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Towards More Integrated Natural Resource Management in Victoria: Possible Elements of an Integrated State-wide Policy Framework

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There is a growing recognition of the complexity of environmental issues and acceptance of the value of more integrated approaches to address them. Evidence of progress with the development of more integrated approaches is however less clear cut. Within this context, this paper explores how a more integrated approach to natural resource management at a state government level could be progressed. Using recent experience in Victoria as a focus, this paper provides an overview of environment and natural resources issues confronting the state, highlights why integration is an important element of any response, and outlines the current policy and organisational context. Possible elements of a state-wide policy framework for more integrated natural resource management across a state government organisation are also outlined and discussed.

Introduction

Environmental issues are widely recognised as important public policy issues, and while the nature and adequacy of responses adopted varies, there is little dispute that the issues are important.

One clear theme in the diverse policy literature on environmental issues is the need for environmental objectives to be integrated into all facets of decision making – the environment cannot be treated as an add-on. However, recognising that integration can be pursued at different levels and in different ways, this paper seeks to contribute to the development and implementation of a more integrated approach to natural resource management (NRM). Recent work on developing a framework for integrated NRM undertaken within the Victorian Department of Sustainability and Environment is outlined and discussed.

The remainder of the paper is structured as follows: Section 2 provides a brief overview of some of the environmental challenges facing Victoria; Section 3 introduces policy integration as an essential element of sustainable development; Section 4 outlines the current policy and organisational context for NRM in Victoria; and Section 5 proposes a framework that could be applied to progress a more integrated approach to NRM.

In broad terms, while this paper touches on conceptual elements of integration, the primary focus is on how integration can be progressed in practice. The paper is pitched at the state government level, although the framework proposed could be scaled to other levels (e.g. regional) and so may be of particular interest to policy and program practitioners within state governments and catchment management agencies.

Environment and natural resource management context

Victoria, like many other areas, has many environmental characteristics or 'natural assets', covering land, water, biodiversity (both plants and animals) and air. In relation to biodiversity, an overview of the principal types of ecosystems in Victoria, and some of the ecosystems and species at risk, is provided in the volume of Victoria's *Biodiversity Strategy* titled *Our Living Wealth* (DNRE 1997).

Maintaining, and where possible enhancing, these 'assets' will undoubtedly contribute to Victoria's long term environmental sustainability. Important values associated with these assets include:

- their intrinsic value (biodiversity is valuable for its own sake)

- the ecosystem services they provide (e.g. clean air and water)

- the amenity and recreational benefits they provide

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■ the opportunity to use them to provide economic and social goods

■ the maintenance of inter-generational equity (Chapter 2 of Eckersley 1992 provides a detailed discussion of different motivations for environmental concern).

However, a credible body of evidence indicates that Victoria's environment is facing serious threats. Much of this evidence is presented in the Victorian Catchment Management Council's report *The Health of Our Catchments - A Victorian Report Card*, which provides an authoritative and comprehensive assessment of efforts to date (VCMC 2002). For example, it is estimated that 70 per cent of Victoria's native vegetation has been cleared since European settlement, and this clearing has impacted in particular upon vegetation types in the more fertile or accessible landscapes suited to pastoral, agricultural or urban land use (VCMC 2002). Further, this widespread land clearing has not only reduced biodiversity (including habitat for animals), it has also contributed to other NRM issues, such as soil erosion, rising water tables and dryland salinity, through changes to water balances.

In relation to dryland salinity, 670 000 ha of land in Victoria is currently predicted to be at risk from shallow, saline water tables, with a worst case scenario (assuming a relatively wet climatic scenario) that within 50 years, the area at risk of severe salinity could be over 3 million ha (NLWRA 2001). Under this scenario, between 8 and 18 per cent of Victoria's agricultural land is predicted to fall into the high salinity risk category, with a further 47 per cent at moderate risk. Further examples of the environmental threats facing the State are provided in Table 1, which summarises a selection of catchment condition indicators from the Victorian Catchment Management Council's Report.

