the global carbon cycle. The Stern Review (2006) estimated that emissions from deforestation account for over 18% of annual global greenhouse gas emissions, and this is an underestimate as it does not include all emissions sources. It concluded that curbing deforestation is a highly effective way of reducing greenhouse gas emissions and that action to preserve the remaining areas of natural forest is urgent.

Soon to be released research by the Australian National University (ANU) shows that the IPCC default position of 217 tonnes of carbon per hectare stored in temperate forests is a substantial underestimate. The forests in south-eastern Australia store over three times this amount and the wet Ash forests of Victoria and Tasmania store more than ten times this amount of carbon.

These new figures demonstrate the vital importance of native vegetation, and especially native forests, as part of the solution to climate change. Protection of native vegetation (especially native forest) is clearly a key part of the policy solution to combat climate change.

To increase the resilience of our ecosystems in the face of climate change, it is also very important that we significantly restore native ecosystems across the state and minimise direct threats.

It is important that we put in place full carbon accounting for ‘green carbon’<sup>2</sup> as it is currently a large and significant source of emissions, uptake and storage.

The Green Paper does not discuss the role ecosystems themselves play in carbon emissions, and only briefly acknowledges their vital roles in carbon storage and uptake. As discussed in the Green Paper, the role of biodiverse carbon offsets in the national Emissions Trading Scheme (ETS) should be investigated, although they cannot yet be included in an ETS until robust accounting methodologies are established. Any system of carbon offsets through vegetation (mandatory or voluntary) must have a strong focus on biodiverse plantings with permanent legal protection.

It is disappointing that the Green Paper lacks any detailed analysis of the likely impacts of climate change on ecosystems.

### **Recommendations:**

- ❖ Halt the clearing, logging and degradation of native vegetation in order to reduce carbon emissions.
- ❖ Establish ongoing funding mechanisms for the long term management of carbon stores in existing native vegetation.
- ❖ Encourage additional carbon sequestration by 1) protecting remnant native vegetation from degrading processes such as grazing and encouraging regrowth, and 2) replanting biodiverse native vegetation in strategic locations that also enhance connectivity and ecological functioning.
- ❖ Develop robust full carbon accounting for ‘green carbon’, incorporating emissions as well as uptake from land use, agriculture, forestry and land use change.
- ❖ Ensure that any system of carbon offsets through vegetation (mandatory or voluntary) has a strong focus on biodiverse plantings with permanent legal protection.
- ❖ Undertake a major investigation, including modelling and mapping, into the likely impacts of climate change on ecological processes, ecosystems and species in Victoria, and recommend strategies to assist adaptation.
- ❖ Increase the resilience of our ecosystems by enhancing landscape connectivity, and by removing direct threats from: invasive species, development, extraction, inappropriate fire regimes, lack of environmental flows, logging and clearing of native vegetation.

### **Issue 11. National Parks and other protected public land**

National parks and other protected areas play a crucial role in the protection of biodiversity and in providing ecosystem services such as clean water, as well as significant recreation and tourism opportunities across the state (Parks Victoria 2007).

There are 118 parks reserved under Victoria’s National Parks Act, including a great range of terrestrial national, state and regional parks, as well as marine national parks and sanctuaries. In all, the nature conservation reserve system covers some 3.2 million hectares, or 16% of the State. In addition, some 2,800 smaller reserves covering 0.5 million hectares are given lesser protection under the Crown Lands Act.

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<sup>2</sup> ‘green’ carbon is the carbon associated with living systems in biomass (above and below ground), litter, dead wood, and soil organic matter.

To be truly effective however, the reserve system must include viable areas of every vegetation type in the state as per national objectives. Some, such as Red Gum forests and wetlands, grasslands and grassy woodlands are still inadequately represented.

Although the information is not publicly available, it appears that Victoria spends well under \$30 million per year (possibly only \$15 million per year) on the ecological management of Victoria's parks. This is less than \$5 per hectare, which is significantly less than NSW and far below what is required to maintain the natural values of the park system<sup>3</sup>. Coupled with insufficient funds for management, Victoria spends only two million dollars per year expanding the park system through public acquisition; far less than other states, and far less than what is needed to incorporate threatened communities into the system before they disappear forever (Sattler & Taylor 2008).

