

Final Report

For the VCCCAR project: Policies and Governance to Support Integrated Landscape Management in a Changing Climate

How does government support integrated landscape management in regional Victoria under climate change?

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1. Summary and recommendations

This report completes the project commissioned in 2010 entitled Policies and Governance to Support Integrated Landscape Management in a Changing Climate — the Integrated Landscape Management (ILM) project.

ILM is a potentially useful concept for helping land managers adapt to climate change, providing a basis for greater collaboration in land and natural resource management. The ILM project defined ILM as a process of facilitating systemic action, both vertically and horizontally, across stakeholders and scales, to enhance the resilience of socio-ecological systems. In other words, ILM is about making decisions that work at state and local levels, based on scientific and local knowledge, to enhance the resilience and productivity of land and ecosystems.

In response to changes in the Victorian policy context since 2010, in particular the review of the *Climate Change Act 2010* and the development of the Victorian Climate Change Adaptation Plan (VCCAP), this report addresses the question ‘How does government support ILM in regional Victoria under climate change?’

The following three findings of the activities of the project aim to address this question.

1.1 Knowledge integration

Generation and exchange of knowledge and information among research, technology and practice communities are the glue that holds the ILM framework together. Formal and informal knowledge at local and global scales are all-important. The Victorian Climate Change Adaptation Plan (VCCAP) (Strategy 3.4 p.29–31) outlines the need for strong links between science, research and decision-making. It identifies that improving access to research for decision-makers is a strategic priority for the Victorian Government.

1. Government can lead knowledge integration through the facilitation and sponsorship of:

- collaborative research projects that include researchers, policy-makers and practitioners, to foster co-production of evidence-based policy to improve adaptation outcomes
- partnerships, to share information and build knowledge, through initiatives such as VCCCAR’s think tanks and Visiting Fellow program
- scenario planning exercises, to assist understanding and planning for future climates

- an adaptation research and information network across government, to strengthen engagement in developing priorities and coordinated approaches for the Victorian community
- regional information brokers, to organise, analyse and package information to make it meaningful and relevant to local stakeholders.

1.2 Horizontal integration in decision-making

Horizontal integration involves decision-making across land managers at state, regional and local levels. Managing land to produce a range of values in a changing climate will affect a range of policy portfolios and land management agencies. However, there are significant policy and institutional barriers to effective integration. Policy- and decision-making are often 'siloes' within sectors, producing fragmentation and undermining the achievement of common objectives. The VCCAP outlines a commitment to ongoing coordination across government and the mechanisms through which this will occur.

2. Government can lead horizontal integration for ILM by supporting:

- the climate change decision-making framework in the *Climate Change Act 2010*
- policy coordination within and across departments and Ministerial portfolios, including through the whole-of-government adaptation coordinating committee outlined in the VCCAP
- stronger partnerships with local governments and communities, for example through the Victorian Adaptation Sustainability Partnership (VASP)
- a forum of public sector natural asset managers to share best practice around climate risk, as outlined in the VCCAP
- a review of the *Climate Change Act 2010* in 2015, which will identify areas of future work and focus of effort
- an evaluation of the VCCAP to ensure key learnings are incorporated into the next plan due by the end of 2016.

1.3 Vertical integration in decision-making

State governments are responsible for program delivery through policy setting, program specification, resource allocation, monitoring, review and evaluation. Conversely, land management is the result of decisions implemented at regional and local levels. Meeting land management objectives in a changing climate will require improved integration among national, state and local levels.

3. Government can lead integrated management and service delivery by:

- supporting partnerships to enable effective policy development and implementation across the levels of government and the private sector
- empowering stakeholders and devolving decision-making to appropriate levels (subsidiarity)
- making links with business and private stakeholders
- developing memorandums of understanding with the regional management forums and local governments
- working together with all regional service providers, such as catchment management authorities (CMAs), to incorporate climate change into delivery arrangements such as through a 'Statement of Expectations'
- developing a monitoring and evaluation framework for programs to assess success in integration of adaptation deliverables and priorities.