Importantly, the nature and magnitude of different threats varies, as does their spatial expression across Victoria and across land tenures (i.e. threats originating from private land may be expressed on public land, and vice versa). In addition, some areas are subject to multiple threats, leading to stressed landscapes (Morgan 2001).

There is also an emerging recognition that, in addition to environmental challenges, the consequences of economic and demographic change need to be considered (ABC 2005; VCMC 2002; Barr 2004).

Given these are some of the major threats and challenges facing Victoria, how effective are the responses that have been implemented? The Victorian Catchment Management Council's analysis is insightful, as the following extracts demonstrate:

Table 1. The condition and trend of selected environment and natural resource indicators for Victoria (VCMC 2002).

Indicator	Statewide Assessment of Condition and Trend
Conservation of native vegetation types at the state and bioregional level	Poor and negative
Conservation status of species at the state and bioregional level	Poor and negative
Index of stream conditions	Moderate
Environmental flows	Unknown
Estuary conditions	Unknown
Urban water consumption	Unknown
Groundwater allocation and use	Good and stable
Compliance with bulk water entitlements	Unknown
Dryland salinity	Poor and negative
Soil acidification	Moderate and negative
Soil structure decline	Poor and unknown
Greenhouse gas emissions	Negative

Are we making a difference? - the simple answer is yes, but not enough! (VCMC 2002, p. 95).

Our natural resources are under pressure and, in many cases, will not be passed on to the next generation in good condition ... under current resourcing and management paradigms our efforts to protect and sustainably manage natural capital are not keeping pace with the breadth of degradation symptoms depreciating the natural capital base. (VCMC 2002, p. vi).

This assessment indicates that much more needs to be done if Victoria's environmental and natural resource challenges are to be met. While there are a number of ways in which this can be progressed, a clear development in the policy literature and current practice is that integration is a key mechanism for progressing environmental sustainability.

Environmental policy integration as an essential element of sustainable development

This section provides a brief overview of the concept of integration and why it is important for promoting sustainable development. It provides the context for later discussion on what a more integrated approach to NRM might look like.

Environmental policy integration is recognised as an essential element of sustainable development. Lafferty and Hovden (2002, p. 1), for example, state that:

> One of the key defining features of 'sustainable development' is the emphasis on the integration of environmental objectives into non-environmental policy sectors. This entails a fundamental recognition that the environmental sector alone [i.e. environmental agencies] will not be able to secure environmental objectives, and that other sectors must therefore take on board environmental policy objectives if these are to be achieved.

More integrated ways for addressing sustainability issues are also needed because sustainability issues present different challenges to other policy issues (see Dovers 1997 and Carter 2001 for more detailed discussions).

The idea of integration is not new. Both Persson (2002) and Hertin and Berkhout (2003), for example, recognise that the necessity of jointly considering economic and environmental policy has been emphasised in several classical environmental texts, such as *A Blueprint for Survival* (Goldsmith *et al.* 1972), the *World Conservation Strategy* (IUCN 1980) and *Our Common Future* (WCED 1987). Further, Lafferty and Hovden (2002, p. 1) state that 'although EPI (environmental policy integration) does not in itself constitute sustainable development, it is impossible to conceive of sustainable development without successful EPI'.

However, what is meant by the idea of integration? Two different forms of integration are typically identified:

- *Horizontal* (or inter-sectoral) integration pursues a coordinated and coherent strategy across different sectors (e.g. whole of government approaches).

- *Vertical* (or intra-sectoral) integration focuses on the integrated management of a single natural resource (legislation, policy, governance, investment and delivery aligned) (adapted from Carter 2001).

