



Analysing how social and ecological systems interact provides clues for improving conservation outcomes. Photo: Suzie Gaynor



Understanding and designing fit-for-purpose institutions for conserving biodiversity

The Tasmanian Midlands is a nationally significant biodiversity hotspot. This means the landscape is not only rich in biodiversity features, but also that these features face strong pressures.

Some drivers of biodiversity decline, such as climate change, are external to the midlands, making them difficult to address at a regional scale. We can mitigate many of the drivers of biodiversity decline, however, by making better decisions and adapting to social and ecological change.

Institutions underpin decision-making, thus they are critical for achieving the goal of a healthy midlands landscape. A recent legislative review called on Australia to reform its institutions and look beyond threatened species to conserve biodiversity at the landscape scale. To advise on potential reforms, it is first necessary to analyse current arrangements.

Summary for policy makes, planners and managers

This document summarises the techniques we used to analyse the Tasmanian Midlands institutions relevant to biodiversity conservation. We outline what we found and propose how the current arrangements could be improved.

We worked with biodiversity management stakeholders in Tasmania, and the analysis was done concurrently with a focus on the contrasting landscape of the Australian Alps. A separate document describes the findings from the study focusing on the Australian Alps.

Key Terms

Landscape-scale biodiversity: a shift in policy away from individual species protection towards broader appreciation of the function, structure and composition of the landscape.

Institutions: these are the rules, norms, and strategies that shape the decision-making of individuals and organisations.

Governance: the processes through which people share power and responsibilities as decisions are made: by whom, for whom, and in whose interests. Institutions are integral to these processes.



Institutional diagnostics and misfits

An institutional diagnostic is a method for analysing institutions and how they fit with a purpose — in our case, biodiversity conservation. Institutional misfits occur when, for example, institutions provide a short-term solution to a long-term problem. Like a doctor diagnosing a patient, the diagnostic approach involves asking questions about current conditions in order to prescribe an appropriate course of treatment. The benefit of this approach is that it can be tailored to a specific context, and does not assume any single institutional design is 'best'.

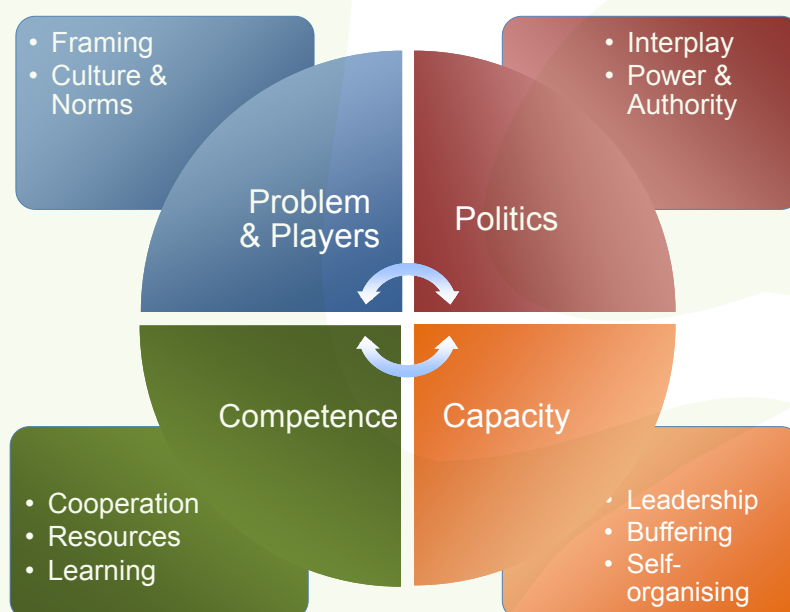
What is new?

What's new about our approach is the creation of an original framework to design fit-for-purpose biodiversity institutions (see figure at right).

The framework builds on the idea of adaptive governance, based on the need for institutions to be more nimble and responsive to cope with environmental and socio-economic changes. A key advantage of the framework is it can transform academic theories into user-friendly tool (see table on page 2).