A range of impacts are already seriously eroding the ecological integrity of many of Victoria's parks, or have the potential to severely impact them in the future, such as weeds, pest animal and pathogen invasions, visitor impacts and inappropriate fuel reduction burns. Stresses brought about by climate change will greatly add to the impacts of these existing threats. Alpine areas, such as Victoria's Alpine National Park or Mount Buffalo National Park, are among the most climate threatened ecosystems in Australia. Under changing climatic conditions, management activities become critical in building the resilience of parks. National parks and other conservation reserves need more effective ecological management.

We need, initially, at least three times the funding for the management of ecological systems in Victoria's national parks and reserves. This means a dedicated budget of around \$90 million per year over the next three years for ecological management.

### **Recommendations:**

- ❖ At least triple the recurrent funding for ecological management of national parks and protected areas to build resilience in the face of climate change through:
  - identifying in management plans scientifically based on-ground outcomes for management of ecological systems
  - establishment of a dedicated 'ecological management' stream within Parks Victoria, with greatly increased capacity for management of ecological systems and threat abatement.
  - comprehensive, systematic monitoring of the ecological integrity of parks, climate-induced impacts and the effectiveness of management programs
  - an additional ongoing dedicated budget to control environmental weeds and pest animals.
- ❖ Provide dedicated funding to urgently improve the size, design and comprehensiveness of national parks, to strengthen the resilience of the existing reserves, and complete the representativeness of the reserve system as much as possible through tenure change for public land and marine areas, strategic acquisition of private land, and support and funding for private land contribution to the National Reserve System.

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<sup>3</sup> Estimate based on information in: Parks Victoria. *Annual Report 2006-2007* and Sattler and Talyor 2008.

## **Issue 12. Very large scale restoration: Connectivity Conservation, biolinks and endangered ecosystems**

It is now recognised that isolated conservation reserves alone will not adequately protect biodiversity, and that the successful integration of conservation and production has a key role to play in modified landscapes. The IUCN has stressed the importance of connectivity for maintaining ecological processes and conserving biodiversity; using the term ‘Connectivity Conservation’, defined as “*buffering and linking ‘islands’ of protected areas into connected large scale mosaics of lands or seas managed cooperatively by many owners*” (Worboys draft). Realising this vision requires large scale restoration of habitat values and ecological processes. The scale of restoration and revegetation in Victoria to-date, while impressive at a local level, is too small to ameliorate the loss of biodiversity, particularly in a rapidly changing climate.

Priorities for restoration include large-scale ‘biolinks’ - reconnecting conservation reserves and large areas of remaining habitat. Riparian zones along waterways provide important opportunities to improve connectivity, and may form the backbone of restoration projects. It is also important to target for restoration endangered ecosystems, such as grasslands and grassy woodlands which largely lie outside proposed biolink zones.

Setting state-wide targets for restoration and revegetation will give communities and catchment managers a greater sense of direction, and could help restoration projects to attract investment. The Victorian Catchment Management Council in its 2002 Catchment Report Card (VCMC 2002) suggested that “*by 2020 the mosaic landscape accommodates a 40% coverage of native vegetation*”. Asking, ‘How much habitat is enough?’ Radford *et al* (2004) found that an average of 30-35% native vegetation cover in a landscape is necessary to maintain biodiversity.

Large-scale restoration and connectivity projects are likely to generate many social and economic benefits. They provide a ‘big picture’ vision around which landholders and local groups, NGOs, corporations and government agencies can coalesce and to which they can contribute. Restoration creates opportunities for regional employment and skills development in ecology, environmental management and community development. ‘Biolinks’ can enhance tourist routes, attract new investment and reverse the sense of decline affecting many Victorian rural communities.

Victoria’s first large-scale connectivity restoration project is the three-state *Habitat 141* project - stretching from Broken Hill southwards to the Victorian coast. Habitat 141 is a partnership led by Greening Australia Victoria. Other, smaller-scale community-based projects are successfully under way around the country. As recognised by the Green Paper, it is time to embark on a major state-wide connectivity conservation effort.