While this may suggest that environmental policy integration is a relatively straightforward endeavour, this is not the case for a range of reasons. Firstly, examples of successful integration are less apparent than one would think. For example, Hertin and Berkhout (2003) consider that, although the question of how an integrated approach to the environment can be positively implemented has been continuously debated since the 1970s, the practice of environmental policy making remains largely unchanged. The recent report of the Productivity Commission (1999) into the implementation of ecologically sustainable development by Commonwealth Government departments and agencies is instructive in this regard, making it clear that there is considerable room for improvement in

current Australian policy practice. This challenge is clearly demonstrated in the title of a recent paper *Environmental policy integration: the easy idea that is difficult to implement* (Janicke 2003).

Secondly, the concept of integration is more complex than it first appears. For example, despite Janicke's (2003) view of integration being an easy idea, Scrase and Sheate (2002) identify 14 different meanings of integration in the environmental assessment and governance literature. Wisely, Scrase and Sheate (2002) conclude that integration is not a panacea for promoting sustainability, and that while some approaches to integration are positive, this is not always the case. Some approaches to integration may work against sustainable development, while the value of others will be influenced by the circumstances in which they are pursued.

This leads to the issue of how to pursue integration in a way that positively contributes to sustainability. The questions investigated by Hertin and Berkhout (2003, p. 40) provide a starting point for clarifying these issues:

> What exactly should be integrated: policy objectives, decision making structures, knowledge and capabilities, or policy instruments? Does it involve a change of balance of power between sectoral and environmental administrations, or is integration a question of expertise and organisational routines?

If integration is to be successful and positive, it needs to be targeted and tailored to a particular situation. In relation to the focus of this paper, it is considered that there is a clear need in Victoria for greater coherence and clarity of policy goals and directions for NRM at the state-wide level, and that integration provides a clear mechanism for pursuing this.

Policy and organisational context

This section briefly outlines two major policy developments that inform the Victorian Government's approach to sustainable development and which currently influence how integrated approaches to NRM may be progressed. These two developments are the release of *Growing Victoria Together* (DPC 2001), and machinery of government changes to establish the Department of Sustainability and Environment.

Growing Victoria Together: Innovative State, Caring Communities (DPC 2001) was released in November 2001, and articulates the Government's broad agenda for public policy and government. This includes what the Victorian Government sees as the social, environmental and economic goals for the State over the next 10 years and how they will be achieved. Adams and Wiseman

(2003) provide a more detailed 'insiders' account of the development and rationale underpinning *Growing Victoria Together*.

In broad terms, environmental sustainability is stated as a core element of the Government's policy directions, as is evident from the Government's *Vision for Victoria* in 2010 (DPC 2001, p. 6), in which:

- 'innovation leads to thriving industries generating high quality jobs

- protecting the environment for future generations is built into everything we do

- we have caring, safe communities in which opportunities are fairly shared, and

- all Victorians have access to the highest quality health and education services all through their lives.'

Further, 'promoting sustainable development' and 'protecting the environment for future generations' are two of the strategic issues the Government has identified as needing to be achieved if their vision for Victoria is to become a reality (DPC 2001, p. 6).

Following its re-election in November 2002, the Government announced the establishment of the Department of Sustainability and Environment, to bring together the State's responsibilities for managing its natural and built environments, and provide a strong policy focus on sustainability as a key objective of government. It was also expected that the Department would help to achieve the Government's vision of Victoria as a world leader in sustainability (DSE 2003).

The implications of these policy developments in terms of achieving greater integration are not clear-cut. Firstly, while *Growing Victoria Together* includes a commitment to sustainable development, the approach adopted would appear to be more informed by the notion of a 'balanced' approach to sustainable development rather than an 'integrated' approach.

Secondly, the Department of Sustainability and Environment was established by splitting off the primary industry responsibilities from the Department of Natural Resources and Environment and adding planning responsibilities from the Department of Infrastructure. On face value, this is problematic in terms of integration as the Department of Natural Resources and Environment had clear organisational responsibility for both the environment and primary industries. In theory at least, this creates clear opportunities for driving the integration of environmental concerns into other spheres of decision-making (in this case primary industries).