Asking and answering the questions in the diagnostic also raises deeper, more specific questions, the answers to which help us understand current institutional conditions and where improvements can be made.

Framework Diagram



Further reading

Clement S (2012) *Biodiversity Governance in the Tasmanian Midlands and Australian Alps – a preliminary literature review*. Murdoch University, Perth, Western Australia.

Abbreviated Framework and Questions

Framework Component	Questions
Problems and Players	
Framing: Understanding the biodiversity conservation agenda, nature of the problem, and the range of solutions.	<ul style="list-style-type: none"> How is biodiversity conservation currently approached in this landscape and at what scale? What (and who) is contributing to biodiversity decline? Who can help solve it? What solutions have been employed and how have they worked?
Culture and norms: Both influence behaviour by 'defining' what is proper and improper behaviour.	<ul style="list-style-type: none"> How does organisational culture influence policy and its implementation? What are the norms influencing decisions to participate (or not participate) in biodiversity conservation?
Politics	
Interplay: Institutions interact across governance levels and geographic scales. Biodiversity institutions also interact with other institutions (for example, economics, agriculture).	<ul style="list-style-type: none"> How do approaches to conserving biodiversity influence each other? How do the different levels of governance interact? How do politics influence practice at each level? How do institutions in other areas interact with biodiversity conservation?
Power and authority: Institutions empower individuals and organisations to act and cooperate. Authority to conserve biodiversity provides an important safety net.	<ul style="list-style-type: none"> How is power distributed between individuals and organisations? Does sufficient authority exist to deal with key drivers and take action? Where does it exist? Are roles and responsibilities clearly delineated?
Practices – competence	
Cooperation: Biodiversity attributes and threats occur across properties, tenures and jurisdictions, requiring cooperation between actors and across scales and governance levels.	<ul style="list-style-type: none"> What is the current level of cooperation? Are there particular areas or objectives requiring greater cooperation? What conditions are hindering efforts to cooperate?
Resources: Knowledge, capability, and the commensurate resources and competencies are necessary to achieving conservation objectives.	<ul style="list-style-type: none"> Do individuals and organisations have the necessary human resources? (for example: skills, knowledge, quantity and quality of employees) Do individuals and organisations have the necessary financial resources? How well do policies on paper match the problem of biodiversity conservation in practice in this landscape?
Learning: A process of adjusting goals and approaches in response to experience and information. It can enable change and sustain practices.	<ul style="list-style-type: none"> How do individuals and organisations get feedback on current approaches? (for example: monitoring practices, sources of information) Do individuals and organisations reflect on current practices, and adjust in response?
Practices – capacity	
Leadership and entrepreneurship: Leadership can be structural, entrepreneurial and intellectual. It can come from any level of governance.	<ul style="list-style-type: none"> Who is taking the lead on biodiversity conservation, and how are they influencing outcomes and practices? Are there individuals and organisations adopting innovative approaches to policy or management? Are there factors constraining leadership capacity?
Buffering: Institutions must recognise thresholds and disturbances and respond to buffer ecosystems. Organisations need to buffer against changes in external environments to achieve objectives over the long term.	<ul style="list-style-type: none"> Are there multiple institutions and organisations addressing biodiversity conservation? Are there multiple approaches to addressing biodiversity decline in this landscape, or are most resources devoted to only one or two? How do organisations cope with external factors, like political influence and budget cuts?
Self-organising: Self-organising networks can build institutional memory, fill gaps in formal responsibilities, and provide capacity.	<ul style="list-style-type: none"> Are individuals and organisations empowered to self-organise and act locally? Are there informal and formal networks for sharing information and making decisions?