### **Recommendations:**

- ❖ Create a ‘2030 vision’ map of a ‘restored and resilient’ Victoria.
- ❖ Set targets for the protection and enhancement of remnant native vegetation, and for large-scale revegetation across the State. (For example, set long-term targets for 30% or more of each catchment to be covered in native vegetation. Short- to medium-term targets may be less than 30% in areas with highly-depleted ecological vegetation classes.)
- ❖ Expand the role of Victorian Environmental Assessment Council (VEAC) to include freehold land, so that it can investigate and make recommendations about land-related issues that cut across tenures.

- ❖ Prepare a set of ecological and community development principles and guidelines for connectivity projects, applicable at a range of scales from local to continental.
- ❖ Support the establishment of a research centre for connectivity conservation and landscape restoration.
- ❖ Support and contribute to the resourcing<sup>4</sup> of a network of collaborative, long-term ecological restoration projects.

### **Issue 13. Marine and coastal conservation**

Some 90 to 95 per cent of Victoria's marine plants and animals are found nowhere else in the world (Victorian Coastal Council 2007). However, the health of the state's estuarine, marine and coastal ecosystems is currently 'moderate' to 'poor' and trending downward. Despite this, the Green Paper virtually ignores marine and coastal environments.

The discussion both of aquatic ecosystems and climate change in the Green Paper very briefly mentions sea level rise and increased storm surges (p47), but there is no suggestion of what should be done or of the potential for very serious impacts on biodiversity.

Victoria needs to begin setting plans to cope with sea level rise and the consequences for biodiversity and ecosystem services. According to the 2007 International Panel on Climate Change Fourth Assessment Report (IPCC 2007b), global sea levels are projected to rise by between 0.18 and 0.59 metres by 2100. (Since 1990, the observed sea level has been rising faster than that projected by models.) While sea-level changes have occurred many times in the past, and many species have migrated inland over time. However, in many cases this is no longer possible as coastal developments such as houses, roads and sea walls act as impenetrable barriers.

Victoria lacks a cohesive decision-making and planning framework for the marine environment outside Marine National Parks and Sanctuaries. A marine governance structure, including adequate legislation and appropriate policies, should be developed to protect and manage all marine areas. The integrated catchment management framework requires a stronger emphasis on catchment-to-coast planning and management.

The White Paper should stipulate the global goal of ensuring that 20-30 per cent of each habitat type is protected in the marine and coastal environment. Alongside a world class system of protected areas, all threats to marine and coastal environments should be systematically identified, and comprehensive, clear and well-resourced management strategies developed.

The Victorian Government clearly needs to prioritise and resource marine and coastal research. This might be achieved, for example, by funding and establishing a marine and coastal research centre.

### **Recommendations**

- ❖ Increase the number, extent and connectivity between marine protected areas in Victoria to meet the international target of 20-30% of each habitat by 2012.
- ❖ Identify all threats to marine and coastal environments, and develop and implement comprehensive, clear and well-resourced management strategies to address them.

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<sup>4</sup> Government funds are important in leveraging other funds from the private sector

- ❖ Undertake investigations to identify how to accommodate intertidal communities as sea levels rise, and develop and implement Coastal Plans that enable the inland movement of intertidal and coastal species.
- ❖ Establish a marine governance framework, including legislation, policy and organisational capacity to plan for, protect and manage all marine areas.
- ❖ Integrate marine governance and terrestrial catchment management governance.
- ❖ Develop guidelines and plans for the protection of Victoria's estuaries, including pollution control and provision of environmental flows to maintain estuarine health.
- ❖ Provide appropriate funding to the Victorian Coastal Council and management agencies to ensure biodiversity protection in the marine and coastal environment.
- ❖ Prioritise and resource marine and coastal research, including publicly accessible EVC mapping of the marine environment.

### **Issue 14. Rivers**

Victorians depend on healthy river systems. Rivers provide clean drinking water for millions of people and support billions of dollars worth of agricultural production. They provide recreation and transport, tourism opportunities and a sense of place. Healthy rivers support a huge variety of flora and fauna, provide connectivity in the landscape, and deliver a wide range of ecosystem services.