2. Introduction

To answer the policy question ‘What does government do to support ILM in regional Victoria under climate change?’, this present report uses the ILM project as its foundation to frame recommendations for action that are consistent with the policy direction of the VCCAP. In addition to this present report, the project has submitted two other outputs that are publically available: a policy brief released in March 2012 (Bennett et al 2012), and a project report (Farmer-Bowers and the ILM project team 2012) which, although dated 2012, was released at the same time as this present report. Details of the original methodology and the scientific underpinnings of the project can be found in the draft project report (Farmer-Bowers and the ILM project team 2012). All three outputs are available from the VCCCAR website at www.vcccar.org.au/publications.

While climate change is increasingly seen as a key policy driver, what remains uncertain is its relative significance to the range of other factors influencing the landscape and the systems it supports.

2.1 ILM project methodology

The ILM project team developed a working definition of ILM, based on a half-day workshop attended by Victorian Government officials and other stakeholders in late 2010, and the views of the researchers in the team. Based on literature analysis and interviews with landowners in southwest Victoria in 2011–2012, the team identified barriers and enablers to ILM.

This review of the project involved interviews with all participants and key people working in policy and natural resource management bodies, analysis and synthesis material in all project documents and convening of a half-day workshop to discuss finding and identify key issues.

2.2 Victorian Climate Change Adaptation Plan

Although developed separately and at a later date, and using a different conceptual framework from the 2012 policy reform paper *Securing our natural future — land and biodiversity in a time of climate change*, the VCCAP identifies approaches to climate change adaptation that reinforce, and are often consistent with, some of the enablers of ILM. The VCCAP identifies eight principles to guide decision-making. These principles are drawn also from the *Climate Change Act 2010*. Of these, the following principles are significant in the context of ILM:

- *Informed decision-making* — tailoring decision-making to the setting and needs of Victoria
- *Integrated decision-making across government* — mainstreaming adaptation and avoiding maladaptation
- *Risk management* — promoting timely action that is appropriate to the level of uncertainty and impact
- *Complementarity with other levels of government* — avoiding duplication and delivering efficiently
- *Equity* — supporting vulnerable people and giving better consideration for future generations
- *Community engagement* — improving understanding and fostering ownership.

3. ILM project

3.1 Defining ILM

ILM has been the subject of debate and research for many years; the term has many different accepted usages. It is variously used as a descriptor, a tool, a process, a form of governance and an aspirational goal. In Victoria, ILM is expressed practically in institutional form. This structure is the Catchment Management Framework, established under the *Catchment and Land Protection Act 1994*. Included are the ten Catchment Management Authorities, which are chartered with achieving integrated and sustainable development of the natural resources within their designated regions.

The ILM project defined ILM as a process of facilitating systemic action, both vertically and horizontally, across stakeholders and scales, to enhance the resilience of socio-ecological systems. In this definition, landscapes were considered to be socio-ecological systems. The definition suggests a resilience approach to ILM, which has the potential to be a useful collaborative process to guide climate change adaptation. This is understood as ‘adaptation with’ climate change as distinct from other framings of adaptation, including ‘adaptation to’, or ‘adaptation for’ a particular purpose. Although spatially bound in some dimensions (a catchment or region), socio-ecological systems are not so bound in other dimensions. For example, stakeholders in a particular landscape can include people, groups and organisations in other national and international locations (Bennett et al. 2012).

3.2 Opportunities for action — barriers and enablers

Under the project, research and interviews with landowners in south-west Victoria investigated barriers and enablers to ILM. These factors, which would apply equally in any other area of the state, are best summarised in the 2012 Policy brief (Bennett et al. 2012) as follows.

Enablers include:

- *Build on existing collaborations and networks* — Current formal and informal collaboration provide a valuable starting point for integration. Such collaboration is often highly valued and accepted by land managers.