What we've learned from the institutional diagnostic

The institutional diagnostic was applied to investigate the current biodiversity conservation institutions active in the Tasmanian Midlands. It included depth interviews with 49 individuals from federal, state, and local government; non-governmental organisations; natural resource management groups; landholders; researchers; and government-owned corporations. Key findings include:

- A. The institutional focus on protecting listed, threatened native vegetation is a poor fit for the Tasmanian Midlands, where enhancing and maintaining ecosystem function in a 'working landscape' is a better fit.
- B. There is a strong expectation that payments will be made to private landholders for the conservation services they provide. This expectation needs to be carefully considered, as a much greater quantum and diversity of funding sources would be required to support this expectation.
- C. While biodiversity conservation requires long-term commitment, this can clash with short-term political and funding timeframes. Though the state government's [Protected Area on Private Land Program](#) has been a long term initiative, more ongoing support and monitoring is required.
- D. Some individuals and organisations have been willing to pursue innovative solutions, but resourcing and scaling up these efforts to a landscape scale is challenging.
- E. There is some reluctance by government agencies to decentralise decision-making power and be less prescriptive about how outcomes are achieved, which creates inefficiencies and can inhibit flexibility.
- F. There are many visions, with the Midlandscapes Conservation Action Plan being a notable example, but a shared vision across a wider spectrum of views is needed to achieve a truly landscape-scale approach.
- G. Economic and political drivers strongly influence individuals' land use decisions and government policy. Greater capacity to mitigate or direct this influence is needed in order to halt biodiversity decline and improve the ecological health of the landscape.

What were the strengths?

The diagnostic also revealed several key strengths in the existing arrangements:

- The establishment of the [Midlands Conservation Fund](#), a perpetual fund providing support for landholders who commit to a management agreement.
- Management agreements supported by this perpetual fund are outcome-focused.
- Strong efforts to self-organise and pursue solutions integrating socio-economic and conservation objectives are helping mitigate overwhelming economic influences.
- History of individuals within government and landholders working together.

The Language of Policy

In addition to the interviews, our diagnosis relied on document analysis using the Institutional Grammar Tool. For more information on the tool and our associated findings, see the separate summary on the hub's website.

Further reading

Clement S, Mitchell M, Lockwood M & Moore SA (2014) *Tasmanian Midlands: options to improve biodiversity governance arrangements*. Landscapes and Policy Hub, University of Tasmania, Hobart.

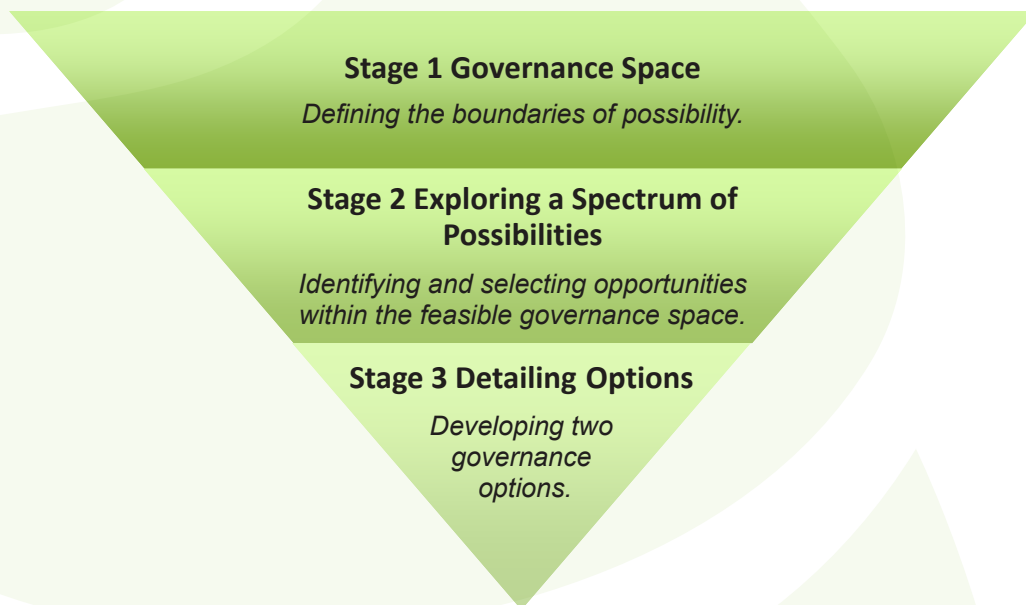
Clement S, Moore SA & Lockwood M (in press) Authority, responsibility and process in Australian biodiversity policy. *Environment and Planning Law Journal*.

