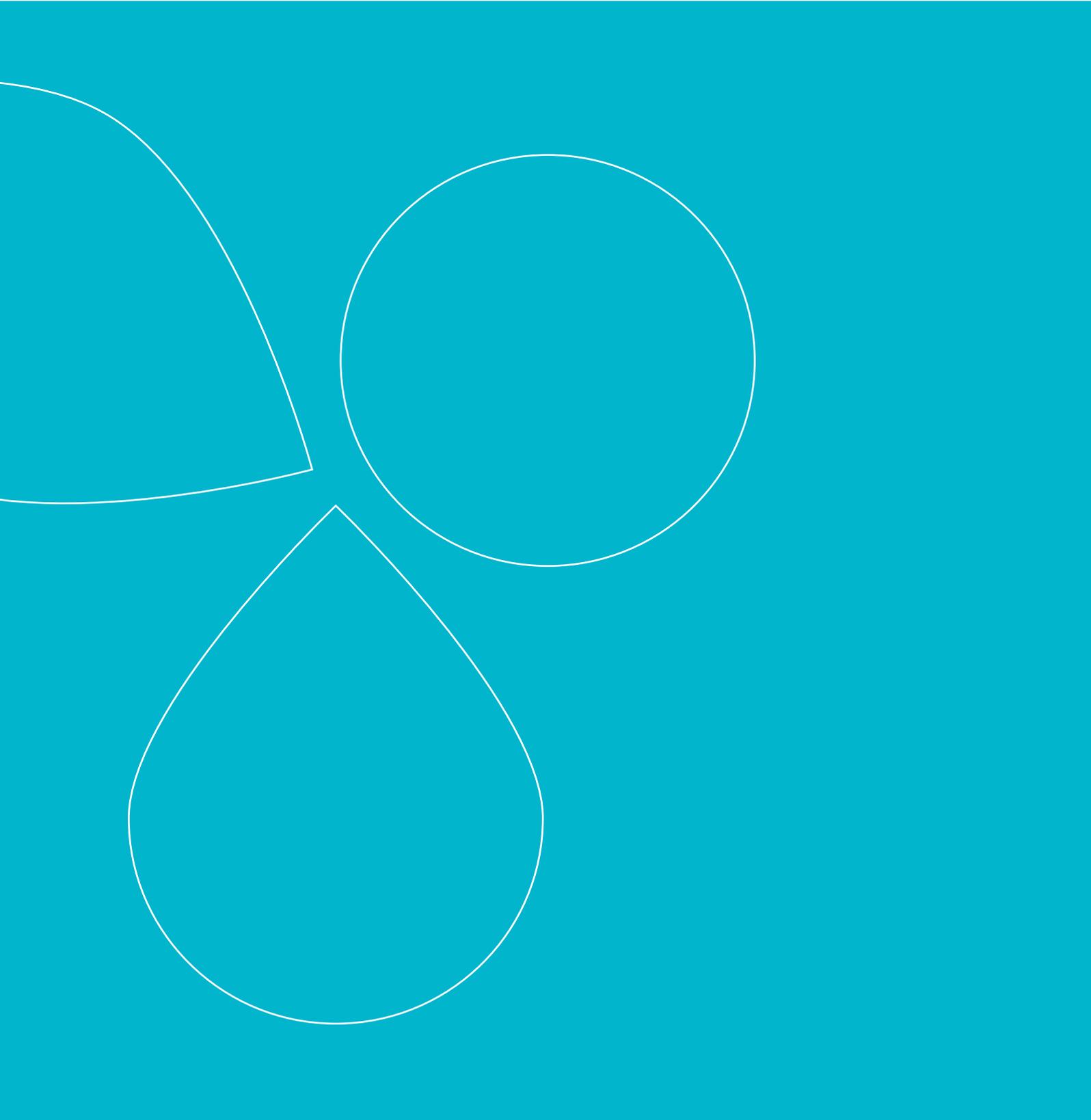


Land and Biodiversity – a Call for Action

An analysis of submissions to the State Government's consultation paper 'Land and Biodiversity at a Time of Climate Change'



About the Environment Defenders Office (Victoria) Ltd

The Environment Defenders Office (Victoria) Ltd ('EDO') is a Community Legal Centre specialising in public interest environmental law. Our mission is to support, empower and advocate for individuals and groups in Victoria who want to use the law and legal system to protect the environment. We are dedicated to a community that values and protects a healthy environment and support this vision through the provision of information, advocacy and advice.

In addition to Victorian-based activities, the EDO is a member of a national network of EDOs working to protect Australia's environment through environmental law.

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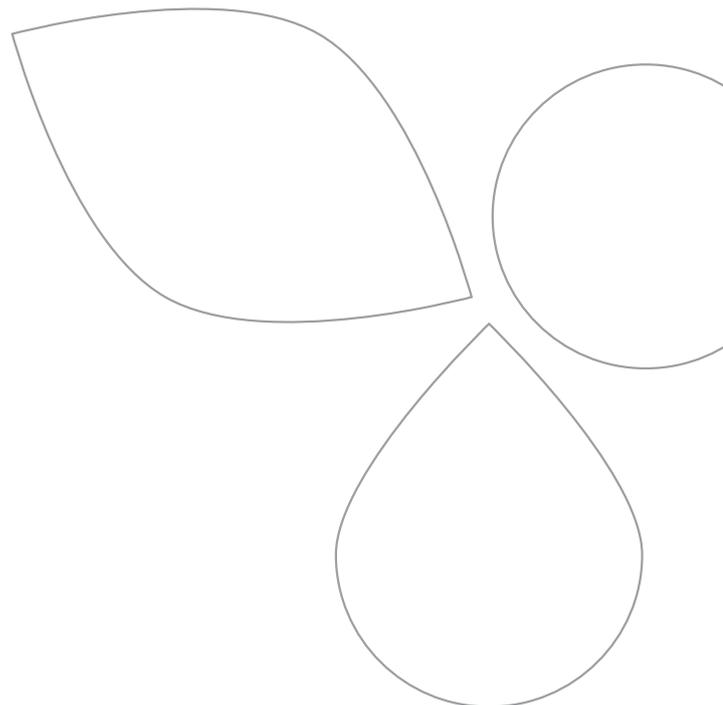
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Land and biodiversity – a call for action

This report examines the submissions received by the Department of Sustainability and Environment (DSE) in June 2007 in response to the consultation paper *Land and Biodiversity at a Time of Climate Change*.

The consultation paper is the first step in the process of developing a White Paper. This White Paper process is a significant and timely opportunity to address land management, biodiversity and the impacts of climate change in Victoria. The White Paper has the ability to result in implementation of policy change and new directions to ensure the protection and enhancement of Victoria's land, waters and biodiversity. With Victoria in the midst of a biodiversity crisis, major drought, and increasing and serious impacts of climate change, it is crucial that this process leads to effective and substantial change and action.

The objectives of the report are to:

- provide an accessible summary of the themes emerging from the submissions as a whole
- provide an analysis of the types of issues being raised by specific groups
- offer a discussion of other noteworthy issues that emerge from the submissions
- facilitate discussion and debate on the central issues, recommendations and solutions raised in the submissions.

The process: Consultation Paper, Green Paper, White Paper

The Victorian Government made a commitment to develop a White Paper on biodiversity in its policy *Our Environment, Our Future – Sustainability Action Statement 2006*. Action 7.1 states that the government 'will develop a White Paper for land and biodiversity by 2008 – similar to the White Paper for water reform – to bring together all our current and future programs to protect and restore our land and biodiversity'.

A White Paper is a document prepared and issued by the government and lays out policy or proposed action on a particular topic or issue. Significantly, the White Paper process allows for public consultation and for submissions to be made by members of the public. White Papers generally contain policy directions or strategies, and may also indicate an intention to reform current legislation.

A Green Paper is in essence a draft White Paper and sets out proposals for strategies, actions and initiatives. It is released before the White Paper and is followed by a submission and public consultation period.

The consultation paper *Land and Biodiversity at a Time of Climate Change* is a call for submissions and is the first step in the White Paper process.

The consultation paper sets out objectives for the White Paper, noting that it will:

- set the direction for Victorian Government policy and investment priorities in natural resource management, land health and biodiversity for the next two decades

- consider how environment and natural resource management activity at the regional, catchment, local and farm scale, and on public land, is contributing to Victoria’s overall environmental health and economic and social wellbeing
- make sure government policy and investment is responsive to new threats and opportunities.

The consultation paper states that the White Paper process will develop a strategic framework around five key policy questions:

- What are the environmental, social and economic values provided by healthy ecosystems and biodiversity?
- What impacts will climate change have on these values?
- What are the other threats and opportunities?
- What are the roles and responsibilities of individuals, community, business and government and how can we maximise the effectiveness of our joint effort?
- How well are the current institutional arrangements working and how could they be improved to deliver sustainable land, water and biodiversity outcomes?

Important dates in the process

April 2007 Call for submissions
 June 2007 Formal submission period
 March 2008 Green Paper draft
 Formal submission period
 Public consultation
 Nov/Dec 2008 White Paper

Our Water, Our Future – a model for the Land and Biodiversity White Paper

‘The Water White Paper that has inspired this White Paper included a thorough review of the institutional arrangements for conservation and management of Victoria’s water resources and a detailed program for legislative reform to align the *Water Act 1989* with the new policy framework.

‘The development of the water White Paper was accompanied by an extensive and detailed review of the suitability of institutional arrangements to deliver water resource management objectives. This review led to significant reforms in terms of legislative mechanisms (e.g. the Environmental Water Reserve), organisational structures and responsibilities (allocation of waterway management and Environmental Water Reserve responsibilities to CMAs) and statutory based planning processes (a statutory framework for regional water planning and long term water resource assessments).

‘The present White Paper should do the same for land and biodiversity.’¹

1. Environment Defenders Office submission.

Reference groups

Two key reference groups have been set up 'to ensure the integrity and independence of the scientific advice with a separate forum for stakeholder and industry debate and input on key issues'.²

The governance structure is modelled on that used for the water White Paper.

The Scientific Reference Group will provide advice on science and its interpretation. It is chaired by Sir Gustav Nossal and has five other permanent members with the capacity to invite specialists as required.

The Scientific Reference Group is comprised of:

- Prof. Barry Hart, freshwater science (Monash University)
- Prof. Ralph MacNally, landscape ecology — biodiversity (Monash University)
- Dr Ruth Beilin, social and biophysical science — everyday landscapes and human interactions with 'place' (University of Melbourne)
- Prof. Mark Burgman, landscape ecology — botany/conservation biology (University of Melbourne)
- Prof. Ary Hoffman, biomonitoring — climate change adaptation (University of Melbourne, Centre for Environmental Stress & Adaptation).

The Stakeholder Reference Group consists of representatives from the following organisations:

- Alpine Resorts Co-ordinating Council
- Australian Conservation Foundation
- Catchment Management Authority Chairs' Forum
- Community Landcare
- EMS State Steering committee
- Environment Protection Authority
- Environment Victoria
- Grains Research and Development Corporation
- Greening Australia (Vic)
- Minerals Council of Australia
- Municipal Association of Victoria
- Private Forestry
- Public Land Council of Victoria
- Traditional Owners Land Justice Group
- Trust for Nature
- Urban Development Institute of Australia
- Victoria Naturally
- Victorian Employers' Chamber of Commerce and Industry
- Victorian Association of Forest Industries
- Victorian Catchment Management Council
- Victorian Coastal Council
- Victorian Environmental Assessment Council
- Victorian Farmers Federation
- Victorian National Parks Association
- Victorian Rural Fire Brigades Association/Country Fire Authority
- Victorian Water Trust Advisory Council

2. DSE website www.dse.vic.gov.au/DSE as at 11/09/07.

Executive summary

The White Paper process represents a significant opportunity to address land management, biodiversity and the impacts of climate change in Victoria.

The consultation paper *Land and Biodiversity at a Time of Climate Change* is the first stage of the process, which will culminate in a White Paper in 2009.

More than 350 submissions were received by DSE in response to the consultation paper. These submissions came from individuals, environmental non-governmental organisations, community conservation groups, councils, catchment management authorities, academics and consultants as well as industry groups.

Several common themes emerge from a review of the submissions. There is a broad consensus across submissions about the issues the White Paper should address.

Recommendations frequently raised in the submissions are calls for the establishment of, or increase in:

- ongoing and longer-term funding and resources
- scientific research and knowledge to inform future policies and programs
- measures for the control of invasive species
- large-scale restoration and increased connectivity
- protection of remnant native vegetation, and the avoidance of clearing native vegetation
- private land conservation and the need for stewardship programs
- improvements to current organisational arrangements, and the need for clarity over the particular roles and responsibilities of government agencies and other bodies
- reform of current regulatory framework for biodiversity

- education at every level
- community awareness, involvement and engagement.