Create informal links across governance levels — Informal communication across governance levels can ameliorate problems associated with information flow, ability to take action and imbalances in the influence of different stakeholders.

- *Use existing policies and strategies* — Existing government strategies, plans, programs and reports can be used to define important landscape management issues and provide a basis for developing common land management objectives.
- *Carefully consider the nature of climatic or other changes* — Changes that will impact on the landscape may be short or long term. They may occur gradually or involve step-changes to new conditions. Management strategies based on an assumption of incremental change for temperature increases may not be suitable when there is potentially a step-change in climate variables like rainfall or stream flow.

Barriers include:

- *Costs* — Facilitating greater interaction and shared decision-making may be more expensive in the short term but may reduce longer term costs from conflict or incomplete understanding of the impacts of climate change.
- *Lack of information* — This can reduce the ability of stakeholders or decision-makers to appreciate current and likely future situations and their significance. Involving diverse views and options can be a creative force in management but it depends on the people involved maintaining a circular flow of trusted information. Failing to gather sufficient information or failing to disseminate information is likely to lead to indecision, becoming overwhelmed by events and failing to respond effectively to crises.
- *Hierarchical decision-making and unequal power relations* — Organisations can become isolated and collaboration inhibited, especially when developing integrating objectives. Prescriptive strategies and plans developed without including all relevant stakeholders, or ignoring the rights of less-assertive stakeholders, can inhibit implementation and cooperation at the landscape scale.
- *Fragmentation in decision-making* — This diverts effort from achieving outcomes to competition among stakeholders.
- *Lack of common objectives* — This can prevent different land managers from working together, leading to inefficiencies, adverse consequences, conflicted actions and an inability to attract funds for implementation or to maintain the interest and trust of all stakeholders. Lack of common objectives is probably the most serious impediment to ILM, because if objectives are not aligned then no amount of removal of other barriers can enable ILM.
- *Lack of leadership* — Leadership is essential for establishing and maintaining collaboration. This does not need to be driven by one individual. On the contrary,

leadership is required from all parties to promote inclusion and access to reliable information.

3.3 Integration

Identified as a key management process that helps achieve ILM objectives, three types of integration provide a framework for designing ‘interventions’ that can enhance ILM:

1. *Knowledge integration* — a fundamental process that occurs before decision-making
2. *Horizontal integration* — coordinating decisions across supply chains so that outcomes deliver the desired objectives
3. *Vertical integration* — coordinating decisions through a supply chain so that the outcomes deliver the desired objectives.

More practically, these forms of management integration in government can be described as follows (Farmer-Bowers and the ILM project team 2012):

1. *Knowledge integration* — Government has an enormous capacity for accumulating and generating information. An issue is bringing this diverse information and knowledge to bear on a particular decision, because decision-makers often work in relative isolation from other professionals in other agencies and at different government levels.
2. *Horizontal integration* — This is necessary when coordination is needed among agencies working on issues at the same level of organisation, such as local and state governments.
3. *Vertical integration* — The process of getting policies and projects implemented is a vertical integration task. Vertical integration links across all levels of an organisation and across organisations.

3.4 Opportunities for government

Although there can be tension among landholders, businesses and government agencies, all have much to gain through cooperation, which delivers long-term benefits to society as a whole; for example, sustainable natural resource management. Government plays a significant role in all forms of integration and can therefore support and facilitate ILM. CMAs, for example, often cite government operational and policy silos as a barrier to ILM.

3.5 Using integration to enhance ILM and overcome barriers

The ILM project proposed a six-step approach for implementing ILM. The approach involves working with communities to overcome barriers to ILM.

Five themes

Five themes, which could apply to any landscape in the state, underpin the approach:

1. Community ownership and decision-making
2. Informed decision-making and building capability
3. Enabling governance
4. Long-term vision
5. Adaptive management.