However, at least two questions can be raised against thi, role of the Department of Natural Resources an(Environment. Firstly, were environmental view: appropriately considered within the Department, or di(economic views dominate? Secondly, was the Departmen of Natural Resources and Environment too narrow in focu: (only being concerned with the environmental implication: of primary industries) and does the Department o' Sustainability and Environment, with its policy focus or sustainability as a key focus of government, provid(greater scope for integration across all areas oi government?

These questions, while important from a broader polic) perspective, are beyond the scope of this paper. Instead, this paper is focused on how greater integration can be achieved across the range of state-wide policies and programs that are being undertaken across the Department of Sustainability and Environment, particularly in relation to NRM. However, the framework advocated is scalable, and could also be applied at regional level.

Towards a more integrated approach to natural resource management policy

An important element of the Department's objective to establish Victoria as a leader in environmental sustainability is the development of 'a statewide framework for integrated natural resource management in a catchment context to complement the suite of regional catchment strategies and guide state wide investment in land, water and biodiversity' (DSE 2003, p. 11). The framework outlined below was developed as part of a project established to deliver on this commitment.

In a broad sense, the integrated NRM project was a high-level policy review project that aimed to improve Victoria's approach to NRM. Put simply, the project focused on articulating a coherent framework for linking the different NRM activities undertaken (such as pest plant and animal management, native vegetation management, salinity management or water resource management).

Project Staging

Stage one of the project was completed in June 2003 and culminated in the preparation of a review paper (Coughlin 2003), which considered international experiences in establishing NRM frameworks and identified some possible elements of an integrated NRM framework. In a sense, this paper involved the undertaking of an environmental scan to identify best practice examples from other jurisdictions, and a consideration of their suitability for Victoria. Stage two, which commenced in July 2003, involved the development of a draft integrated NRM

framework, with some of its key elements outlined in this paper. Stage three, which commenced in late 2004, involved gaining agreement for different elements of the framework.

Building on, and enhancing, current efforts

Over the past 30 years or so, a wide range of policies and programs have been established and implemented in response to particular environmental and natural resource issues. However, as more policies and programs have been established, Victoria's approach to environmental governance has become more complex. While this reflects (at least in part) the complexity of sustainability issues, it also indicates that limited attention has been directed to how the different elements intersect.

For example, in undertaking the project it was identified that:

■ While there are approximately 28 pieces of 'environmental' legislation and numerous state-wide strategies and investment programs, there is no state-wide framework that provides a coherent focus for these activities (i.e. strategies and programs are pitched at different levels and the coverage of issues is not comprehensive).

■ There are no state-wide goals and targets to provide a clear focus for efforts to achieve integrated land, water and biodiversity outcomes, and there is no consistent approach to developing these goals and targets.

■ It is difficult for regional and local authorities to align priorities with state-wide goals and targets.

■ The relationship between on-ground expenditure and state-wide priorities is unclear.

■ The value of knowledge and integrated understanding is not fully appreciated or utilised.

■ Monitoring and review is not systematically undertaken.

■ The links between NRM and regional land use planning are poorly established.

A more integrated approach to setting integrated state-wide policy and program directions would therefore seem to be particularly useful in a mature system of environmental governance, such as Victoria's (by mature system, we mean where sectoral and single issue policies and programs have been in operation over the past 30 years or so). It is also recognised that total integration may not be feasible or desirable - diversity enables policy learning - therefore integration should be approached in a strategic manner - it should be purposeful (i.e. clearly focused on promoting sustainability).

A strategic approach to integration

Building on Scrase and Sheate's (2002) recognition of the many forms of integration, it is also apparent that integration can be approached at various levels and in various ways. Working towards integrated policy is therefore complex; there are no magic bullets.

However, we also consider that integration is best approached in a systematic manner - there should be a concerted effort to understand how different policies and program settings interact and there should be a clear agenda for change. By contrast, while benefits may be obtained from improving integration within particular program areas (e.g. water resource management), these may or may not contribute to overall integration. We consider that more significant benefits arise from investigating and progressing opportunities for integration in a systematic manner rather than relying on *ad hoc* piecemeal changes. Within an adaptive management framework, this would be considered as purposeful change (Dovers 1997).