Developing Governance Improvements

Our understanding of current institutional arrangements, gained through the diagnostic, identified strengths, institutional misfits and gaps. Collectively this information enabled development of proposals for altered governance arrangements to achieve better biodiversity outcomes. We developed two options for improving biodiversity governance in the Tasmanian Midlands and tested them in focus groups, one in Hobart with primarily government decision-makers and the other in Campbell Town with landholders and non-governmental organisations.

What is new about our approach is combining theoretical and practical understandings about the institutions and our knowledge of the midlands landscape to design the options. Although institutional design and reform are both frequently discussed in the literature, much of this discussion fails to connect general theoretical understandings to the practical reality of institutional environments. We did this through a three-stage approach (see figure below). A snapshot of each stage follows.

The process of governance development



Snapshot of Stage 1: Governance Space

In this stage, we considered the factors limiting the feasible extent of change. These include Australia's system of government, political environment, and the Tasmanian Midlands context. Each of these has implications for potential governance options.

For example, given that the Tasmanian Midlands is a largely privately-owned landscape landholder and others are unlikely to accept further limitations on private property rights for the benefit of biodiversity. Landholders are thus critically important decision-makers. Private ownership also limits more radical governance options involving increased government control, such as declaring the area as a protected landscape.

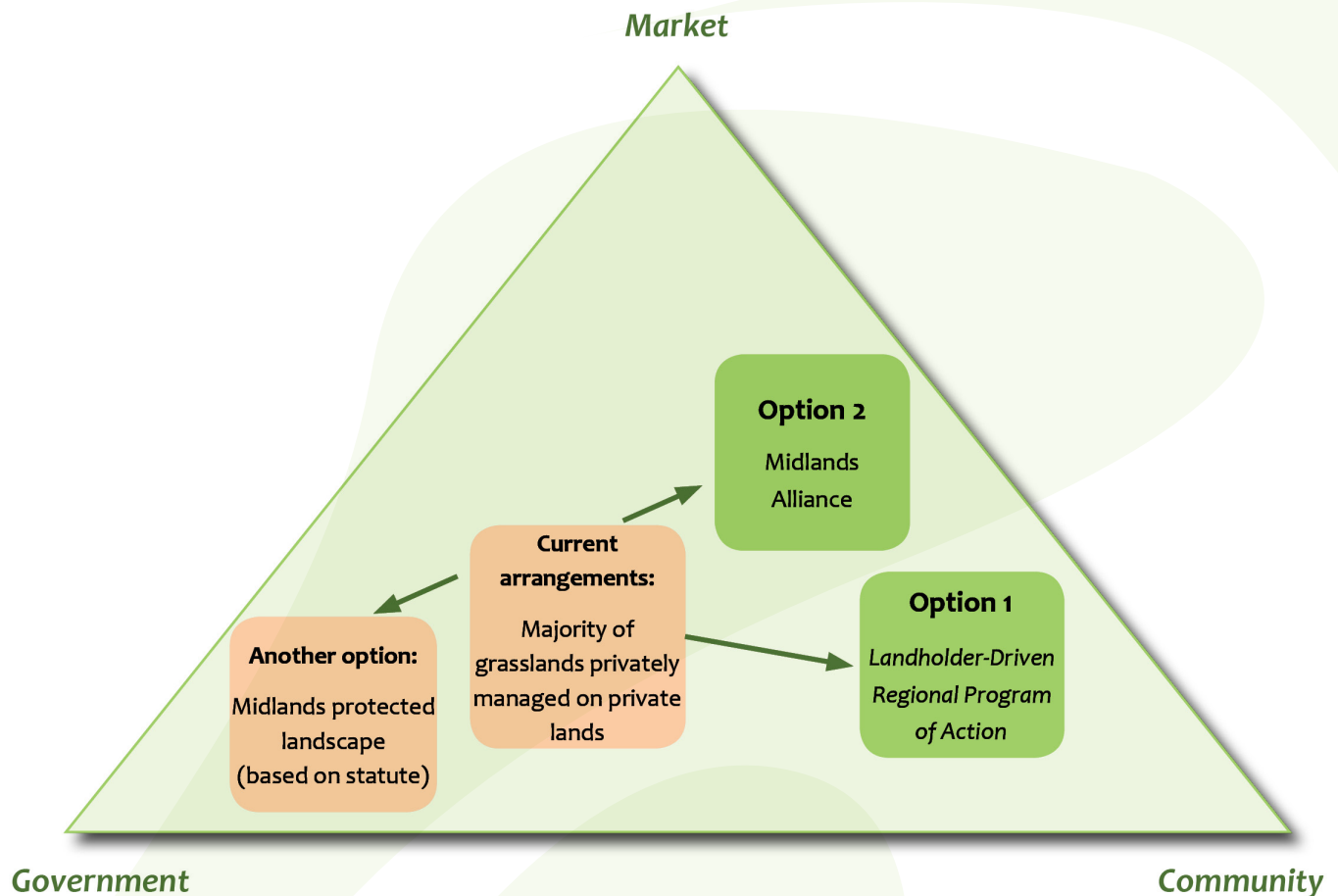
Snapshot of Stage 2: Option mapping

In this stage we identified a range of options from good practice case studies. We considered how each of these options might address the gaps and institutional misfits found in the diagnostic. Importantly, we also considered how they could build on the strengths of existing efforts.