Victoria's rivers are in a critical state. One-third of river reaches in Victoria have been classified as in poor or very poor condition<sup>5</sup> and severe reductions in natural flooding frequencies have occurred on Victoria's regulated rivers. The situation continues to worsen due to significant reductions in river flows over the last 10 years, a result of low inflows and over-extraction. The major driver is the development of agriculture and the extraction of water for human use. In 2005/06, approximately one-third of the state's available surface water was diverted for human use. Seventy-six percent of this water was used for irrigated agriculture (DSE 2007a). Climate change will further compound this, with even moderate scenarios predicting up to 35% decline in inflows by 2050 (Jones & Durack 2005).

In the last 10 years, reduced inflows have had a disproportionate impact on environmental flows across the state. The environment's share of the water has already been traded off in favour of consumptive use by the current allocation framework. Future decisions need to ensure the environment's share of the available water is increased, particularly to reduce the disproportionate impact of climate change.

As noted in the Green Paper, the development of Sustainable Water Strategies is the key mechanism for improving river health. It is therefore essential that any additions to the Environmental Water Reserve (EWR) made through these strategies are actually delivered to ecosystems and are not subject to Ministerial discretion.

The State Government is investing heavily in infrastructure modernisation projects to create water savings, to be shared between irrigators, the environment and Melbourne. What is missing is a commitment by the Victorian Government to purchase water to add to the EWR. This is the most immediate and cost-effective way to provide water for the environment.

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<sup>5</sup> This is stated in the Green Paper on page 18.

## **Recommendations**

- ❖ Begin purchasing water as soon as possible, and use other mechanisms to increase the Environmental Water Reserve (EWR) for each of Victoria's rivers to meet scientific flow recommendations for healthy instream and floodplain habitat under climate change scenarios. To be effective this must include a State Government commitment to buy water entitlements for environmental flows.
- ❖ Put in place licensing provisions for farm dams and small catchment dams, groundwater extraction and stock & domestic use, and set sustainable diversion limits for unregulated rivers.
- ❖ Amend the Water Act 2005 to ensure that any additions to the EWR made through Sustainable Water Strategies are actually delivered and are not subject to Ministerial discretion.

## **Issue 15. Wetlands**

Lakes, as well as inland and coastal wetlands play a significant role in reducing nutrient, sediment and pollutant loads. They provide breeding and feeding areas for native wildlife, including both local and migratory birds. They also mitigate flood impacts and coastal wetlands help to stabilise shorelines.

Victoria has approximately 16,700 non-flowing wetlands covering 540,900 hectares, of which 12,800 (covering 432,800 hectares) are natural and the remaining 3,900 wetlands are artificial. Worldwide, wetlands are among the most threatened ecosystems. In Victoria, almost 4,000 natural wetlands have been lost since European settlement (191,000ha), mostly from drainage for agriculture. Many that remain are affected by one or more degrading processes.

Currently, it is difficult to find good information and indicators on the condition and trends for lakes and wetlands. The Victorian Catchment Management Council's 2007 catchment condition report notes that lakes and wetlands are, overall, in poor condition, declining over the past five years and likely to continue to decline. As is the case with other water resources, the prolonged 10-year dry period across much of Victoria has severely impacted many lakes and wetlands. Lakes and wetlands throughout Victoria are drying out and/or becoming increasingly saline and many systems are close to collapse. Predicted higher temperatures and lower rainfall as a result of climate change have the potential to make lakes and wetlands dry out more frequently.

## **Recommendations**

- ❖ Establish a statewide wetlands monitoring and assessment program to determine condition benchmarks and trends.
- ❖ Provide funding for the Index of Wetland Condition and water purchase for wetland supply.
- ❖ Increase the the provision of water for wetlands by increasing the Murray Flora and Fauna Entitlement.
- ❖ Add to EWR for rivers flowing into the Gippsland Lakes to halt the drastic decline of the Lakes ecosystem.