In line with this, the following elements are proposed as an effective means for bringing about more integrated NRM through purposeful change:

■ establishing a vision for integrated NRM

■ identifying integrated NRM outcome areas, and approaches to target setting

■ creating a more integrated legislative framework

■ aligning policy with outcomes

■ identifying and investing in priorities

■ improving knowledge and capacity

■ monitoring, evaluation and reporting.

These elements are closely interlinked, as indicated in Table 2, but will be discussed sequentially to give insights into the different elements. It should be noted that there is limited discussion of issues related to investment in this paper for the sake of brevity.

Creating a State-wide vision, outcomes and targets for natural resource management

Establishing an integrated vision, set of outcomes and associated targets gives meaning to the idea of sustainability: it provides a clear indication of what is to be achieved, across what areas, and within what time-frames.

In proposing a vision and associated outcome areas, we have been heavily informed by the approach adopted in Sweden (see EOC 2004).

Table 2. A possible framework for more integrated natural resource management policy in Victoria.

Proposed Vision for NRM: Sustainability in a Generation *(What do we want to achieve?)* ↓							
Natural Resource Management Framework *(How will we know if we've achieved our vision – what might regional environmental sustainability look like?)*							
Natural Resource Management Outcomes	**Healthy Land Systems**	**Maintain and Enhance Biodiversity and Ecological Integrity**	**Healthy Rivers and Waterways**	**Sustainable Marine and Coastal Zones**	**Respect and Preserve Cultural Heritage**	**Vibrant Communities and Livable Human Settlements**	**Clean Air and Atmosphere**
Target Setting	*What are some of the milestones that need to be achieved along the way?*						
	Honour existing targets, but review over time using a rigorous approach to target setting						
Policy, Business and Delivery. • *Aligning policy with outcomes* • *Enhancing legislative frameworks* • *Identifying and investing in priorities* • *Improving knowledge and capacity*	**By what means can we achieve environmental sustainability?**						
	Current: What programs and knowledge do we have?						
	Future: What programs and knowledge do we need? – increased focus on program design and mix of policy tools						
Monitoring, Evaluation and Review	**How will we know if we are making a difference?** The SOE Report to be prepared by the Commissioner for Environmental Sustainability provides a useful mechanism for obtaining independent feedback and advice to Government on environmental performance.						

Vision

The articulation of a vision for NRM can provide a clear sense of purpose to guide future effort. A possible vision identified as part of the project is that Victoria could seek is:

to achieve regional environmental sustainability within one generation.

This example vision is adapted from Sweden's goal of achieving sustainability within a single generation.

Identifying agreed outcome areas

While an outcomes focus can be criticised for simplifying complex issues and neglecting the importance of 'process' in public policy deliberations (Di Francesco 2001), we consider that it nevertheless can be useful for environmental policy and planning for a number of reasons. The identification of agreed NRM outcomes focuses attention on what it is that is trying to be achieved and provides a mechanism for focusing effort and measuring progress. The seven outcome areas proposed are consistent with the themes used for national State of the Environment reporting (ASEC 2001) and the themes identified as part of the Australian and New Zealand Environment and Conservation Council work to identify core environmental indicators for State of the Environment reporting (ANZECC 2000). We consider that linking sustainable development with an outcomes orientation creates a clear impetus for change.

The development of agreed outcome areas is also useful for a range of other reasons, principally that they:

■ provide a coherent focus for policies and programs

■ establish links between different programs and frameworks

■ align with nationally recognised themes and indicators

■ provide a mechanism for aligning NRM policies and programs with State of the Environment reporting to be undertaken by the Commissioner for Environmental Sustainability.

This alignment is outlined in Table 2. However, while the identification of clear outcomes is beneficial, it is necessary to remember that biophysical systems are interrelated, and so will not align with human defined boundaries that are imposed.