There is also broad consensus of the urgent need for substantive action and increased accountability for outcomes.

In addition to the frequently recurring issues identified, the Environment Defenders Office considers several other themes to be significant and noteworthy of comment. These include discussion or commentary on the following issues:

- the utility of market-based instruments and incentive schemes
- the efficacy of current fire management regimes
- marine, estuarine and coastal issues
- urban expansion and demographic change
- the management of public land
- the relationship between catchment management authorities and local government
- ecological processes and current conservation biology thinking
- the establishment of a duty of care for public and private land managers
- the need to develop a vision for biodiversity in Victoria
- involvement, or lack of involvement, of traditional owners.

The consultation paper's terms of reference and the White Paper process are discussed. Some submissions criticise the nature of the key policy questions and objectives set out in the consultation paper, and view the reference to 'trade-offs' as misleading. Criticism is also made that some matters have been excluded from the White Paper process (such as commercial forestry). Impacts of climate change are seen as significant and unrefuted, yet largely unknown.

Environment Defenders Office

The Environment Defenders Office (Victoria) Ltd (EDO) is an independent, not-for-profit, community legal service, specialising in public interest environmental law. The EDO's activities include:

- providing the community with legal advice and representation on public interest environmental matters
- developing and promoting community legal education programs
- contributing to environmental and planning law reform and policy.

EDO Mission: To mobilise informed and active use of environmental law and increase access to legal resources in defence of the environment. To utilise knowledge and a dedicated legal community to catalyse policy reform, deliver targeted community education and increase community engagement in monitoring and protecting Victoria's natural and cultural heritage.

EDO Vision: To set and pursue a progressive agenda for law reform, education and action aimed at the greater protection of Victoria's natural and cultural heritage.

EDO submission to consultation paper

The EDO prepared a submission to the consultation paper, which is available on the DSE website along with the other submissions.

The submission identifies certain areas the EDO believes require further investigation or review in the course of the development of the Green Paper. In summary, the submission addresses:

- climate change and the extinction debt
- the need for a broad and comprehensive review of institutional arrangements, and a discussion of principles on which any new arrangements should be based
- going beyond plans and strategies, and ensuring accountability for implementation and outcomes
- the need to review and improve the regulatory framework for biodiversity and land management to ensure it is effective and up to date
- commentary on land use planning under the *Planning and Environment Act 1987*
- problems with the *Flora and Fauna Guarantee Act 1988*, and native vegetation regulation
- the need for traditional owners to participate in biodiversity conservation, from a justice and human rights perspective
- commentary on market-based mechanisms, and the promises and pitfalls of carbon offsets.

This report

This report has been prepared at the initiation of the EDO to further awareness and debate and to encourage public participation in policy development. Although we hope the report will be useful to DSE and the Victorian Government, the report has not been prepared at their request - it reflects the views of the EDO as an independent community-based organisation.

Methodology

This review of submissions has been undertaken by a team of researchers led by EDO staff. The submissions were accessed electronically via the DSE website.

All submissions published on the DSE website www.dse.vic.gov.au/landwhitepaper/³ were read and analysed by the team.

To assist in the analysis, a system of classification of submissions by category of submitter was developed and submissions were categorised accordingly. The submissions have been classified into ten groups — including individuals, academics and consultants, industry groups, various government bodies, community-based environment groups, and environmental non-government (and wildlife) organisations.

While there was a minor degree of overlap between categories, for example between individuals and academics and consultants, this categorisation was constructive and aided the analysis.

An initial review of submissions was undertaken to identify a number of common and frequent themes.

3. As at 17/10/2007.

It became apparent that many of the submissions followed their own format, rather than following the format of the consultation paper, which posed five key policy questions.

All submissions were then reviewed more thoroughly to determine the frequency with which the issues were raised by submitters — regardless of whether negative or positive comments were made about the particular issue. The comments and views on the various themes by the submitters were analysed.

A range of other themes were analysed including those the EDO considers noteworthy or relevant, or those which are raised on a relatively regular basis.

Examples and quotes from individual submissions have been extracted to illustrate significant comments or recommendations. Footnotes are used to list examples of submissions addressing a particular issue.

Acknowledgements

The EDO wishes to acknowledge and thank the following authors of and contributors to this report:

- Jake Goldenfein, law student volunteer
- Leigh Hogarty-Langston, solicitor
- Brendan Sydes, principal solicitor
- James Tierney, law student volunteer
- Bronwyn Woodgate, law student volunteer
- John Sampson, Victoria Naturally (editing and design)
- Mandy Johnson, administration and projects coordinator (editing and design)

Submissions by category

DSE's *White Paper Newsletter – Edition No.3* (July 20, 2007) indicated that over 350 submissions were received in response to the consultation paper. The significant number of submissions illustrates a wide interest in Victoria's biodiversity.

While a number of submissions (especially those of individuals) use DSE's online pro forma, which sets out specific questions, a significant percentage follow their own format and are of considerable length.

The content of submissions is of a high standard. Many submissions contain detailed discussion and commentary. Many include salient illustrations, academic references, and case studies.

Submissions were received from a broad range of individuals and organisations. This demonstrates the wide community interest in biodiversity conservation, and will assist in ensuring that there is community input into the White Paper process.

The pie chart below shows the approximate percentages of different types or categories of submissions.

Fourteen submitters⁴ requested their documents remain confidential including Parks Victoria, the National Parks Advisory Council, Macedon Ranges Shire Council, four community conservation groups, one industry group and six individuals.⁵ A copy of the Parks Victoria submission was obtained by the EDO through a Freedom of Information Act request.

The submissions were grouped according to the following types or categories:

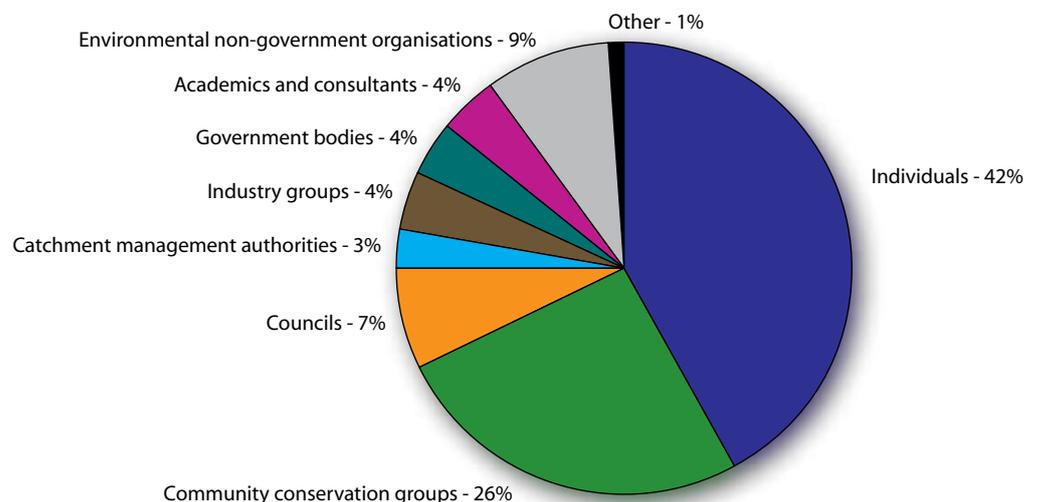
- individuals
- academics and consultants. This includes academic bodies and consultancies, as well as submissions from academics and consultants acting in a personal capacity
- industry groups. This includes a range of organisations from farming and forestry,

4. These submissions are: Bendigo Native Plant Group; Berwick; Cross; Dobson; Dunn; Friends of the Bay of the Islands Coastal Park; Golden Point Landcare; Kilter Pty Ltd; Macedon Ranges Shire Council; National Parks Advisory Council; O'Halloran; Parks Victoria; Sunbury Conservation Society; and Walsh.

These submissions have been included in the pie chart showing submissions by type of organisation or individual. They have obviously been excluded from any further analysis or data.

5. In addition, two submissions remained anonymous or withheld their name.

Submissions by category



recreational fishing, superannuation and other industries – most with some form of economic or stakeholder interest in land and biodiversity

- environmental non-government organisations, including wildlife groups
- local councils, including the Municipal Association of Victoria and the Association of Bayside Municipalities
- Catchment management authorities, including the Catchment Management Authority Chairs' Forum and Victorian Catchment Management Council
- government bodies, such as water authorities, coastal boards and others
- community conservation groups. This group consisted mainly of Friends and Landcare groups.

While there is inevitably some degree of overlap with several submissions as to the most appropriate categorisation, this classification proved useful for analysis purposes.

Analysis based on submissions by category

This section discusses each type of submitter and summarises the common themes emerging from each type.

Individuals

Individuals make up the largest group of submissions to the consultation paper.⁶ Many follow DSE's pro forma.

While these submissions address an assortment of concerns from overpopulation to the increased need for bikeways, a consistent issue is the need

6. Approximately 149 individual submissions.

for 'large-scale' restoration of natural habitats and the protection of remnant vegetation. Other issues to emerge are invasive species and the need for increased community education and research into the effects of climate change.

Many individual submissions are primarily concerned with bringing a single issue, or small number of issues, to the attention of the White Paper consultative process. While this involves highlighting a particular problem (for example, the prevalence of feral species in or near national parks, or recommending harsher legal penalties for dumping rubbish on public land), it typically does not entail an engagement with the institutional processes involved in implementing such reforms.

Catchment management authorities

Nine of Victoria's ten catchment management authorities (CMAs) have contributed to the submission process.⁷ The CMA Chairs' Forum and Victorian Catchment Management Council also provide submissions.

As is to be expected, CMA submissions focus on the problems posed by land degradation, biodiversity loss and climate change. They emphasise the importance of revegetation and restoration and a 'whole-of-landscape' approach to natural resource management. There is an acknowledgement that 'biodiversity must be managed across a mosaic of public and private land'⁸ and that private landowners need to be incorporated into this process.

A frequently recurring theme in CMA submissions

7. A submission was received from each CMA, with the exception of East Gippsland CMA.

8. Glenelg Hopkins CMA.

is the need for a landowners' duty of care. As a category, CMA submissions are also notable for their emphasis on the need to develop the concept of ecological services.

Many CMA submissions state that institutional overlap has created a degree of confusion and that any future policies need to identify clearly the roles of government, organisations and stakeholders. There is a stated need for close co-operation 'on the ground' between regional government, Landcare groups and CMA boards. Another prominent topic is the control of weeds and pest species.

Industry groups

The submissions from industry-based groups vary in content. This is a result of the range of organisations included within this group and of the predominance of 'single issue' submissions.

Despite little mention of the biodiversity crisis that other submissions highlight, the submissions recognise the importance of biodiversity, the values that stem from sustainable and diverse ecosystems and the dangers posed by climate change.

The most consistent theme is that any forthcoming government policy must have simple, clearly defined roles for different institutions. The Victorian Farmers Federation warns of the pitfalls of current legislation — e.g. tightening native vegetation controls would restrict the ability of landowners to claim land under any future carbon trading scheme. VicSuper highlights the need to create investor certainty in the 'green' industry.

Some of these submissions make reference to potential conflict between stakeholders or interests, between 'tree-changers' and plantation owners for example.

Community-based conservation groups

Community-based conservation groups form the second largest number of submissions in the White Paper process. All are sympathetic towards ecological principles and existing conservation efforts, but stress the need for further education in matters of biodiversity and sustainability. Submissions recognise the importance of linking the concerns of local groups with those recommending large-scale restoration, instituting 'biolinks', halting the loss of native vegetation and combating climate change.

The main themes to emerge from this group are weed control and invasive species. This is consistent with the concerns of other parties in the submissions process.

Reflecting the voluntary nature of these groups, many submissions emphasise the need to support volunteer and Landcare organisations and to adopt a coordinated approach between different stakeholders and agencies.

There is a significant amount of criticism directed towards fire management schemes.

Other issues flagged are the urgent requirement for additional funding, and criticism that preference is given to economic considerations over environmental considerations.

Councils

The 24 submissions received from municipal councils⁹ show a high level of engagement with the questions that guide the White Paper consultation process. The submissions are consistent in linking an array of social, economic, aesthetic, heritage and community benefits with healthy land and biodiversity. A majority of submissions are concerned about the challenges posed by climate change, particularly the increased risk of bushfire and reduced rainfall.

The key threats to biodiversity that are identified vary with location. For councils close to Melbourne such as the City of Casey, urban and peri-urban expansion form the biggest threats to biodiversity, while for the rural shires such as Buloke, weeds and pest animals cause the most persistent problems.