## **Issue 16. Riparian zones – high priority for conservation**

The high rates of primary productivity (fertility) in riparian zones make them biodiversity hotspots and refugia for wildlife, especially at times of climatic stress. Native vegetation in riparian zones delivers a range of benefits, including: better water quality and river health, erosion protection, carbon sequestration, improved habitat and connectivity for wildlife, and landscape amenity. According to the VCMC (2007), riparian zones have been extensively cleared, and their condition is moderate to poor across much of Victoria.

Riparian zones are a high conservation priority for protection and restoration and should be managed in the long term public interest for river health and biodiversity outcomes. A major expansion in stream frontage fencing and revegetation is required.

Crown river frontages occupy around 100,000 ha, or 1.1% of Crown land in the state. There are some 30,000 kilometres of Crown frontages of which some 22,000 km abuts freehold land, a substantial proportion of which is licensed, mainly for grazing.

The alliance strongly support the suggested approaches in the Green Paper (p48) to improve management of riparian areas, environmental outcomes through the 2009 review of Crown frontage licensing, and statutory and administrative instruments to improve riparian zone management. It is timely that DSE has just released The Public Land Consultancy's *Review of the Management of Riparian Land in Victoria* (2008). This report is very detailed and provides useful information, analysis and suggestions.

Current legal requirements for publicly owned stream frontage management lack public interest criteria, with management fragmented and overly complex. The Public Land Consultancy's Review (2008) proposes a range of ways of achieving legislative reform. The suggestion of introducing all the "*recommended legislative changes through a single Riparian Land Reform Act which will amend six or eight existing Acts, and can then be repealed*" is worth exploring further. There is also a need to clarify riparian roles and responsibilities.

The 5-yearly renewal of Crown licences in October 2009 is a not-to-be-missed opportunity to achieve environmental outcomes. As there are some 10,000 licensed frontages across the State, it may be necessary to have a stepped process, with highest conservation priority licences identified and reviewed first. In the event that any licences are renewed, licence conditions must require a minimum standard of riparian conservation management, for example through a Code of Riparian Practice.

While public land stream frontages are clearly a major opportunity for reflecting changing community values about the need for conservation, private land riparian zones still make up a very significant component of all riparian land. Clearly major investment is needed for these riparian areas, from both public and private purses.

### **Recommendations**

- ❖ Reform the existing arrangements with respect to the management of riparian land to ensure that all riparian land is managed for conservation outcomes.
- ❖ Encourage the management of riparian zones in the public interest for conservation and revegetation with indigenous species, especially through control of livestock access, natural regeneration and weed management.
- ❖ Utilise the 2009 licence renewal period to change the approach to riparian management from a primary focus on agriculture to conservation.

- ❖ Transfer legislative provisions relating to Crown frontage licences from the Land Act 1958 to the Crown Land (Reserves) Act 1978, and change their purpose to protection of the riparian environment.
- ❖ Review legislative requirements for management of riparian zones to deliver conservation outcomes, including preparation of a Code of Practice for Riparian Land Management under the Conservation, Forests and Lands Act 1987.
- ❖ Clarify roles and responsibilities in relation to riparian zones, and better support CMAs in performing their riparian responsibilities.
- ❖ For high conservation priority riparian zones, establish partnership and resourcing arrangements for their effective management. Set 5-year and long term targets for environmental condition of these areas.
- ❖ Significantly increase investment in riparian management for both public and private riparian zones via appropriate tools such as stewardship and ecosystem services payments, supported by education and extension services.
- ❖ Support the changes in riparian zone management with a community awareness campaign in rural areas about the benefits of, and assistance available for conservation-oriented management.

### **Issue 17. Urban and peri-urban biodiversity**

Urban dwellers benefit from engaging with biodiversity (Miller and Hobbs 2002) (one of the main reasons for Melbourne’s status as a ‘liveable city’ is the level of greenspace).

According to the Green Paper, over 40% of Victoria’s nationally-listed threatened ecological communities occur in urban and peri-urban areas (p21). In Australia, more than 50% of threatened species occur in urban fringe areas (Yencken & Wilkinson 2000). Remnant vegetation at the urban-fringe and in existing urban areas in Victoria includes some of our most endangered ecosystems, such as native grasslands and grassy woodlands, and many sites are of very high conservation significance. Moreover, grasslands undoubtedly sequester carbon. Yet this remnant vegetation is under great development pressure and development consistently out-competes biodiversity concerns on a case-by-case basis. Improved strategic planning, a regulatory presence and investment are required to protect it.