Great care also needs to be taken to ensure that attention is not inadvertently focused upon particular areas to the detriment of others. This would appear to be particularly the case with target setting, as there is a risk that the identification of targets narrows the focus of activity onto selected high profile areas, while other important areas are neglected.

Target setting

Setting targets provides a clear sense of what is to be achieved, by when (while recognising that targets can never fully capture the diversity of areas that require attention). Nonetheless, target setting can be useful for focusing attention, tracking progress, and developing a shared sense of milestones that have been achieved. Over time, targets would be established for each of the outcome areas identified above, and progress towards these targets regularly reported.

A range of targets are established in the existing suite of strategies. However, no consistent approach to target setting has been adopted, which makes it difficult to obtain an overall sense of what is trying to be achieved and what progress is being made. There are also gaps in the areas of established targets. To improve the coherence between strategies and programs, a clear approach to target setting should be established. Our current thinking is that the broad methodology agreed by state and commonwealth ministers in May 2002, through the Natural Resource Management Ministerial Council, provides a useful starting point for thinking about targets (i.e. aspirational targets, resource condition targets and management action targets).

A more integrated legislative framework

The Department of Sustainability and Environment portfolio ministers (i.e. Ministers for Environment, Water, Planning) are responsible for Victoria's principal environmental legislation. Over time, this suite of legislation has been added to, amended, and in some cases repealed, but effectively provides the legislative framework for environment and NRM in Victoria. Each Act is also a product of the specific circumstances operating at the time in which it was enacted, which means that older Acts may be outdated.

A high level scan of Victoria's principal environmental Acts was used to identify opportunities for improving Victoria's legislative framework for integrated NRM. Two particular areas where further attention would be useful include:

- *articulating natural resource management objectives (framework legislation)*. The establishment of overarching NRM objectives legislation could articulate NRM aspirations, identify agreed outcome areas, require the development and five yearly review of a state-wide NRM strategy, and establish coordination and advisory bodies, among other things. Such an approach would be consistent with Sweden's approach

- *reviewing and enhancing under-utilised legislative tools*. There has been no systematic assessment of the environmental implications of Victoria's legislation. It would therefore be useful to review legislation to identify opportunities for enhancing legislative coverage; identify regulations that hinder sustainable development; consider under-utilised legislative policy tools; and clarify various roles and responsibilities. While potentially a major undertaking, such an approach has potential to improve environmental performance. The experience with the National Competition Policy demonstrates that mandated regulatory review processes are possible (Curran and Hollander 2002).

Aligning policy with outcomes

Clarifying program logic

Victoria has a wide range of state-wide strategies, policies and frameworks related to NRM (e.g. native vegetation management, pest plant and animals, biodiversity, salinity management, coastal management, etc). The links between these strategies are often not clear (different strategies are informed by different 'program' logics). Clearly articulating the alignment of policies with the outcome areas would provide a clearer sense of policy coverage and policy gaps. Other benefits are a strengthened focus on outcomes, less potential for contradictory policy objectives, and a clearer nesting and cascading of strategies.

Improving policy design

The design of policies and programs is the principal means for achieving policy outcomes on the ground. Therefore designing policies and programs with the 'right' mix of policy tools (or instruments of governance) is critical. Victoria has established, and currently deploys, a range of governance instruments as part of NRM efforts, with many of these being innovative. However, despite these efforts, the evidence from the

Victorian Catchment Management Council indicates that better approaches are required. One way that this can be achieved is through a stronger focus on policy design - more actively considering the range of policy interventions necessary to achieve the desired outcomes. This approach is consistent with a portfolio policy approach to the design of policy interventions as discussed by Doremus (2003).

Investment planning and priority setting

Investment planning can make a significant contribution to policy integration through matching investment decisions with policy directions; improving investment processes; and better identification of priorities. In some ways, the priority of an issue is reflected by the amount of resources directed towards it. A more integrated approach to investment would assist in targeting funding towards agreed priority outcomes.