A recurrent theme is that roles need to be clarified so that institutional overlap can be minimised. Almost all councils who sent in submissions cite funding as a primary concern, and emphasise the need for ongoing funding of restoration projects. These concerns are linked to a belief that responsibility for carrying through environmental programs is often 'dumped' on local government.¹⁰

Environmental non-government organisations

Environmental non-government organisations (ENGOS) provide the most comprehensive submissions of any type of group. While the thoroughness of these submissions result in a lack of statistical significance for any one particular issue, the detail provided ensures that an encompassing overview is given of the ecological, economic and social processes involved.

9. In addition, submissions were received from the Municipal Association of Victoria and the Association of Bayside Municipalities.

10. Buloke Shire Council.

What distinguishes the ENGO submissions is the way in which they engage with larger social and economic issues. This is displayed through the recommendations that market-based incentives and private landowners are needed to form a large part of any large-scale conservation effort.

Submissions display a highly critical attitude towards government and existing policy. The *Flora and Fauna Guarantee Act 1988* and *Native Vegetation Management: A Framework for Action* ('the Native Vegetation Framework') are criticised as inadequate for the protection of biodiversity. There is agreement that 'decisions on land use are controlled by a plethora of different government acts and regulations'¹¹ and that a clear demarcation of roles and responsibilities is needed.

Many of these submissions stress that any analysis of 'land and biodiversity at a time of climate change' also needs to incorporate an analysis of water and coastal ecosystems. ENGOS are unique in that many acknowledge and recommend the involvement of traditional owners in the policy and land management processes, an issue that received little or no attention in other submissions.

Included in this category of ENGOS are a small number of wildlife groups, which focus on the protection of a particular species of plant or animal. As such, most of these submissions place emphasis on the need for the White Paper to adopt a more wildlife focused, less anthropocentric approach to issues of land, biodiversity and climate change. This concern manifests itself in a clear emphasis on preserving existing habitat reserves and expanding the number of habitat corridors and biolinks.¹²

11. Field Naturalists Club of Victoria.

12. Animals Australia; Friends of Leadbeater's Possum Inc.

The Victorian National Parks Association made two submissions - addressing terrestrial national parks and reserves in a landscape context, and marine issues. The terrestrial submission noted it was preliminary, and would be revised. The EDO has reviewed this revised submission, which consists of two parts.

Appendix 1 deals with implications for park management from information in some recent reports issued since the close of DSE's submission period.¹³ These reports emphasise the need for increased action on pest plants and animals, and the need for effective ecological monitoring.

Appendix 2 is an outline of a proposal to set up a pilot program for management of ecological communities in the face of climate change in the Bogong High Plains, which is part of the Alpine National Park. This new initiative aims to develop a model for strategic management of climate impacts and threats to natural systems.

Victoria Naturally alliance

The Victoria Naturally alliance consists of eight peak ENGOs that have joined together to work towards the common goal of reversing Victoria's biodiversity crisis. The alliance is led by the Victorian National Parks Association and includes the Australian Conservation Foundation, Environment Victoria, The Wilderness Society, Invasive Species Council, Greening Australia (Vic), Trust for Nature and Bush Heritage Australia.

13. Victoria's State of the Parks Report, Parks Victoria (2007); an assessment of the Weed Management program in land managed by Parks Victorian Biosis Research (October 2007); and Catchment Condition Report 2007 by the Victorian Catchment Management Council (October 2007).

Victoria Naturally is committed to working with governments, industry and the community to address the biodiversity crisis. The alliance has been successful in pushing for the launch of the White Paper process, and is also pushing for more funding for the protection and enhancement of native vegetation by land managers.¹⁴

The comprehensive Victoria Naturally submission sets out recommendations the alliance sees as essential to a comprehensive and strategic approach to the conservation of Victoria's biodiversity. In summary, these include:

- a vision, goals, and targets that articulate biodiversity outcomes
- maintenance and restoration of ecological processes
- avoiding clearing of native vegetation
- a resilient, comprehensive conservation reserve system
- very large-scale restoration
- private land conservation programs
- coastal-marine-land links
- threatened species and communities recovery
- tackling threatening processes (including invasive species) and drivers of loss
- a scientific basis for actions, targets and monitoring
- involvement of traditional owners
- major increase in community awareness, engagement and participation in decision making
- institutions and regulatory framework that are aligned with the vision
- sufficient resourcing to deliver the vision
- systematic, long-term biodiversity monitoring
- research and extension.

14. www.vnpa.org.au as at 16 October 2007.

Victoria Naturally places strong emphasis on current conservation biology thinking that to maintain natural assets, the ecological processes that sustain them must be maintained. Victoria Naturally has commissioned Deakin University to investigate appropriate policy responses to address the urgent need to maintain or re-establish the integrity of Victoria's ecological processes. The alliance intends to provide Deakin University's findings to the White Paper process once they are finalised.

The submission describes seven ecological processes and connections that the WildCountry Science Council has identified as critical to the implementation of whole of landscape conservation. The submission also provides examples of large-scale restoration and protection programs throughout Australia, such as Gondwana Link and Habitat 141.

As the Victoria Naturally alliance represents a significant portion of the ENGOs, it is of no surprise that ENGO recommendations are consistent with those of the alliance. This is seen particularly in relation to recognising the importance and effects of climate change, of preserving and restoring land and of adopting a 'whole of landscape' approach to conservation.

Government bodies

Relatively few government bodies or agencies have participated in the submission process.

Some submissions from water authorities emphasised the importance of vegetation protection and restoration to water quality. Their submissions also highlighted the need to take into account the greater incidence of drought and problems with water supply that will result from climate change.¹⁵

15. Submissions from water authorities include: Melbourne Water; Gippsland Water; Wannon Water; Victorian Water Trust Advisory Council.

As with many other groupings, there is a broadly stated need among government agencies for the *Flora and Fauna Guarantee Act 1988* and *Victoria's Native Vegetation: A Framework for Action* to be reviewed. Another important issue raised is the need for adequate funding of government initiatives.

Academics and consultants

Submissions from academics and consultant groups focus primarily on areas of research that require further funding or investigation to enhance land and biodiversity outcomes. These submissions tend toward analysing knowledge gaps and institutional shortfalls rather than identifying specific threats (i.e. against a particular endangered species).

Contributors emphasise that a scientific knowledge base should be developed about biodiversity in Victoria. Other major issues concern law reform, in particular the need for more rigid application of legislative controls and the potential of market-based mechanisms for land conservation. Many submissions in this category emphasise the importance of habitat preservation, large-scale habitat restoration and 'bio-linkages'.

Other

Two submissions by the Australian Labor Party (Kilsyth and Geelong West branches) were placed in the 'other' category.

Recurring themes

A review of all submissions reveals a number of frequently recurring themes. These issues largely correspond with the major themes identified in the DSE's *White Paper Newsletter – Edition No.3* (20 July 2007).

The graph below demonstrates the frequency in which themes are raised on the whole - regardless of whether negative or positive comments are made about the particular issue.

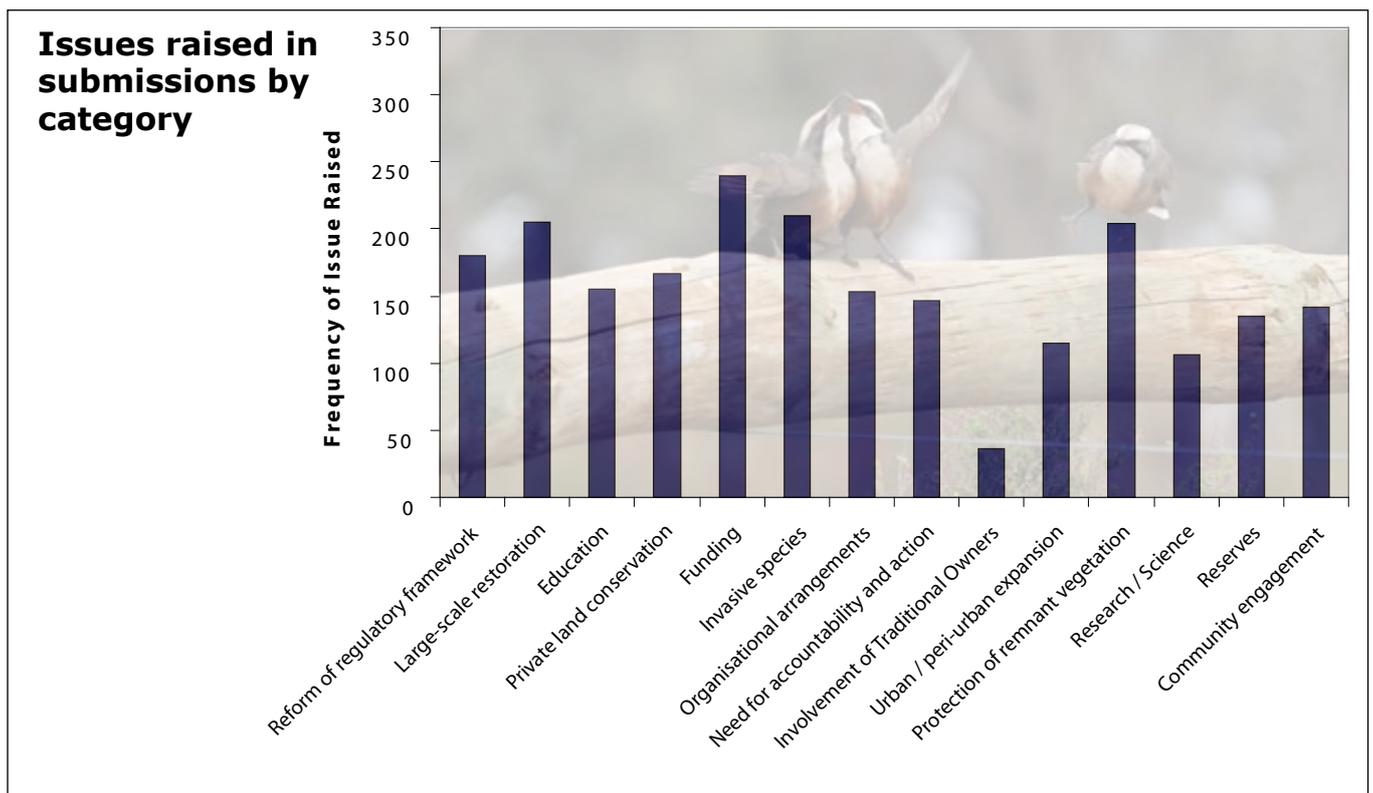
Funding

The provision of adequate government funding and resources is seen by many as the most important issue. Many submissions emphasise that without a major increase in funding and resources, a real commitment cannot be made to Victoria's biodiversity.

The submissions recognise that a significant lack of financial resources has led to problems in implementation and enforcement of current legislative mechanisms, policies and programs.

Increased funding also underpins many of the other key themes and recommendations in the submissions – most notably research, control of invasive species, climate change impacts, large-scale corridors, private land conservation programs, community involvement and institutional arrangements.

It is emphasised that a general lack of funding, combined with the short-term nature of funding, has resulted in projects not always being effectively completed, followed-up or monitored. While it is acknowledged that substantial funding is required, the submissions differ in terms of their focus on exactly where, and to whom, the funding should be channelled.



“If a quantum leap in the management of land and biodiversity in Victoria were to be achieved, it would require a quantum leap in available funds.”

– Port Phillip and Westernport CMA

The Shire of Yarra Ranges suggests that the allocation of funding should not be constrained within government agency boundaries, but rather be based on areas of high biodiversity value or need. Port Phillip and Westernport CMA suggests consideration of introducing an ‘environmental levy’, analogous to the existing charge on water that is collected from all water users by water authorities, and used to fund state-wide programs to protect and enhance rivers and water supplies. This proposal also received support from the Green Wedges Coalition.

Several community-based conservation groups question the effectiveness of annual funding cycles, and request funding cycles based on multi-year plans.¹⁶ Other submissions point to the need for increased funding towards the appointment of additional staff to implement and enforce programs effectively.

Invasive species

Control of invasive species is cited as a major concern in the submissions. Reference is made to invasive weeds, animals, pathogens¹⁷ and marine pests,¹⁸ although environmental weeds are most frequently addressed.

Many submissions point out that invasive species have a highly detrimental effect on native species and habitats. The Conservation and Wildlife Ecology Group¹⁹ notes that invasive species frequently alter

habitats and ecosystems dramatically — they fill certain ecological niches, and thereby displace native species in communities and ecosystems.

Some regard weeds as the greatest threat to biodiversity.²⁰ There is concern that climate change will increase the negative impacts of invasive species, with some introduced species being advantaged by climate change.²¹

Many submissions, especially from individuals and community-based conservation groups, highlight problems in their local area on weeds (such as blackberries, bridal creeper and agapanthus), as well as feral animals (such as foxes, rabbits and domestic animals).

Suggestions put forward to address this threat include education programs, awareness campaigns, weed action plans, weed mapping, the introduction of state laws creating controls on the sale and distribution of high-risk invasive plants, the creation of codes of best practice, and the introduction of a pest animal strategy. Control of invasive species is considered necessary on both public and private land.