Strategic planning for biodiversity needs to be undertaken at the outset of altering planning zones, for example through precinct planning. To be effective, this requires thorough assessment/survey of ecological values, with rigorous spatial prioritisation to zone land appropriately to protect biodiversity. Strategic planning however is not a substitute for planning controls.

It is important that the ‘avoid’ and ‘minimise’ principles in the NVMF are prioritised in urban and peri-urban areas. Too often the process jumps to ‘offset’, despite the frequently high conservation significance of the vegetation in question. The high price of urban and peri-urban land, and the limited availability of suitable remnant vegetation often results in offsets failing to meet the ‘like for like’ criterion, with urban biodiversity the big loser. It cannot be assumed that offsets and market-based approaches alone will solve this problem. Rather, a portfolio of regulatory, market and community measures are required.

### **Recommendations:**

- ❖ Undertake a comprehensive study of biodiversity in urban and peri-urban regions to inform the design of a conservation reserve network, precinct planning and public open space management.
- ❖ Prepare strategic plans for conservation reserve networks across the metropolitan regions including peri-urban areas, where land should be designated and rezoned for conservation well in advance of urban development.
- ❖ Ensure that growth area plans provide an inclusive and viable local reserve network, which protects all high quality native vegetation and habitat while providing additional space for recreational uses.
- ❖ Increase the funding for public acquisition of sites of high conservation significance in rural and peri-urban areas, and enlarge the Trust for Nature Revolving Fund for land purchase, covenanting and re-sale<sup>6</sup>.
- ❖ Increase urban consolidation and increase residential densities in new developments, while protecting tracts of land for biodiversity protection.
- ❖ Review planning controls, including zones and overlays, to ensure planning tools provide for strong biodiversity outcomes.

### **Issue 18. Private land conservation**

Two-thirds of Victoria is private land and over 80% of this has been cleared of native vegetation (DSE 2008a), with remaining native vegetation on private land highly fragmented, significantly degraded and subject to a range of threats. On private land 60% of remaining vegetation is a threatened vegetation type (DSE 2007b).

Agricultural production is Victoria's predominant land use and occurs mainly on what were previously grasslands and woodlands in western and northern Victoria. Agriculture contributes \$8.4 billion to the Victorian economy (Australian Bureau of Statistics (ABS) 2007a), but the successes of modern industrial food and fibre systems fail to reflect their substantial environmental costs (ABS 2007b).

Soil health is vital for land health. It is disappointing that the Green Paper gives almost no consideration to soil health and management.

There is a strong need to step up conservation and restoration of biodiversity on private land. Native grasslands and grassy woodlands are a high conservation priority.

It is important to recognise that private land conservation plays a key role in the National Reserve System, through the permanent protection of habitat in conservation covenants.

Adequate resources should be made available for the purchase and protection of remnant habitat, as well as for strategic restoration activities. A high priority is significant additional public funding to enable expansion of Trust for Nature's Revolving Fund. Funds required are:

- \$10 million for rural conservation priorities,
- \$20 million for peri-urban conservation priorities,
- \$20 million for land use change and ecosystem services.

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<sup>6</sup> Refer also to funding recommendation for Trust for Nature's revolving fund - p22 and 24 of this document.

Greening Australia, Landcare networks, community groups and many other land restoration initiatives play a leading role in private land restoration and revegetation.

Victoria should be orienting research and policy work towards the development of multifunctional landscapes that might include intensive and extensive agriculture, farm forestry and other traditional as well as novel commercial products, ecosystem services, nature conservation, rural lifestyles, recreation and tourism. The major socio-demographic transitions underway in rural Victoria present opportunities to reinvigorate biodiversity conservation.