More integrated approaches to investment planning also provide a mechanism for different funding providers to jointly identify areas where shared investments can deliver multiple outcomes. Such an approach is being progressed as part of Regional Catchment Investment Processes in Victoria. By contrast, past (and present) approaches to investment generally rely upon the use of single issue based funding programs of limited duration and with a project focus. This reduces flexibility and capacity to fund activities with multiple benefits. It also often makes it difficult to identify the links between projects, programs and outcomes.

It is also important to identify where effort should be directed, and further work in this area would be beneficial. For example, work on priority setting for salinity and NRM has been, and continues to be, undertaken through a range of mechanisms. While acknowledging the value (and limits) of previous work, the Victorian Auditor General (2001, p. 76) has recommended that:

> the Department invest in evaluative tools to measure the socio-economic, environmental and economic impacts of proposed salinity management options. This will provide a basis for sound decision making in terms of identifying appropriate management options and establishing funding priorities.

In progressing work in this area, a useful starting point is the recognition that priority setting is a complex and evolving activity.

Knowledge and capacity

Issues of knowledge and capacity are being considered as key elements for successful integration. Having the right data, information and knowledge is a critical component in progressing sustainable development (Dovers 1995). However, the value of these elements is not always fully appreciated, let alone utilised. Further, in order to deal with NRM in a more integrated way, the data collected, and the ways in which it is transformed into information and knowledge, must also be become more integrated. Flowing from this is the need to manage data, information and knowledge in ways which move beyond compartmentalised, or siloed approaches, while acknowledging that detailed technical data is still required in many circumstances. In a broad sense though, integrated decision making requires integrated understandings.

Questions of capacity, while complex, are clearly central to achieving integrated NRM. Our current impressions are that approaches to capacity building for NRM tend to:

- vary considerably using a range of different approaches

- are undertaken in the absence of a strategic framework

- are more likely to be issue based than integrated in their approach

- appear to place more emphasis on individual capacity rather than organisational or social capacity.

We therefore consider that, despite current efforts, further work on capacities is required to successfully progress more integrated approaches to NRM. In general terms, this would involve more attention being given to the areas of policy capacity, business capacity and capacity for delivery.

Monitoring, evaluation and reporting

The need for effective monitoring, evaluation and reporting is clear cut - it provides the means for tracking and reviewing progress, and is a key element of an adaptive management approach (see Dovers and Mobbs 1997). A key element of the integrated NRM project is to improve the alignment of policies and programs with agreed outcomes. As part of this, the intention is that the framework for NRM be consistent with the framework for State of the Environment reporting that is to be prepared by Victoria's newly established Commissioner for Environmental Sustainability. Under the *Commissioner for Environmental Sustainability Act 2003* (POV 2003), the Commissioner is responsible for preparing a State of the Environment report for Victoria. Having these frameworks aligned offers real potential for the establishment of a high-level continuous improvement cycle for NRM in Victoria.

Conclusion

Victoria has many important environmental assets. Ensuring these assets are maintained and, where possible, enhanced for current and future generations is an important challenge. More integrated approaches to NRM are considered a key element in meeting these challenges.

Integration is important because it provides a mechanism for environmental concerns to be built into decision-making, and thus is a critical mechanism for promoting sustainable development; albeit one that is more complex and difficult to achieve than first appears. Further, as integration can be pursued at many levels and through many means, there are no simple answers and no certainty that integration necessarily leads to sustainability.

As a way to encourage discussion on strategies and mechanisms for pursing more integrated approaches to NRM, this paper reports recent work undertaken in Victoria. This paper also proposes a policy framework that provides a practical basis for progressing more integrated approaches to NRM at a state government level, and particularly across an organisation. The framework outlined articulates a coherent sense of what it is that is trying to be achieved, and some of the key elements available for translating this vision into practice. In simple terms, it connects policy directions with business processes and monitoring and review mechanisms, to establish a mechanism for promoting sustainable development.

Acknowledgments

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