Strong enforcement of all pest and weed eradication programs is seen as necessary in most submissions. In addition, continuous and long-term programs are viewed as necessary to remove and monitor the eradication of invasive weeds and to ensure that their removal remains permanent.

16. For example: Wombat Forestcare; Castlemaine Landcare Group; Johns Hill Landcare Group.

17. For example: Australian Centre for Biodiversity (Monash).

18. For example: the Northern Pacific Seastar, referred to by both the Association of Bayside Municipalities and the Victorian National Parks Association (marine).

19. University of Melbourne research group.

20. For example: Geelong Environment Council Inc; ANGAIR Inc; Friends of Eastern Otways; Surf Coast Shire Flora and Fauna Action Unit; Port Phillip and Westernport CMA.

21. For example: Bird Observers Club of Australia; Wellington Shire notes that new weed species may invade areas currently weed-free.

“In reality we are making barely educated guesses and the mistakes that come from this will not only cost many species their existence, but the devastated landscape and loss of arable land will be the legacy to our children.”

- Conservation and Wildlife Ecology Group

Large-scale restoration

There is overwhelming consensus on the necessity for looking at the ‘big picture’.

Large-scale restoration in some form is suggested by the majority of submissions. Recommendations include increased connectivity through large, strategically-placed corridors linking remnant patches of native vegetation and providing habitat corridors, as well as regional-scale biolinks programs.

These recommendations are in line with the concept that action on a ‘whole-of-landscape’ scale is required for effective biodiversity conservation.

Suggestions include mapping to identify specifically viable corridors that cross both public and private land, as well as a state-wide evaluation of potential biolinks projects linking reserves and national parks. Biolinks should be constructed on a range of scales including state, catchment, regional, landscape and local levels. The Habitat 141 project and Gondwana Link are frequently cited as an illustration of the scale of programs required.

The Royal Botanic Gardens Melbourne submission provides a noteworthy discussion on the concept of a landscape de-fragmentation plan. Developing appropriate linkages across landscapes will require a number of different strategies to be employed, depending on the characteristics of the organisms likely to be moving through the area. This is because organisms and other ecosystem components move across the landscape at a variety of spatial scales.

Many submissions suggest that roadside vegetation, railway corridors, drainage lines and creeks should

be employed in creating reserves to support wildlife corridors.²² Roadside reserves and vegetation are also seen as playing a role in protection of remnant native vegetation.

Some submissions recognise that the impacts of climate change and global warming may lead to population migration, with the result that habitat corridors could play an even greater role in facilitating the movement of flora and fauna to more appropriate habitats.²³

Research and a scientific basis for action

Current knowledge and understanding of biodiversity issues is seen by many submissions to be limited. Scientific research and assessment is therefore required, it is said, to develop a sound knowledge base from which to develop, invest in and implement programs.

As the Deakin University submission notes, ‘it is now accepted that successful natural resource management, including biodiversity protection, relies crucially on the best scientific and ecological information available’.

Suggested areas requiring research range from macro issues such as the impacts of climate change and its effect on biodiversity as a whole, to micro issues such as individual species and threatened micro-habitats.

22. For example: Corangamite Shire.

23. For example: Royal Botanic Gardens Melbourne; Friends of Wallan Creek; Geelong Environment Council Inc; South – Eric and Bronwyn; Victorian Malleefowl Recovery Group.

“Many existing documents provide ‘answers’ for what needs to occur to conserve biodiversity... but no funding has been provided, nor staffing levels adequate, to implement the required actions. We need to stop reinventing the wheel and actually implement the programs.”

- Benalla District Environment Group

Increased monitoring, assessing and reporting are viewed as critical by many submitters. Many submissions refer to the importance of employing frameworks that set out clear and comprehensive objectives, targets, measures, modelling and timelines in addressing the protection of biodiversity. The Wilderness Society submission, for example, advocates scientifically determined targets. It suggests clear targets for terrestrial and marine biodiversity, and proposes that habitat targets should be set, plus targets for supporting ecological processes.

Lack of knowledge of the public and government agencies on biodiversity issues is also cited as of concern. Many submissions identify a need for officers with greater expertise, as well as the need for greater coordination and data sharing arrangements. Manningham City Council, for example, suggests one central collection point for data, which is properly resourced and easily accessible.

Protection of remnant native vegetation

The protection of remnant patches of native vegetation is referred to by more than half the submissions. A common statistic quoted is that 70% of Victoria’s landscape has been cleared of native vegetation.

A significant problem highlighted in the submissions is the incremental loss of native vegetation. This is attributed to factors such as illegal clearing of native vegetation, weed invasion, and the loss of bushland through urban development and agriculture. Related to this is the fact that fragmentation of native

vegetation is rife. Hamilton Field Naturalists Club, for example, states that ‘fragmentation of original landscapes has resulted in “islands” of native communities in a sea of farmland’.

Many submissions refer to the need for protection and monitoring as well as enhancement and revegetation of native vegetation.

Many submissions emphasise the need to avoid clearing native vegetation. Many point out that avoidance of clearing should be given the highest priority (especially as scientific evidence suggests it may not be possible to fully revegetate and replace a degraded habitat or ecosystems).²⁴

While the broad intent of the Native Vegetation Framework is generally supported, many agree it is inadequate and requires improvement.

There is some commentary, predominantly from community-based conservation groups, that the concept of net gain does not work in practice. Friends of Heathfield Creek Reserve say the net gain system ‘can only be viewed as an inadequate compromise’. Friends of Warrigine Park — Bittern consider that offsets never result in new reserves being created, and real positive net gains are required. Others, such as Nillumbik Shire Council, consider it a useful tool for placing a value on biodiversity, although effective implementation is necessary.

The concept of offsets for clearing native vegetation is also criticised by some. For example, the Bendigo and District Environment Council Inc says biodiversity ‘is not fungible. It is not possible to trade it from one place to another and hope to retain its value — it is

24. For example: Portland Field Naturalists Club; Zollinger.

“Over the past 20 years we have seen departments dealing with natural resources turned upside down, amalgamated, de-amalgamated, tweaked and down-sized.”

- South Gippsland Conservation Society

dependant on where it is in the landscape (place) and when it is (time). Hence the framework’s offsets are scientifically unsound’.

The Bird Observers Club of Australia comments that while the system of offsets for native vegetation has merit, in practice offsets must be used with caution. By way of illustration, the club points out that ‘the habitat value of a large old tree with hollows cannot be replaced by planting many seedlings, until many decades have passed, by which time the dependent wildlife may have disappeared’.

A relatively common recommendation is that the key principles in the Native Vegetation Framework, especially regarding avoidance of clearing native vegetation, need to be strengthened and given more practical meaning to ensure they are strictly implemented. The exemptions in the Victorian Planning Provisions should be tightened or removed.²⁵

Also, more rigorous controls are needed for implementation. Some submissions note that the Native Vegetation Framework is often left to local councils to implement.²⁶ However, as the Shire of Yarra Ranges comments, the Native Vegetation Framework is very complex to administer. Difficulties in terms of staff shortages and officers with inadequate expertise are also flagged in the submissions.

It is clear from the broad criticisms aimed at the Framework that a comprehensive review is necessary, especially regarding strong measures to ensure compliance, implementation and enforcement. In contrast to the majority of submissions, the

Victorian Farmers Federation questions the need for tighter native vegetation regulations, on the basis that it reduces the ability of landholders to claim existing vegetation as a carbon offset under future emissions trading schemes.

The Green Wedges Coalition submissions, and supporting documents, focus on the protection and enhancement of Green Wedge areas.

Organisational arrangements

Many submissions point to the uncertainty surrounding the particular roles and responsibilities of government agencies and other bodies. The current institutional arrangements require reworking and improvement.

Problems are seen as relating to the lack of communication, engagement and coordination between the various government agencies and key players, leading to unnecessary overlaps, duplication and unacceptable gaps. The current institutional arrangements lead to large gaps between the legislation, policy or strategy and the way in which they are implemented ‘on the ground’. Inadequate implementation is therefore another area of great concern. This is seen as leading to a lack of accountability and coordination, as well as a heavy reliance on the activities of volunteer and Landcare groups.

The submissions frequently comment that a review and improvement of the current institutional arrangements is required, and that the role of each relevant agency should be made clear, transparent and accountable.

25. For example: Green Wedges Coalition.

26. For example: Buloke Shire Council.

“Improving pest and weed control must be a priority for the White Paper.”

- Victorian Farmers Federation

The submissions overwhelmingly conclude that there is a need for a simplified, coordinated and integrated approach to the institutional arrangements. As Alex Arbuthnot notes, ‘the community face all too often a world of acronyms, complex institutions and paper and regulatory barriers’. A more streamlined and accessible delivery process is therefore desirable. The Shire of Yarra Ranges notes by way of illustration that there are three agencies attempting to address environmental weeds alongside local governments (namely DSE, Department of Primary Industries and CMAs), yet none are able to achieve this effectively. The Australian Labor Party Geelong West branch submission also provides a practical example of the Barwon River system as managed by a ‘plethora of bodies whose areas of authority overlap’.²⁷

However, not surprisingly, no single approach to improved institutional arrangements stands out. Some favour either CMAs or councils assuming greater responsibility for management of biodiversity.

Some further suggestions include the appointment of a commission for natural resources or conservation advisory committee,²⁸ or increasing the role of existing bodies such as the Victorian Environment Assessment Council²⁹ or Sustainability Commissioner.³⁰

27. The submission lists the Corangamite Catchment Management Authority, Barwon Water, Southern Rural Water, DSE, Parks Victoria and City of Greater Geelong, and notes that it is unclear who to contact when requiring information on wetlands or environmental stream flows.

28. WWF Australia.

29. Trust for Nature.

30. EDO.

Case study — Wombat Forestcare

‘...the day after a programme to protect the upper catchments of the Coliban River was announced by the North Central Catchment Management Authority, a Department of Sustainability and Environment works crew were putting a bulldozer through the very headwaters of the Coliban River when undertaking unnecessary road works.’

Reform of regulatory framework for biodiversity

A large number of submissions identify the importance of the regulatory framework to effective land management and biodiversity conservation. Many also identify inadequacies in the current regulatory framework, however, few submissions actually propose what reforms are required.

Overlaps, gaps, contradictions and inconsistencies in the regulatory framework are identified in some submissions and the lack of emphasis on utilising and enforcing existing regulations is criticised.

Many submitters consider law reform is necessary to address the problems with current institutional arrangements and to ensure the effective implementation and enforcement of laws through a more coordinated approach.

A regular comment made in the submissions is that the *Flora and Fauna Guarantee Act 1988* provides an inadequate system for protection of biodiversity and has major flaws in terms of implementation.

“The White Paper should be a unifying agent of recent and new policy and a re-awakening of existing but low profile legislation such as the *Flora and Fauna Guarantee Act*.”

- Parks Victoria

Other problems include the significant delays in preparing the Flora and Fauna Guarantee Strategy and Action Statements for listed species, communities and processes, and that several powers under the Act are under-utilised. Many consider that the Act should be reviewed and improved.

Interestingly, the focus remains on the *Flora and Fauna Guarantee Act 1988* and little mention is made of other legislation relevant to biodiversity conservation such as the *Wildlife Act 1975* and *Conservation, Forests and Lands Act 1987*.

The planning system and planning controls and policies are often criticised for being inadequate, and a review of the *Planning and Environment Act 1987* is recommended.³¹ Many question the effectiveness of the Native Vegetation Framework and suggest that it requires improvement (discussed in more detail below).

Private land conservation

Some form of private land conservation is recommended by a majority of submissions. As the consultation paper observes, two-thirds of land is in private hands and therefore stewardship provided by private land managers is important.

The underlying message is that in order to manage land on a landscape scale, it is essential that biodiversity conservation is extended to both public and private land.

Various reward schemes and stewardship programs to encourage and motivate landowners to preserve remnant vegetation are discussed and suggested. To protect biodiversity on private land, landowners need to be offered incentives to protect or enhance habitats.

The Municipal Association of Victoria, for example, calls for the government to provide programs that make available financially sound choices and alternatives to landholders considering development opportunities or expanding agricultural enterprises.

The significant role of existing programs is acknowledged.³² Some see the Trust for Nature model and covenants as a successful model that should be further supported and developed.

The Trust for Nature submission sets out a useful discussion of its role, achievements, and aims. Trust for Nature’s mission is to conserve all significant natural areas of private land in Victoria, and it acts through voluntary conservation covenants with private landholders and through acquiring land via purchase and donation.

The introduction of some form of financial incentive via rates and tax reductions is referred to in submissions. Trust for Nature observes that incentives such as rate and tax relief are improving the uptake of permanent protection of private land (particularly in areas that have traditionally resisted conservation, such as farming areas containing threatened grassland communities).