Sustainable production systems require the marriage of profitability with environmental benefits. Victoria ought to be actively leveraging large-scale private finance for new, conservation-friendly industries and encouraging the development of a national enabling framework to achieve this – both to augment public investment in the landscape and as a catalyst for innovation. Compatible approaches to securing investment or co-investment from the private sector include:

- payments for land stewardship and ecosystem services (e.g. BushTender and EcoTender),
- changes to taxes and duties in recognition of the benefits to the public good arising from conservation endeavours (e.g. exemption of covenanted land from land tax, stamp duty and GST, etc.),
- municipal rate rebates (e.g. uniform government rates should be in place for covenanted land).

The current level of Victorian investment in BushTender and EcoTender is \$14 million over 4 years. This should be significantly expanded.

The establishment of ecosystem services markets – including appropriate public regulation and support – would be an enabler of private investment in conservation. These mechanisms, once in place would leverage further private investment. The Victorian Government needs to create a price for selected ecosystem services, which will require setting scientifically determined legislated targets for landscape and river protection and restoration.

However, it is important to recognise that not all biodiversity needs can be met by payments for ecosystem services and market-based instruments (MBIs). A portfolio of tools is needed, including direct regulation of land-use and proper enforcement.

### **Recommendations**

- ❖ Significantly scale up the effort to engage private land managers in conservation and restoration of biodiversity, and the level of public and private investment in this. Assign a high priority for conservation efforts to improve connectivity and to conserve native grasslands and grassy woodlands.
- ❖ Utilise the full portfolio of policy tools and support measures to enable, encourage and require landholders to improve conservation outcomes, and avoid an over-reliance on market-based instruments. The portfolio should include regulation, volunteerism, education and extension, research and development, new ecosystem services markets, payments for environmental stewardship, statutory and community-based planning, voluntary binding agreements (i.e. covenants), environmental assurance schemes, and voluntary non-binding agreements (for example Land for Wildlife). Use different approaches that are appropriate to different types of landholders, including lifestyle, corporate agri-business and farming families.

- ❖ Assist landholders to voluntarily retire part or all of their land from production in marginal areas with high conservation values or where current land uses are leading to environmental degradation.
- ❖ Provide \$50 million in additional public funding to expand the Trust for Nature Revolving Fund for purchase of environmentally significant land, which is on-sold with a Conservation Covenant.
- ❖ Actively leverage large-scale private finance for conservation-friendly rural industries and environmental ventures, and – through the Council of Australian Governments - encourage the development of a national enabling framework to this end.
- ❖ Significantly increase resourcing for BushTender and EcoTender and implement them across Victoria.
- ❖ Encourage the Commonwealth Government to expand its Environmental Stewardship Programme.
- ❖ Support local communities and local government to prepare and implement local biodiversity action plans.
- ❖ Encourage, legislate and set targets for, and invest in the development of ecosystem services markets.

### **Issue 19. Institutional and legislative reform**

Improved institutional arrangements are critical for meeting biodiversity and land management objectives. The alliance’s submission to the Consultation Paper emphasised that Victoria needs a quantum shift in our institutional approach to conservation. The White Paper should include a broad appraisal of the present institutional arrangements, and should detail a comprehensive platform and options for their improvement. The Green Paper approach is far too piecemeal.

An overarching strategy is important. The functions of such a strategy include guiding the development of planning and strategies at the regional and local level, and coordinating the delivery of large scale long-term actions. To give it full effect, the strategy needs a legislative basis. The renewal of the Biodiversity Strategy concurrently with the development of the White Paper presents an ideal opportunity to establish a legislative foundation for the Strategy to ensure that it is developed and reviewed in a timely manner, that its contents and coverage are appropriate, and that it contains clear targets and timelines.

The successful implementation of biodiversity strategies, policies and programs in Victoria is currently seriously constrained by the inadequacy of funding levels. This is reflected in repeated references in the Green Paper to “*finite resources*”, “*redirecting resources*”, and “*prioritisation*”. It is clear that there is ongoing decline of biodiversity at the current level of investment and that much greater investment is needed.