We placed all of these on a 'map', and we revised both the options and the map in response to focus group feedback. In particular, the 'landholder-driven regional program of action' was added in response to strong interest in such an option.

Selecting Governance Options for the Tasmanian Midlands

Map of Possible Governance Options



Snapshot of Stage 3: Detailing options

We then detailed two different governance options, drawing on findings of the diagnostic as a checklist (see table on page 7), and gaining insights from literature on what has worked elsewhere. The two options are summarised below. Refer to ‘further reading’ for more detailed information.

OPTION 1: Landholder-Driven Regional Program of Action.

The option assists landholders to develop strategies to meet agreed biodiversity outcomes, outlined in a regional program of action. It is a ‘bottom up’ model, establishing a working group of landholders with an appointed facilitator to develop a regional program that will meet both duty of care expectations for biodiversity and ensure rural livelihoods. This will require flexibility regarding how those outcomes are met. The working group could eventually be formalised and responsible for outlining the governance arrangements to facilitate delivery of the program of action under government oversight.

OPTION 2: The Midlands Alliance.

This option also supports landholder flexibility in achieving biodiversity outcomes. The key difference is broader stakeholder representation in a formalised alliance (a ten-year charter reviewed every five years). The alliance would use the Midlands Coordination Group (an existing group) as a conduit to develop a broader collaboration. Approaches under the alliance would focus on conserving the natural and cultural heritage of the region while bolstering rural development by, for example, pursuing accreditation schemes for produce, which would require meeting a set duty of care standard for biodiversity on private land.

How the options address the diagnostic findings

In developing the governance options of Stage 3, we used a checklist to ensure we addressed the key findings of the diagnostic. The summary of features in each options appears below in the table.