31. For example Practical Ecology Pty Ltd remarks that too much faith is placed on the planning system to protect native vegetation and habitat.

32. For example: Bird Observers Club of Australia (Trust for Nature).

Suggestions include cancellation of rates on natural areas (such as wetlands) preserved on private property and the inclusion of financial rewards for preserving significant long-living trees (such as bulokes).³³ Direct grants may also be given to private landowners, such as in the Mornington Peninsula Shire.

The Port Phillip and Westernport CMA submission calls for consideration of a 'Victorian Eco Tender' program, which could invite private landholders to submit tenders to provide high-quality environmental services on their land that benefit the community – such as enhancement of native vegetation, revegetation, creation of links across the landscape, salinity mitigation, pest control, water quality protection and erosion control. The landholder would bid the price for which they are prepared to provide the service, and bids would be selected that provide the best outcomes and value. The submission suggests three (or more) distinct components of the program, to recognise different circumstances and priorities: rural, green wedge and Melbourne.

The Manningham City Council, a Green Wedge municipality, advocates increased government support for incentive-based conservation programs. Many suggest private land conservation programs should be given more funding and resources so that they can be developed further.

33. Hamilton Field Naturalists Club.

Case study — Manningham City Council

Manningham City Council runs a Bush Gain (farming biodiversity) Program. The program involves private landowners voluntarily managing an area of remnant vegetation on their property for its biodiversity values (such as control of weeds and pests). The landowners, described as 'biodiversity farmers', are paid an annual 'harvest payment' for the ecosystem services provided in that area of remnant vegetation.

Community engagement and involvement

Many submissions emphasise that community engagement and participation are essential components of any future strategy.³⁴

Some submissions express concern about perceived ignorance or apathy by many Victorians about land and biodiversity issues. A common recommendation is that the public should be more aware of the problems Victoria's biodiversity is facing.³⁵ These submitters take the view that a greater understanding of biodiversity conservation and the impacts of climate change will lead to increased support for change and increased involvement in change. L Grant's observation encapsulates the philosophy behind community engagement - 'the pathway to a better future involves changes to culture'.

34. For example: Corangamite CMA.

35. For example: Friends of Venus Bay Peninsula.

“One more thing, please no more glossy brochures.”

- Chatfield

Community engagement is considered crucial to ensure ‘on-the-ground’ action occurs.³⁶ The role of the Landcare movement is acknowledged by the consultation paper, and several submissions elaborate on this. The submission by Gill Hopkins, for example, illustrates the numerous and time-consuming roles that individuals volunteer for. Several other submissions emphasise the extent to which volunteer groups make positive and substantial changes to biodiversity conservation and land management in their local areas.

The submissions recognise the role voluntary groups play in terms of developing local knowledge and encouraging local action. The Castlemaine Landcare Group, for example, remarks that Landcare is both a movement and a process. These groups function as a process through mutual learning from experiences and on-the-ground observation.

However, the submissions acknowledge that community groups are generally under-funded and under-valued, and some fear they are too heavily relied on. Many of the community-based conservation groups request the provision of more opportunities to share knowledge and provide advice, as well as increased funding. They recommend the government provide a framework for individuals and community groups to work within and support programs they wish to undertake.

It is apparent from the submissions that large-scale restoration programs require the support and involvement of the community to be successfully implemented. Volunteers may play a substantial part in supporting, and assisting in, the implementation

36. Chandler.

of large-scale restoration programs such as Project Hindmarsh and Habitat 141 (for example, through voluntary labour).

Education

A large number of submissions observe a need for education at every level to increase awareness and understanding of the value of Victoria’s biodiversity and the problems it is currently facing.³⁷

At a government level, departments, agencies and officers require increased education on issues surrounding biodiversity.³⁸ At a community level, suggestions include awareness campaigns, education programs, the inclusion of environmental education in school curricula, and education for volunteer groups.³⁹ Education campaigns are proposed for agriculture and other industries.

Need for accountability and action

It is clear from the submissions that a considerable degree of frustration exists over the current regulatory framework for the protection of biodiversity.⁴⁰ While submissions applaud and congratulate the government on initiating the White Paper process, the submissions frequently request

37. Mallee CMA; North Central CMA; Wimmera CMA; Benalla District Environment Group.

38. Bayside Shire Council; Corangamite Regional Local Government Environment Officers Network; Biodiversity Northern Network.

39. Bird Observers Club of Australia; Australian Labour Party Kilsyth Branch; Davis.

40. For example: Laverack; Environment East Gippsland Inc; Chatfield; Benalla District Environment Group.

“Lip service is paid to the environment, motherhood statements have been many but practical work to help the environment – or even limit abuse to the environment has been minimal to non-existent.”

- Environment East Gippsland Inc

an improved framework that holds the government accountable, as opposed to mere lip service or yet another strategy that lacks substance⁴¹ or that yet again attempts to ‘reinvent the wheel’.⁴²

Dr Geoff Wescott comments that the White Paper ‘must be a frank and open examination of Victoria’s biodiversity conservation performance if we are to move forward’.

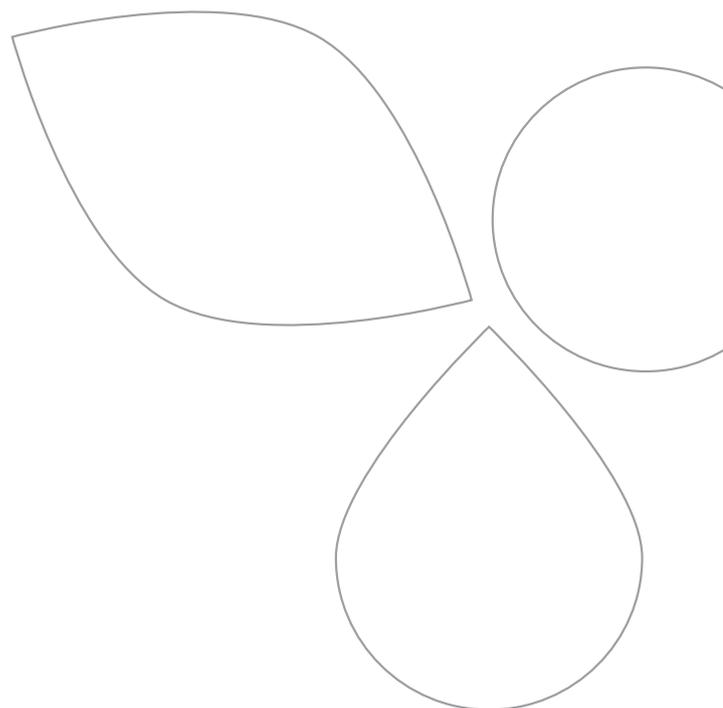
Practical and actual ‘on-the-ground’ action is called for.⁴³ Many submissions plead to the government for urgent, real and large-scale action.⁴⁴ Anne Lee’s submission makes a succinct request; ‘please be daring and bold’.

41. Chandler; Mackay; Ballarat Environment Network; Bendigo and District Environment Council Inc.

42. Benalla District Environment Group; Clarke.

43. Environment East Gippsland Inc.

44. Friends of Venus Bay; Murray Darling Association; Buloke Shire Council.



Discussion of other noteworthy issues

A range of 'other' themes additional to the most common or frequent themes stand out as worthy of discussion.

Market-based instruments and incentive schemes

Many submissions recognise the potential of market-based approaches. Many submissions, however, express caution about the limitations of such an approach.

Market-based instruments aim to operate as incentives and rewards and are described as a 'carrot' rather than a 'stick' approach,⁴⁵ as opposed to more traditional regulatory approaches. The submission from VicSuper refers to the need to 'develop appropriate market-based mechanisms to mobilise a balanced and sustained flow of capital into rural areas, including both environmental and agricultural activities'.

However, some submitters comment that market-based instruments should only be used as a means to an end and complementary to a strong legislative framework, not a substitute for it.⁴⁶

Submissions that discuss incentive or market-based approaches refer to a range of existing programs, including Trust for Nature's Revolving Fund, Bush Tender and bio-banks.⁴⁷ Gippsland Private Forestry Inc strongly recommends evaluation of the issue of incentives and cost sharing, whether described as ecosystem services or stewardship payments.

45. Municipal Association of Victoria; Centre for Environmental Stress and Adaptation Research.

46. For example: Bekessy et al.

47. For example: Environmental Farmers Network; Wimmera CMA; Butters.

Case study — based on report by Municipal Association of Victoria (MAV)

A recent MAV report explored three types of financial incentive schemes:

1. Rate rebates tied to councils' rating systems.
2. Conservation covenants administered by Trust for Nature.
3. Independent schemes offered through grants and subsidies.

A combination of types of schemes may be used.

A range of non-financial incentives may also be offered by councils (e.g. award schemes, subsidised contractor labour, equipment loans).

MAV states that:

- 30 Victorian councils reported that they currently employ a financial incentive mechanism to further environmental enhancement or conservation objectives within their municipality
- rebates tied to the rating system are offered by eleven councils
- twelve councils offer grants or subsidies
- the significance of Trust for Nature is evident as covenant status is used as a qualification criterion for financial incentives offered in eighteen of the respondent councils.

While the schemes vary in focus, all involve a combination of recognising and stimulating community and private landholder involvement in natural resource management activities, with the delivery of actual environmental outcomes.

MAV states that the case studies represent significant variation in the type, scale and cost of conservation incentive schemes. They note that this reflects different political and community contexts, different capacity to fund schemes and different council objectives.

Several submissions address the role a market-based system could play in the farming industry. The Victorian Farmers Federation favours incentive schemes to reward and encourage farmers to enhance and protect native vegetation, while at the same time suggesting that state-based native vegetation programs should not impede landholders from accessing the emissions trading market. Ausfarm’s submission contends that farmers should be paid to change, and suggests a new income source for farmers that encourages change and offers long-term benefits. Its submission discusses a new farming system — Farming Without Harming — and a point system where points are allocated to farmers.

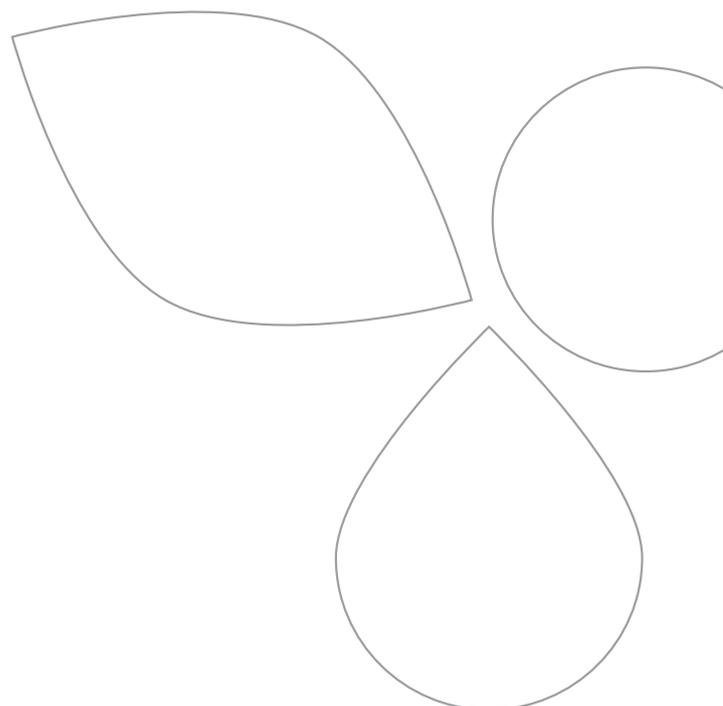
Several submissions also highlight the potential of emissions trading as a potential source of demand for offsets in the form of tree planting and biodiversity restoration.

Manningham City Council advises that a market-based system should be regulated to provide safeguards, establish minimum standards and moderate adverse effects of markets.

In conclusion, the underlying message seems to be that market-based instruments have potentially a very valuable role to play in biodiversity conservation and this should be explored and experimented with, while not neglecting other key avenues for change.

Case study — ecosystem services

The submission by S. Butters focuses on ecosystem services, which are referred to in a number of other submissions. An ecosystem services marketplace has a role to play in broadening investment in sustaining ecosystem services, and land managers can become ecosystem service providers. Butters provides a starting list for some suggested ecosystem services, including flood mitigation, biodiversity enhancement and management, biolinks Victoria, land resilience and buffering, bushfire recovery and prevention, and safe salt storage.



“In the marine and coastal environment often the biodiversity crisis goes unnoticed and species may become extinct before they are even identified.”

- Victorian National Parks Association

Marine, estuarine and coastal issues

Only a small number of submissions addressed marine and coastal issues. Possible reasons include that the objectives for the White Paper do not specifically address the coast or sea, and that the White Paper’s heading makes specific reference only to ‘land’.