These themes are similar to the VCCAP decision-making principles, which are designed to guide climate change adaptation. The themes are also similar to those underpinning the process for developing the regional catchment strategies (RCSs), which aim to create a community-owned vision and priorities for action in the catchment (landscape).

Six-step approach

Informed by the themes of community self determination and informed decision-making, the project identified six steps, primarily for state and local government agencies and non-government decision-makers (e.g. developers), to implementing ILM:

1. Generate a common understanding of landscape objectives (social and biophysical) at regional and local levels for a range of stakeholders now and in the future.
2. Develop ideas about collaborative governance arrangements required to implement and review the long-term objectives.
3. Publish these long-term objectives and empower independent, collaborative governance arrangements to meet them.
4. Collect and share information on the key landscape attributes (social and biophysical) that are most relevant for these objectives.
5. Empower collaborative governance to implement the long-term objectives.
6. Monitor, evaluate and review progress toward short and long-term objectives.

4. Conclusion

The ILM project has demonstrated the challenges of working on a term and topic with many diverse meanings and interpretations across government, as well as the challenges in defining objectives, gathering information and satisfying the expectations of a range of different participants in a changing policy context. The project has made a valuable contribution to policy in identifying key governance considerations and future directions for research to support more effective land management in a changing climate. By adopting a consultative and inclusive process in the review of project outputs, the project has contributed to building capability within the project team (both from government and the research community) to consider complex policy issues.

Adapting to a changing climate will involve many unknowns. Adapting well will depend on being able to build capability to 'learn within the unknowable' (Flood 1999, cited in Lonsdale 2012).

5. Bibliography

VCCCAR research projects and reports:

Bennett ATD, Beilin R, Buxton M et al 2011. *Scoping the challenges of ILM under climate change*. Policy paper, VCCCAR, March 2011.

Bennett ATD, Beilin R, Buxton M et al 2012. *Integrated landscape management for a changing climate*, Policy Brief, March 2012. Available from the VCCCAR website at www.vcccar.org.au/publications.

Farmar-Bowers Q and the ILM project team 2012. *Meeting the challenges of climate change adaptation in peri-urban and rural landscapes: impediments and enablers for ILM approaches — Final report (draft)*, (submitted) June 2012. Available from the VCCCAR website at www.vcccar.org.au/publications.

Keenan R 2013. *Policies and governance to support integrated landscape management in a changing climate (ILM project)*. Report to the VCCCAR Board.

Lonsdale K 2012. *Beyond tools: building learning organisations to adapt to a changing climate*. VCCCAR Visiting Fellowship Final report, VCCCAR: Melbourne, 22 p. Available at www.vcccar.org.au/sites/default/files/publications/VCCCAR_Final_Report_Kate_Lonsdale_forweb_150713.pdf.

VCCCAR Project *Processes and governance to support integrated landscape management in a changing climate* (the ILM project).

Wallis P, Bosomworth K, Fünfgeld H, Millin S, Rance A and Lonsdale K 2003. *Climate change adaptation in the natural resource sector in Victoria: a literature review and analysis of institutional context and organisational needs for adaptation*. Melbourne: RMIT University, Monash University, Victorian Centre for Climate Change Adaptation Research. Available from the VCCCAR website at www.vcccar.org.au/publications.

Other publications:

Australian Public Service Commission 2007. *Tackling wicked problems — a public policy perspective*. Discussion paper. Available at: www.apsc.gov.au/publications-and-media/archive/publications-archive/tackling-wicked-problems.

Dietz T, Ostrom E and Stern PC 2003. The struggle to govern the commons, *Science* 302(5652), 1907–1912.

Appendix 1: ILM project history

In 2010 the policy reform paper *Securing our natural future — land and biodiversity in a time of climate change*, which included an initiative to restructure Victoria's CMAs, was launched. The Victorian Government Department of Environment and Primary Industries (DEPI) (then Department of Sustainability and Environment (DSE)) commissioned VCCAR to develop a research project entitled Processes and Governance to Support Integrated Landscape Management in a Changing Climate (the ILM project).