#### **Legislative reform**

The current legislative framework for land and biodiversity in Victoria is fragmented, out of date and does not meet the necessary objectives. Important legislation such as the *Conservation Forests and Lands Act 1987* and the *Flora and Fauna Guarantee Act 1988* is now more than 20 years old. This and other legislation do not reflect contemporary thinking and policy on ecologically sustainable development, let alone provide a basis for dealing with the threat posed by climate change. In effect, the Green Paper does little more than provide an *ad hoc* list of possible legislative reforms.

Rather than simply foreshadowing the possibility of legislative review, the White Paper should set out some clear objectives for legislative reform (with a realistic timeline for implementation) in a manner similar to *Our Water, Our Future*. This must include a commitment to establish a legislative framework that addresses some of the key deficiencies, consolidates some of the existing fragmented legislative framework, and also introduces new principles and mechanisms needed to properly account for and manage biodiversity, ecosystem services and ecological processes. It must establish a framework within which it is possible to specify goals and undertake transparent auditing of their achievement. Standing provisions that allow for appeals or review of administrative decision making and other accountability mechanisms are also needed.

The alliance recommends the consolidation of key land management and biodiversity conservation laws to achieve better biodiversity outcomes, reduce complexity, overlaps and gaps, clarify roles and responsibilities, and lessen the administrative burden of state regulation.

A consolidated Act may include relevant aspects of the Flora and Fauna Guarantee Act 1988, Wildlife Act 1975 Conservation Forests and Lands Act 1987 and the Catchment and Land Protection Act 1994 and other relevant Acts. A suggested working title for consolidated legislation is the Biodiversity and Ecological Processes Act. Likewise, it may provide a mechanism for strengthening the regulatory basis of the Native Vegetation Management Framework (NVMF).

Better communication and coordination is required between government and non-government bodies, including Catchment Management Authorities and local government - particularly in respect of local government responsibilities under the Planning and Environment Act 1987. This will require aligning planning schemes with biodiversity values by clearly delineating the role of each relevant agency and aligning land use planning with Regional Catchment Management Strategies.

### **Recommendations**

- ❖ Ensure conservation funding commensurate with the extent and scale of past losses and current threats, and sufficient to implement the necessary measures.
- ❖ To give greater certainty in long-term conservation endeavours, guarantee program funding over a number of years rather than subjecting it to annual budgetary negotiations and readjustments.
- ❖ Provide at least a 10-fold increase in government funding for the on-ground work needed to protect, restore, and revegetate wildlife habitat across the state.
- ❖ Undertake a comprehensive review of the existing land and biodiversity legislation with a view to consolidating the existing fragmented legislative framework and also introduce new principles and mechanisms necessary to properly account for and manage biodiversity, ecosystem services and ecological processes in the face of climate change.
- ❖ Ensure that all legislation applying to land and biodiversity in Victoria includes ecologically sustainable development principles.
- ❖ Establish a new overarching legislative framework for developing a state-wide strategy. The framework should include a requirement for public involvement in the development and implementation of the strategy and a legislative requirement for the strategy to include a targets and a program for evaluation and monitoring.

- ❖ Pursue the legislative reviews and reforms identified in the Green Paper in a manner consistent with the recommendations outlined above rather than in a piecemeal or ad hoc fashion.
- ❖ Ensure that organisational and agency roles, functions and responsibilities are clearly specified in legislation.
- ❖ Do not dilute the objectives of contained in the *Flora and Fauna Guarantee Act 1988*.

### **Issue 20. Recognition of Indigenous communities' involvement in management of biodiversity**

Victoria's Aboriginal communities have legitimate, strong and enduring interest in Victoria's natural heritage, and that that interest and knowledge has, in more recent times, been largely ignored or given token recognition.

The Victoria Naturally Alliance leaves it to indigenous communities to comment on the suggested approaches in the Green Paper, but we endorse the need for the White Paper process to seriously engage with Victoria's Aboriginal community.

Indigenous communities should be appropriately funded during consultation periods, and consultations should be directed towards achievable ends and results acted on.

#### **Recommendations**

- ❖ The White Paper process should respectfully and meaningfully engage with Victoria's Aboriginal community, and allocate adequate resources to support their involvement.
- ❖ Investigate models for future dialogue on land management issues, and opportunities to train and employ Indigenous people in projects and programs relating to biodiversity conservation and enhancement.

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