Those submissions that do address this issue acknowledge the pivotal role marine and coastal environments play in terms of biodiversity. Environment Victoria points out that aquatic biodiversity is under as much threat as terrestrial biodiversity. Particular pressures facing coastal ecosystems include channel deepening, over-fishing and sewerage discharge. Some groups predict coastal areas will be increasingly threatened due to the impacts of climate change such as sea level rise and increased storms.⁴⁸

Submissions addressing marine and coastal issues emphasised the importance of a holistic approach to natural resource management that incorporates coastal and marine diversity.⁴⁹ The Deakin University submission argues that it is critical the link is recognised between healthy lands and biodiversity in catchments and rivers, estuaries and coastal environments. The City of Kingston recommends that the impact of inland ecosystems on coastal and marine environments should also be examined. Several environmental non-government organisations, including the Victoria Naturally alliance, recommend coastal-marine-land links. Parks Victoria recommends that the next iteration of

48. For example: ANG AIR Inc; Nepean Conservation Group; Geelong Environment Council Inc.

49. Bendel and Walker.

catchment management plans needs to consider the marine environment as part of the catchment and develop appropriate strategies.

Coastal vegetation is frequently flagged as an issue, especially by those groups based in coastal areas, yet it is generally not given any detailed discussion or specific recommendations.⁵⁰

The Victorian National Parks Association provides a comprehensive and noteworthy submission on marine and coastal issues (which is additional and separate to their main submission). The submission provides a detailed discussion of the impacts of climate change on marine and coastal areas, and the main issues affecting the long-term sustainability of marine, estuarine and coastal areas. It refers to policy limitations such as inadequate governance structures, inadequate capacity in agencies and the lack of integration of catchment, coastal and marine management. The submission offers 33 recommendations, including research and investigation into particular issues, and catchment-to-coast management plans.

Urban expansion and demographic change

Urban expansion, increasing population growth, intensification of land use and changing demographics are also given frequent reference in the submissions.

Urbanisation and peri-urban expansion, especially into rural areas and green wedges, are identified as important contributors to biodiversity loss and adding

50. The Wilderness Society and Birds Australia.

“Fire is predominantly used as an asset protection tool and fuel reduction tool, rather than for biodiversity management.”
- Greening Australia (Vic)

to the incremental loss of native vegetation. The increasing population places further stress on the natural environment and resources, especially water, energy and productive land.⁵¹ Problems relating to inadequate infrastructure such as transport services are also mentioned.

Several submissions comment on the potential contradiction in Victorian Government policies, which aim to increase Victoria’s population substantially yet at the same time aim to conserve biodiversity.⁵²

It is interesting to note that several submissions comment on the change in demographics in semi-urban or rural areas because of the ‘sea change’ and ‘tree change’ phenomena as well as ‘lifestyle’ landholders.⁵³ Several submissions point out that landholders often lack knowledge about biodiversity values and its conservation at the time of purchase. This represents an opportunity to provide education and ongoing support.

Several submissions advocate the need to curtail the urban sprawl taking place in Victoria. Recommendations include the establishment and strict maintenance of urban boundaries,⁵⁴ and the control of population growth.⁵⁵ The Port Phillip and Westernport CMA submission deals in some detail with initiatives and measures to protect Melbourne’s Green Wedge areas.

51. For example individuals such as Berwick; Davis; MacMillan; Sansom and Bilcblau; Simondson and Looby; Zollinger. Also organisations such as National Trust of Victoria and Environment Victoria.

52. For example: Laverack; Threatened Ecosystems Network.

53. For example: Corangamite CMA; Shire of Yarra Ranges; HVP Plantations; Environmental Farmers Network; Ellen Hogan and Associates.

54. Green Wedges Coalition.

55. For example: Kaufmann.

Case study — City of Casey

The City of Casey submission notes that planned population growth in the Casey Cardinia Growth Corridor region is the single biggest pressure on the ecosystems. The submission refers to the demand on domestic and commercial water consumption. Particular pressures for Casey include edge effects at the interface with foothills, coastal villages and RAMSAR areas. The submission stresses the need for habitat corridors and the creation of links to other areas of significance.

Fire management

There is some disagreement as to the role and effect that controlled or prescribed burns have on native vegetation. For hundreds of years Australians have been using fire regimes to help clear land, as well as regenerate it. However, arguments are now being put forward that controlled burns are causing more harm than good to native flora and fauna.

Several Landcare and Friends groups argue that controlled burns devastate native animal populations and decrease the rate of native revegetation rejuvenation.⁵⁶

Some Landcare groups also question current fire management practices. Some view controlled fire burns as a political exercise, based on asset protection, rather than being based on scientific principles or understanding.⁵⁷ Greening

56. Friends of Wright Forest.

57. For example: Wombat Forestcare; Westernport and Peninsula Protection Council.

“Frank and fearless assessment of the ecological condition of parks is the first step in effective management.”

-Victorian National Parks Association

Australia (Vic) also contends that fire is not used to increase biodiversity growth but rather to increase productivity of businesses, almost always at a cost to the environment.

Wildlife groups point to the devastating effects burn-offs and quota-based burns are having on wildlife. Birds Australia, for example, contends that altered and inappropriate fire regimes are a major threat for a number of birds. At this point in time, there are some fifty bird taxa currently threatened by inadequate, ill-informed fire management across Australia. Similarly, Friends of the Koalas state that areas of the Victorian landscape are being burned too frequently, with disastrous effects on wildlife. By way of example, they note that bushfires and burn-offs in the Moondarra region of Gippsland have badly affected a previously healthy koala colony.

An opposing view is that controlled burns are essential for protecting rural communities and supporting biodiversity. For example, the Victorian Farmers Federation says damage caused to Victoria’s biodiversity from recent wildfires was immense, whereas ‘by contrast, prescribed burning is acknowledged as being beneficial to biodiversity and the overall health of national parks’. They see the benefits of regular controlled burns as two-fold: enabling native vegetation to revegetate and remain healthy, and helping to avoid large-scale bushfires.

A further issue raised is the increased risk of fire due to climate change, which focuses around how to accommodate for the frequency and ferocity of potential fires in Victoria’s summer months.⁵⁸

58. Such as Corangamite Shire; Hume City Council; Knox City Council; Municipal Association of Victoria; HVP Plantations; Timber Towns Victoria; Melbourne Water; Zollinger.

Some submissions point out that it is predicted that Australia’s fires will become larger, faster, and harder to manage. Climate change will also cause increased drought, providing perfect conditions for bushfires to begin and rapidly intensify.

Despite the conflicting submissions about prescribed burning there is a degree of consensus across submissions that further scientific research should be undertaken.⁵⁹ The establishment of fire policies, fire management plans and the provision of increased funding are also recommended.

Public land management

While many submissions acknowledge the significant role protected area systems play, improvements and recommendations regarding public land management are not a prominent part of the submissions considered as a whole. There is a much stronger focus on issues surrounding private land management and stewardship.

Public land management appears to be most frequently addressed in relation to the need for increased funding and increased connectivity on a landscape scale. For example, the Victoria Naturally alliance submission recommends that the Green Paper should examine what extensions are required to achieve a representative conservation reserve system, as well as the resources needed to successfully manage the ecological systems in protected areas.

59. For example: Montrose Environmental Group; Western Port Bird Observers Club; Hopkins.

“Developing the links between Victorian local government and regional catchment management authorities (CMAs) has always been an important and vital challenge.”

- Municipal Association of Victoria

Parks Victoria’s submission notes that it manages more than 3.95 million hectares of parks and reserves, amounting to 17% of Victoria. Parks Victoria suggests that existing programs such as Bushtender, Bushbroker, and Trust for Nature covenants should be expanded as examples of ‘government investment on land and biodiversity management’. The submission suggests that these programs should be ‘placed in a context of an overall Public Private Partnership Program that complements a comprehensive, adequate and representative protected area system’.

The Victorian National Parks Association submission highlights several positive aspects of current practices, and then suggests five areas for improvement to maintain the ecological integrity of Victoria’s national parks and reserves. These include ‘completing’ the reserve system as far as possible, increasing resources and funding, establishing connectivity across the landscape, ensuring research and monitoring takes place, and enacting education programs.

Catchment management authorities and local government relationship

While there is no single view that emerges with regard to institutional arrangements, councils and CMAs are viewed by a considerable number of submissions as the organisations with the most capacity to implement ‘on-the-ground’ recommendations from the White Paper. However, some submissions point to a clear need for greater co-ordination and integration between regional

catchment planning and local land use planning.⁶⁰

The Victorian CMA Biodiversity Network comments that there is a clear mismatch between the roles and responsibilities of local government and CMAs with regard to land use planning, which needs to be addressed.

The Municipal Association of Victoria, and the Association of Bayside Municipalities, has called for closer links between CMAs and municipalities so that there is greater understanding of the operational and strategic planning capabilities and limits.

Ways of addressing the lack of co-ordination between these bodies are comprehensively addressed by the Municipal Association of Victoria submission. This submission argues that the relationship between local government and CMAs is ‘critically important’ and highlights the need to build upon existing programs such as the Integrating Local Land Use Planning and Regional Catchment Planning Project to improve links between councils and CMAs.

Traditional owners

Only approximately 8 per cent of the total submissions received recognised the need for indigenous issues to be integrated into any proposed policy on land, biodiversity and climate change. This lack of engagement is surprising given the long acknowledged role of Aboriginal groups as ‘custodians of the land’ and ongoing efforts to engage indigenous communities in environmental projects.

60. Municipal Association of Victoria.

Proposals for indigenous engagement in the White Paper process are concentrated among environmental non-government organisations, individual submissions and councils.⁶¹

Overall, acknowledgement of the capacity for indigenous groups to participate in biodiversity conservation, land and heritage management is 'symbolic rather than substantive'.⁶² While there is a stated need for indigenous input or consultation on land management issues⁶³, little attention is given to the more complex process-orientated issues of how to engage indigenous communities substantially in ongoing conservation efforts.

The submission from VicHealth focuses on the potential health gains and opportunities of protecting land health and biodiversity, and recommends the inclusion of indigenous people in land and biodiversity

61. This consists of eight environmental non-government organisations, nine individual submissions, five councils and one industry group.

62. EDO.

63. For example, Western Coastal Board.

stewardship roles. The submission notes that indigenous Victorians' traditional models of health are truly 'ecological' models of health, whereas human health is seen as interdependent with that of other species.

Notably, no submissions were made by traditional owners or representative organisations. This suggests a failure to engage with traditional owners that will need to be remedied as the White Paper process proceeds.

Some possible reasons for indigenous non-participation in the White Paper process are explored in the submission by Greening Australia (Vic).

Recommendations are made for future environmental policy and further stages of the White Paper process to explore the natural nexus between paid Landcare-style programs and rehabilitation projects and the need to create employment in Aboriginal communities.

WildCountry Science Council – 'whole of landscape' approach

An attachment to the Victoria Naturally alliance submission is the WildCountry Science Council's identification of the seven ecological processes and connections that are critical to the implementation of 'whole of landscape' conservation:

- species that have a major impact on the habitat in which they live
- animals that migrate over long distances or spend different parts of their life in different places. A pelican in St Kilda will head north to Lake Eyre after a cyclone dumps water in the lake's northern tributaries
- natural disturbance regimes, such as fire, maintain diversity in many habitats
- natural and human induced climate change affects species, their distribution, and their habitats. Refugia have been critical in colder and warmer periods in the past
- hydroecology — the links between water, vegetation and wildlife, including water flows below and above ground water
- coastal zone fluxes are the transport of water and nutrients from inland to coastal ecosystems
- long-term evolutionary processes.

Ecological processes

The Victoria Naturally alliance considers that to 'maintain natural assets, the ecological processes that sustain them must be maintained'. The alliance's submission references Bennett et al, who maintain key ecological processes that sustain biodiversity fall into seven themes:

- climate
- primary productivity
- hydrological processes
- biophysical habitats
- interactions between organisms
- movements of organisms
- natural disturbance regimes.

The alliance also recommends that a number of case studies in a number of bioregions be undertaken to 'investigate the status, trend and risks for ecological processes that sustain biodiversity in Victoria', including marine and coastal areas.

The Australian Wildlife Protection Council forcefully submitted that all native ecosystems are connected and assist each other to survive. It is crucial all ecosystems remain healthy — because if one is defective or eliminated, all in turn will suffer.

The noteworthy submission by Bennett et al⁶⁴ focuses on ecological processes and the need for a new approach that emphasises the 'essential role of ecological processes in sustaining biodiversity, and of developing policy and management approaches

64. A group of 19 ecologists from five universities, three government departments, a CSIRO division and several conservation agencies. This group requested the opportunity to present further information to the White Paper Project Team and to the Scientific Reference Committee.

that are directed toward sustaining such processes'. In summary, the submission recommends inventory and monitoring, maintaining processes in 'intact systems', restoration in degraded systems, a vision for the future, consideration of drivers of change and appreciating ecosystem services.