The research comprised three stages:

1. Create a working definition of ILM and identify barriers and enablers to ILM (completed)
2. Conduct a more detailed investigation of barriers and enablers to ILM through interviews and conversations with stakeholders in south-west Victoria (incomplete)
3. Create a final report *Meeting the challenges of climate change adaptation in peri-urban and rural landscapes: impediments and enablers for ILM approaches* (incomplete).

In November 2010 the Liberal–National Coalition was elected and immediately reversed the restructuring of the CMAs. More broadly, government support for the land and biodiversity policy reforms waned. Over a similar time frame the *Climate Change Act 2010* came into operation on 1 July 2011.

The *Climate Change Act 2010* provided a framework for the Victorian Government in responding to climate change, including requiring:

- the Victorian Government to develop a Climate Change Adaptation Plan (VCCAP) every four years, to provide a high-level assessment of the potential impacts of climate change and provide a statement of the Victorian Government's strategic responses
- decision-makers to take climate change into account when making specified decisions under the *Catchment and Land Protection Act 1994*, *Coastal Management Act 1995*, *Environment Protection Act 1970*, *Flora and Fauna Guarantee Act 1988*, *Public Health and Wellbeing Act 2008* and *Water Act 1989*.

Subsequently VCCAP was developed and released in March 2013.

The consensus of DEPI (formerly DSE and Department of Primary Industries (DPI)), Department of Planning and Community Development (DPCD, now integrated with the Department of Transport Planning and Local Infrastructure) and academics R Beilin,

ATD Bennett, R Jones and M Buxton (the working group) is that the ILM project delivered good foundation research and analysis, best summarised in three documents:

1. *Scoping the challenges of ILM under climate change*. VCCCAR Policy paper by Bennett ATD, Beilin R, Buxton M et al — March 2011
2. *ILM for a changing climate*. Policy brief by Bennett ATD, Beilin R, Buxton M et al. — March 2012
3. *Policies and governance to support integrated landscape management in a changing climate (ILM project)*. Report to the VCCCAR Board by R Keenan — 2013.

Unrelated to the changes in government policy direction, the ILM project encountered difficulties during stage 2 (above). As a consequence the final report was not completed.

In early 2013, Janine Haddow was engaged to identify the most appropriate way to complete the ILM project within the changed policy environment. The methodology for finalising the ILM project report is given in Appendix 2.

Appendix 2: Methodology — finalising the ILM project report

The methodology (or approach) adopted for completing the project report consisted of four stages:

1. Situational review

An assessment in early 2013 [by Haddow] highlighted gaps and inconsistencies in the project documentation, a wide variety of views about the merits of the final ILM draft project report *Meeting the challenges of climate change adaptation in peri-urban and rural landscapes: impediments and enablers for ILM approaches* and conflicting views about the most productive way to finalise the ILM project.

- Output:
 - Gap analysis

2. Research and analysis

ILM project documentation was collated and verified. Interviews with all members of the ILM project working group were conducted.

- Output:
 - Short paper — *Options to complete the ILM project* (VCCCAR, unpubl. paper 2012).

3. Workshop — Preparation of final report

A workshop involving ILM practitioners and the working group was convened to determine DEPI's key policy question and scope the final report.

- Outputs:
 - Discussion paper *VCCCAR research project — policies and governance to support integrated landscape management in a changing climate* (see Appendix 3)
 - Improved understanding by participants of the challenges of the ILM project from policy and research perspectives
 - Six different interpretations [among the steering committee; unpublished] of the project scope and narrative.

4. Documentation — Preparation of final report

Following the workshop, DEPI requested that the final report include linkages to and alignment with the VCCAP.

- Outputs:
 - Final Report version 1 (first draft circulated to DEPI and VCCCAR following the workshop; unpublished)
 - Final Report version 2 (second draft circulated to DEPI and VCCCAR following the workshop; unpublished).