The submissions addressing ecological processes consider that ecological processes should be maintained and restored, and future threats anticipated.

Duty of care

The creation of a statutory duty of care for public and private land managers is recommended in a few submissions, and features strongly in submissions from CMAs.⁶⁵

The recommendation is underpinned by the notion of a moral and ethical obligation to care for our land. Ortega's submission summed it up as follows: 'We have a moral and ethical duty, as custodians of our land, to protect our biodiversity and raise its moral and legal status in Victoria, and Australia.'

It is suggested that while the *Catchment and Land Protection Act 1994* identifies responsibilities of landholders, this is insufficient. The Charles Sturt University School of Environmental Science submission considers that the existing environmental duty of care provisions do not adequately serve the needs of biodiversity. Therefore, a specific focus on developing a practical duty of care framework is proposed.

65. For example: Wimmera CMA; CMA Chairs' Forum; Corangamite CMA; West Gippsland CMA (and Victorian CMA Biodiversity Network).

“Without a clear vision, we don’t know what to do and how to do it.”

- West Gippsland CMA

The CMA Chairs’ Forum considers that ‘the White Paper presents an opportunity to explore the relationships between a landholder’s duty of care and the protection of community assets as identified and defined in a regional catchments strategy’.

Some CMAs argue that duty of care needs to be clearly defined.⁶⁶ Corangamite CMA recommends that the public and private land manager duty of care is better defined in the White Paper process, particularly regarding how the duty might change in response to a changing climate. Some suggest the duty should provide clear minimum expectations for land management, as well as setting out measures in which to meet those expectations.

As Corangamite CMA comments, it is essential that once the duty is defined, it is effectively underpinned through appropriate legislation. Similarly, the Charles Sturt University – School of Environmental Science submission suggests that legislation be introduced to create a duty of care specific to biodiversity.

Developing a vision for biodiversity in Victoria

Several submissions consider that the White Paper should set out a clear and long-term vision for the landscape, providing a specific goal to work towards.

Regarding the need for a vision, Wimmera CMA comments that ‘the major component missing at a state-wide level with regard to the values provided by land and biodiversity in Victoria is a clearly

articulated vision for land health and biodiversity that can be shown spatially with supporting state-level resource condition targets’. It considers that the state-wide vision should provide a clear picture to both government and the community of how the future is destined to look. The submission by S. Butters observes that a ‘vision is a story that can be communicated to many people from different backgrounds’, and the White Paper consultation process could capture a range of such visions for Victoria.

Various suggestions are made as to the form and content of a vision for Victoria’s biodiversity. CMA Chairs’ Forum points to the need for a compelling vision that offers real targets and opportunities. Walsh suggests the development of a vision for the future that will facilitate change. The vision should be based on thorough scientific research. Mallee CMA recommends a vision that encourages strategic natural resource management investment and which engages rural communities through large-scale projects. The submission from Bennett et al argues that a vision must be framed to incorporate the notion of ecological processes. The Norman Wettenhall Foundation suggests a vision needs to be built using a ‘bottom-up’ approach, so that communities play a meaningful role in its development and implementation. West Gippsland CMA suggests the vision needs to be built on a clear understanding of the current state of Victoria’s natural resources and the community’s aspirations for the future conditions of natural resources.

Some visions put forward in the submissions are:

- The Wilderness Society articulates a vision ‘to be the generation to have restored a connected network of functional ecosystems

66. For example West Gippsland CMA (and the Victorian CMA Biodiversity Network).

“The major component missing at a state-wide level with regard to the values provided by land and biodiversity in Victoria is a clearly articulated vision for land health and biodiversity that can be shown spatially with supporting state-level resource condition targets.”

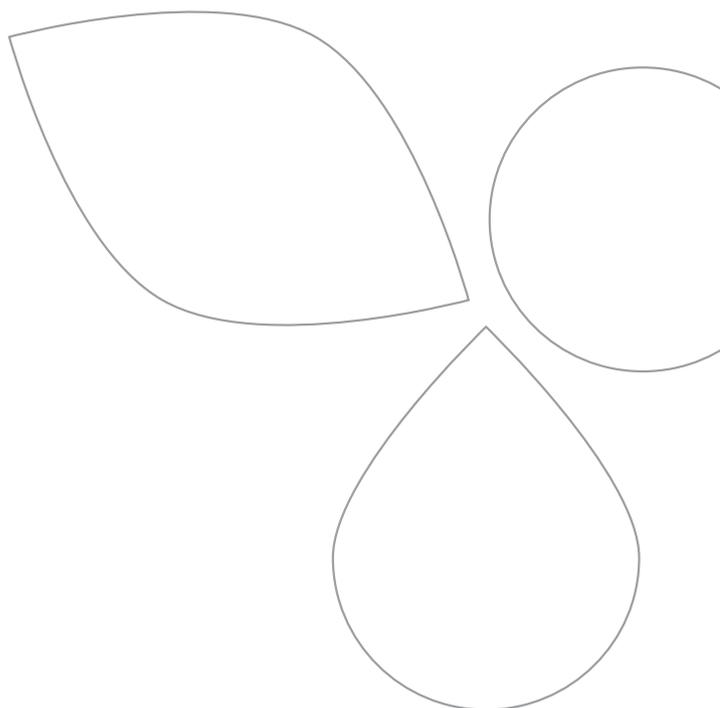
- Wimmera CMA

across Victoria, where species, populations and communities are viable in the long term and are resilient to climate change’. The submission sets out more detailed and technical goals and targets.

- The Victoria Naturally alliance proposes a vision containing five key components:
 - o Catchments, coasts and marine waters flourish and are valued, protected, effectively managed and restored
 - o Links between biodiversity and the wellbeing of people are reinforced
 - o Victorians value their natural environment heritage
 - o The government delivers natural resource management underpinned by targets used to measure success
 - o Victorians reduce resource use per person to an environmentally sustainable level.
- The Victorian Catchment Management Council proposes a vision based on the goal of healthy catchments. In summary the vision consists of:
 - o Landscapes as a mosaic of land uses firmly aligned with land capability and with a significant cover of native vegetation
 - o Ecosystem services recognised as essential products of land
 - o New agriculture activities contained in closed systems
 - o Amenity and lifestyle areas utilised as part of the mosaic of land uses
 - o Wild landscapes preserved, protected and developed.
- The Mallee CMA foreshadows a long-term vision for the Mallee in which people live harmoniously with the environment to a greater degree than presently,

and they expect significant progress by 2020.

- The Corangamite CMA recommends a suitable vision for future land and biodiversity health at a state-wide level. The CMA notes that a vision and targets at a regional scale should be established in response to a state vision.



Key policy questions and process

Focus on biodiversity

The objectives of the consultation paper refer to natural resource management, land health and biodiversity in general. The title makes reference to both land management and biodiversity. However, it is interesting to note that the majority of submissions focus on biodiversity, rather than on land management issues.

It is clear that the broad concern of submitters lies in biodiversity specifically. However, the issue of biodiversity is not able to be addressed in full without an examination of the issues surrounding land management.

It is uncertain why there has been such a strong focus on biodiversity in particular. It may be due to some submitters not appreciating the link between land management and biodiversity, or due to a failure to communicate properly the White Paper process to a wider land management audience. It may also simply be due to the fact that biodiversity is what the submitters feel strongly about.

Climate change

The consultation paper focuses on climate change, as evidenced by its explicit reference in the paper's title.

The impacts of climate change on biodiversity are consistently seen as of concern in the submissions. The submissions react positively that climate change is now acknowledged and included on the agenda. However, several submissions note the continuing uncertainty and a lack of scientific knowledge over what the precise impacts will be. As one Landcare group said of the impacts of climate change, 'We don't know! Nobody does'.⁶⁷

⁶⁷. Newham and District Landcare Group.

Despite this lack of certainty and knowledge, submissions recognised that climate change is a great threat to biodiversity. To prevent potentially catastrophic loss, many note that it is crucial that a resilient landscape is built and policies to buffer ecosystems are adopted. The Australian Labor Party Kilsyth branch notes that 'optimising current water catchment facilities and retaining mature forests are critical to helping us combat the effects of climate change'.

It is widely recognised that climate change will exacerbate or magnify Victoria's existing biodiversity crisis. Some consistent issues raised in relation to climate change include:

- fire regimes and management will be affected
- the resilience of landscapes, habitats and ecosystems needs to be increased
- migration may be necessary as flora and fauna seek more appropriate habitats
- increased variability in weather conditions and environmental patterns will occur
- pest and weed problems are likely to worsen
- there is a growing conflict between water consumption for the population and water conservation for the environment
- research and monitoring is required.

The Australian Conservation Foundation's submission is noteworthy for its strong focus on climate change impacts.

Key policy questions and objectives

The consultation paper sets out five key policy questions that are effectively the terms of reference for the process. The submissions vary in their approach to addressing the key policy questions raised in the consultation paper. Although some follow the five policy questions strictly, most choose to deal with issues in their own manner.

Several submissions comment on the consultation paper's use of language and terms in addressing biodiversity. Some comment on the ambiguous wording used. For example, the Bass Coast Shire comments on the meaning of the words 'values' and 'seascapes'. The continuous use of the word 'landscapes' is criticised by some – for example, because it is biased toward land and neglects coasts and marines⁶⁸, and because it emphasises the scenery and visual impacts of the land, as opposed to focusing on ecosystem preservation⁶⁹. West Gippsland CMA suggests care is taken in the language used, so as not to alienate people with jargon they cannot relate to.

The submission by the Australian Labor Party Geelong West branch comments that the policy questions raised in the consultation paper are too broad to allow for a meaningful response.

Brian Coffey criticises the fact that the consultation paper (and other strategies and policy documents) use the language 'our environment' and 'our water'. He considers that this 'promotes an individualistic, materialistic and possessive approach to conceiving the environment'. He notes the need to open up discussion about how we relate to and live in the environment.

Some criticism is also made that the consultation paper is anthropocentric in nature, and it is urged that a broader approach is taken to include wildlife, plants and organisms.⁷⁰

A few submissions consider that the nature of biodiversity necessitates a longer-term approach. For example, the Threatened Ecosystems Network criticises the fact that the White Paper is confined

to 20-30 years. Instead, it should be looking at a long-term vision of 4 billion years, as the life time of the planet. Western Coastal Board consider a longer timeframe is particularly relevant for climate change impacts.

The objectives for the White Paper refer only to land health, and do not address the coast or sea. Victorian National Parks Association considers this relegates coastal and marine issues. Dr Geoff Wescott describes this as the 'most blatant omission' from the objectives of the White Paper.

He is also critical of the consultation paper's objectives as 'far too narrow and economically driven'. He criticises several statements in the paper, and concludes that 'this continued occasional reference to clearly biased and unsubstantiated statements destroys the overall credibility of the process'.

Trade-offs

The consultation paper refers on page 11 to trade-offs between water supplies and a healthy environment and on page 12 to trade-offs between competing environmental, economic and social outcomes.

Several of the submissions (especially the community-based conservation groups) comment on, and criticise, this notion of trade-offs. They refer to the notion of trade-offs as misleading, inadequate, a delusion and misconstrued as it demonstrates a lack of understanding of the complexities involved in biodiversity.⁷¹

68. Central Coast Board.

69. South Gippsland Conservation Society.

70. Animals Australia; Friends of Leadbeater's Possum; Shire of Yarra Ranges; Manningham City Council.

71. For example; Friends of Box Ironbark Forests; Friends of Merri Creek; Friends of Nillumbik; Montrose Environmental Group.

As the Shire of Yarra Ranges comments, the reference to trade-offs is inappropriate because it tends to lead discussions towards particular conclusions, thereby reducing the potential suite of options. South Gippsland Conservation Society comments that a win-win outcome should be pursued at all levels.

Other submissions, on the other hand, accept the notion of trade-offs and discuss how trade-offs can be achieved. VR Fish⁷² suggests that all-inclusive stakeholder community consultation is initiated to define what trade-offs are needed or desirable. Any trade-offs must be scientifically verified.

The Environmental Farmers Network suggests that trade-offs between competing environmental, economic and social outcomes should be dealt with by placing higher values on environmental outcomes by creating markets for preservation and environmental services.

Values of healthy land and biodiversity

Many submissions address the policy question of what environmental, social and economic values are provided by healthy land and biodiversity. This question produced a discussion, often highly emotive, of the different ways in which the community values biodiversity and landscapes.

For example, the Bushwalking Victoria submission notes that viewing natural landscapes and seascapes 'is the visual equivalent of a symphony that resonates with the rhythms of our very being'.

It is widely stated that a healthy environment is essential for human wellbeing. The submissions,

72. Victorian Recreational Fishing Peak Body.

from individuals in particular, touch on the spiritual values that landscapes and biodiversity provide in addition to economic and environmental values. As one individual comments, 'it is from nature I gain my strength to deal with the hardships of life'.⁷³

VicHealth highlights that land health and biodiversity are crucial to human health, and sets out arguments to support this.

Similarly, it is widely stated that 'a healthy economy is not sustainable without a healthy environment'.⁷⁴

Other issues not covered in the consultation paper

A considerable number of submissions criticise the exclusion of certain policy areas. In particular, submissions from wildlife groups consider that the issue of wildlife exploitation should not be excluded from the White Paper, and its exclusion demonstrates a lack of understanding and comprehension about biodiversity.⁷⁵

The exclusion of issues such as commercial forestry, mineral exploration and agricultural industry reform from the White Paper process is also questioned by some.⁷⁶ The South Gippsland Conservation Society submission comments that 'while there may be sound reasoning behind subjecting these areas to independent policy processes, the development of biodiversity policy will be weakened if they are excluded from consideration'.

73. Halpin.

74. Brooks.

75. For example: Wildlife Victoria; Animals Australia; Quaker Concern for Animals; Women for Animals and Forests Spiritual Alliance.

76. Specifically noted in South Gippsland Conservation Society and also, for example, by WWF Australia, Friends of Nillumbik and Zollinger.

Concluding remarks

Consensus over biodiversity crisis and climate change

Victoria is facing a serious crisis in biodiversity. The submissions highlight some alarming statistics and case studies regarding the state of Victoria's biodiversity. It is recognised that this crisis will be exacerbated and worsened by the impacts of climate change.

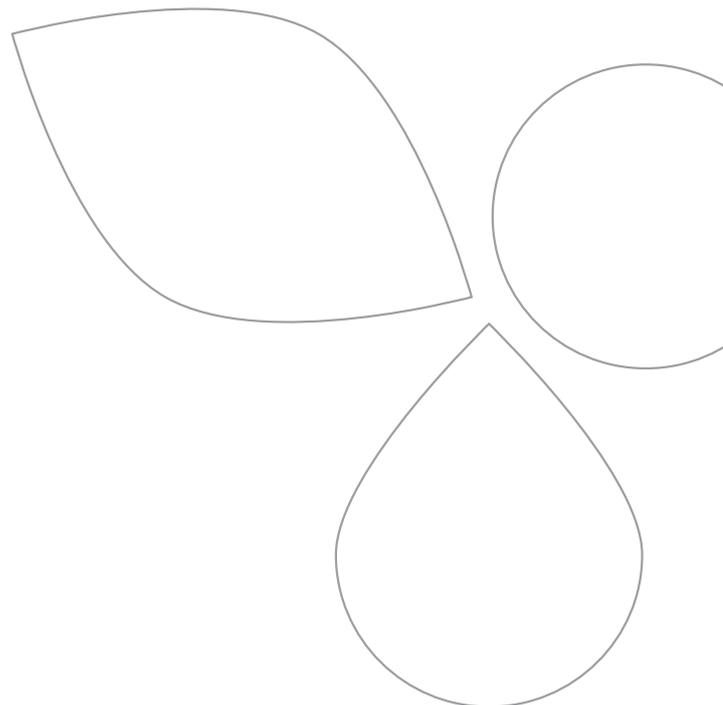
It is pleasing to see that there is broad consensus about the urgent need for effective and dynamic action to protect and enhance Victoria's landscapes and seascapes, especially given the threats of climate change.

The substantial number of submissions, which highlight key issues and offer a multitude of recommendations, will hopefully have a real and positive influence on the final outcome of the White Paper.

Where to next?

The next formal step in the process is the issue of a Green Paper by DSE in March 2008. DSE anticipates issuing a White Paper in 2009.

The issue of the Green Paper will lead to a further opportunity for submissions from the public. It is vital that community input continues to ensure the public consultation and submission process is effective. The EDO encourages everyone to review the Green Paper and send DSE a submission.



APPENDIX – List of submissions by type

Individuals

Anon	DeMoulied	Johnson & Smith	Name Withheld	Simondson & Looby
Arbutnot	Dench	Jones and Ellis	Neville	Sloan
Baker	Dobson	Kaufmann	Newman	Smithyman
Bartels	Dunn	Keogh	Nicholson	Snape
Baxter	Durham	Kene	Noble	Snape
Bemmel-Misrachi	Ervin	Kinghorn	Nye	South D
Bendel	Feller	Kurz	O'Connell	South E
Berwick	Forster	Lacey	O'Halloran	Sprawson
Booth	Fox	Laverack	Ortega	Summers
Bos	Francis	Lee	Osborne	Sutton
Broadbent	Frazer	Lindsay	Panter	Sympson
Brooks	Gillespie	Lock	Pearey	Tate
Brunner	Goulding	Lorimer	Pelczynska	Thomson
Butters	Grainger	Lumb	Perkins	Van Dok
Carnegie	Grant L	Mackay	Perkins	van Huslen & Lord
Carsterns	Grant T	MacMillan	Perrin	Van Keulen
Chandler	Grantham	Marlow	Petheram	Wade
Charleson	Gross	Marshall	Powell	Walker G
Chatfield	Hampel	Martin A	Rainsford	Walker G L
Clarke	Hare R M	Martin P	Ralph	Waller
Coffey	Hare H	Mathews	Rayner	Walsh
Connor	Harris G	McCaffrey	Riedl	Walters
Conway	Harris S	Mclver	Rowsell	Whittle
Corben	Hewston	McIver C	Sanders	Williams
Coupar	Higgins D I	McMahon	Sansom & Blicblau	Williamson K
Cross	Higgins G L	Morgan	Schmidt	Williamson A
Cummings	Hilling	Medley	Schmidt W	Woods
Dalziel	Holmes	Miller	Setchell	Youl
Davies	Hooley	Morison	Shell	Zollinger
Davis	Howes	Myroniuk	Showell	

Community conservation groups

Andersons Creek Catchment Area Landcare Group	Friends of Loughie's Bushland	Marie Claire's Eco-works
ANGAIR Inc	Friends of Merri Creek	MEAFEC and Friends of Moorooduc Quarry
Ballarat Environment Network	Friends of Mt Cannibal	Merri Creek Management Committee
Bass Coast Landcare Network	Friends of Nillumbik	Montrose Environmental Group
Bayside Friends of Native Wildlife	Friends of Picnic Hill	Mordialloc Beaumaris Conservation League Inc
Benalla District Environment Group	Friends of Plenty River	Mornington Peninsula and Westernport Biosphere Reserve Foundation Ltd
Bendigo and District Environment Council Inc	Friends of Salt Creek and Associated Parklands Inc	Murray Darling Association Inc
Bendigo Native Plant Group	Friends of Seaford Foreshore Reserve	Nepean Conservation Group Inc
Blackburn Lake Environmental Education Park Committee	Friends of the Grange	Newham and District Landcare Group
Blue Wedges	Friends of the Koalas	North Warrandyte Landcare Group Inc
Cardinia Environment Coalition Inc	Friends of the Yarra	Portland Field Naturalists Club Inc
Carey Middle School Environment Committee	Friends of Toolern Creek	South Gippsland Conservation Society
Castlemaine Landcare Group	Friends of Venus Bay Peninsula	South Gippsland Landcare Network
Corangamite Regional Landcare Network	Friends of Wallan Creek	St Arnaud Field Naturalists Club Inc
Daylesford Regional Landcare Group	Friends of Warneet	Sunbury Conservation Society
Defenders of the South East Green Wedge Inc	Friends of Warrandyte State Park	Upper Goulburn Landcare Network
Envirofriends of Hobsons Bay	Friends of Warringine Park – Bittern	Wannon Conservation Society
Environment East Gippsland Inc	Friends of Werribee Gorge and Long Forest Mallee Inc	Warringal Conservation Society
Friends of Bass Valley Bush Inc Landcare Group	Friends of Wright Forest	Warrnambool Field Naturalists Club
Friends of the Bay of the Islands Coastal Park	Geelong Environment Council Inc	Werribee Waterways Management Committee
Friends of the Bay Road Heathland Sanctuary	Geelong Field Naturalists Club Inc	Western Port Bird Observers Club
Friends of Box Ironbark Forests	GLADE (Group for Lilydale and District Environment)	Western Port Greenhouse Alliance
Friends of Braeside Park Inc	Golden Point Landcare	Westernport and Peninsula Protection Council Inc
Friends of Cook St Bushland Reserve	Great Ocean Road Coast Committee Inc	Woody Yaloak Productive Catchment Management
Friends of Eastern Otways (Great Otway National Park) Inc	Green Wedges Coalition	Wombat Forest Care - Halpin
Friends of Gembrook Park	Hamilton Field Naturalists Club	Wombat Forest Care - Hegedis
Friends of Heathfield Creek Reserve	Healesville Environment Watch Inc	Wombat Forest Care - Ralph
Friends of Hoddles Creek	Hughes Creek Group	Woori Yallock Creek Catchment Biodiversity Planning Group
Friends of Kalimna Park Inc	Jacksons Creek Econetwork	Yarram Yarram Landcare Network
Friends of Leadbeater's Possum Inc	Johns Hill Landcare Group Inc	
	Lake Wellington Landcare Network	
	Landcare Network Readiness Project	
	Macedon Ranges Residents Association Inc	

Councils

Ararat Rural City	Corangamite Shire	Moyne Shire
Association of Bayside Municipalities	Gannawarra Shire	Municipal Association of Victoria
Bass Coast Shire Council	Golden Plains Shire	Murrindindi Shire Council
Bayside City Council	Hume City Council	Nillumbik Shire
Buloke Shire Council	City of Kingston	Shire of Yarra Ranges
City of Casey	Knox City Council	Southern Grampians Shire
City of Greater Bendigo	Macedon Ranges Shire Council	Surf Coast Shire Flora and Fauna Action Unit
City of Whitehorse	Manningham City Council	Wellington Shire Council
City of Whittlesea	Maroondah City Council	
	Mornington Peninsula Shire	

Catchment management authorities

CMA Chairs' Forum	North Central CMA	West Gippsland CMA (and the Victorian CMA Biodiversity Network)
Corangamite CMA	North East CMA	Wimmera CMA
Glenelg Hopkins CMA	Port Phillip and Westernport CMA	
Goulburn Broken CMA	Victorian Catchment Management Council	
Mallee CMA		

Industry groups

Ausfarm Management	Kilter Pty Ltd	Victorian Employers Chamber of Commerce and Industry
Environmental Farmers Network	Monson	Victorian Farmers Federation
Gasification Australia Pty Ltd	Phillip Island Nature Parks Australia	VR Fish
Gippsland Private Forestry Inc	Timber Towns Victoria	
HVP Plantations	VicSuper	

Government bodies

Central Coastal Board	Heritage Council of Victoria	Victorian Coastal Council
Corangamite RLG Environment Officers Network	Melbourne Water	Victorian Water Trust Advisory Council
Environment Protection Authority (EPA) Victoria	National Parks Advisory Council	Wannon Water
Gippsland Water	Parks Victoria	Western Coastal Board
	VicHealth	

Academics and consultants

Bekessy et al	Conservation and Wildlife Ecology Group	La Trobe University
Bennett et al	Deakin University	Monash University, Australian Centre for Biodiversity
Centre for Environmental Stress and Adaptation Research (CESAR)	DF Mortimer and Associates	Practical Ecology Pty Ltd
Charles Sturt University School of Environmental Sciences	Ellen Hogan and Associates	Royal Botanic Gardens Melbourne
Clive Crouch Environmental Research	Gillbank	Wescott
	Hopkins	White

Environmental non-government organisations

Animals Australia	Environment Defenders Office (Victoria) Ltd	Trust for Nature
Australian Biosphere Volunteers Inc	Environment Victoria	Victoria Naturally
Australian Conservation Foundation Inc	The Field Naturalists Club of Victoria	Victorian Animal Welfare Association
Australian Conservation Foundation Mullum Branch	Greening Australia Victoria	Victorian Malleefowl Recovery Group
Australian Wildlife Protection Council	Marine and Coastal Community Network	Victorian National Parks Association
Bird Observers Club of Australia	National Trust of Australia (Victoria)	Victorian National Parks Association – marine and coastal
Birds Australia	The Norman Wettenhall Foundation	Wild Side Outdoors
Bush Heritage Australia	Quaker Concern for Animals	Wildlife Victoria
Bushwalking Victoria	Sustainable Gardening Australia	Women for Animals and Forests Spiritual Alliance
The Coalition against Duck Shooting	The Wilderness Society	WWF Australia
	Threatened Ecosystems Network	

Other

Australian Labor Party Kilsyth Branch	Geelong West Branch ALP
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