Diagnostic Finding*	Features of Each Option	
	Option 1: Landholder-led regional program of action	Option 2: The Midlands Alliance
Finding A <i>Need to re-frame biodiversity to better align with 'working landscape'</i>	<ul style="list-style-type: none"> Regional program built around the goal of maintaining and improving ecosystem function, with flexibility in how this is achieved. Landholders take the lead in identifying suitable, economically viable solutions. 	<ul style="list-style-type: none"> Regional program built around the goal of maintaining and improving ecosystem function, with flexibility in how this is achieved. Alliance has dual goal of conservation and maintaining rural livelihoods.
Findings B & C <i>Provision of long-term support and diverse funding sources</i>	<ul style="list-style-type: none"> Establishment of a perpetual trust fund, building on the strength of the Midlands Conservation Fund. Potential to pursue innovative funding options, especially because the approach has not been trialled with biodiversity in Australia. Efforts overseas (for example, Malpai Borderlands) offer some guidance. 	<ul style="list-style-type: none"> Establishment of a perpetual trust fund, building on the strength of the Midlands Conservation Fund, with co-contribution by government. Bolsters rural development through accreditation schemes for produce meeting a set duty of care standard for biodiversity on private land.
Finding D <i>Scaling up innovative efforts</i>	<ul style="list-style-type: none"> Provides institutional support and explicit permission for landholders and others to collaboratively pursue innovative solutions. 	<ul style="list-style-type: none"> The formalised Alliance approach means charter signatories have the institutional support to scale up successful pilot projects and smaller scale efforts.
Finding E <i>Providing greater decision-making autonomy</i>	<ul style="list-style-type: none"> Working party first develops the program of action, and then works collaboratively with government to ensure duty of care will be met. Potential to formally devolve decision-making by conducting a strategic assessment on the program. 	<ul style="list-style-type: none"> Regional Alliance accepts responsibility for implementing the program via the opt-in charter. Potential to formally devolve decision-making by conducting a strategic assessment on the program.
Finding F <i>Shared vision</i>	<ul style="list-style-type: none"> Establishing a shared vision is a crucial basis for the program of action. Focuses efforts beyond listed species and communities to enable broader engagement. Working party concept enables broad engagement, led by landholders who retain primary responsibility for conservation on their properties. 	<ul style="list-style-type: none"> Establishing a shared vision is a crucial basis for the program of action. Focuses efforts beyond listed species and communities to enable broader engagement. Builds on the Midlands Conservation Action Plan and formally engages a broader sector of the community.
Finding G <i>Coping with economic and political influence</i>	<ul style="list-style-type: none"> Enables explicit integration of economic objectives into the regional program of action. Building networks supportive of landscape-scale conservation can create political pressure and build social norms to conserve biodiversity. 	<ul style="list-style-type: none"> Enables explicit integration of rural development objectives into the regional program of action. A formal Alliance and charter could develop monitoring and sanctioning systems above and beyond current institutions.

* Letters correspond to summary of findings on page 4

Key findings

Using a diagnostic approach enabled us to understand current institutions, and develop recommendations for better addressing biodiversity conservation at a landscape scale.

Options for governance improvements should build on the strengths of existing arrangements. In the Tasmanian Midlands this includes:

- Expanding biodiversity beyond listed threatened species and ecological communities, and explicitly incorporate ecosystem function.
- Pursuing solutions that support the midlands as a 'working landscape'. This requires greater decision-making autonomy at the regional level and flexibility to meet agreed outcomes.
- Diversifying and expanding existing funding sources, and identifying policy instruments enabling complementary achievement of conservation and rural development objectives.

Who are the researchers involved?

Sarah Clement



Sarah is a human ecologist, whose PhD focuses on the social and institutional dimensions of environmental problems.

E: s.clement@murdoch.edu.au

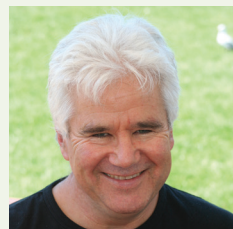
Professor Susan A Moore



Susan is a researcher in the environmental and conservation sciences at Murdoch University, WA.

E: s.moore@murdoch.edu.au

Dr Michael Lockwood



Michael is an environmental social scientist at the University of Tasmania.

E: Michael.Lockwood@utas.edu.au

Dr Michael Mitchell



Michael is a social researcher who specialises in the social dimensions of natural resource management.

E: Michael.Mitchell@utas.edu.au

Further Reading

Clement S, Mitchell M, Lockwood M & Moore SA (2014) *Tasmanian Midlands: options to improve biodiversity governance arrangements*. Landscapes and Policy Hub, University of Tasmania, Hobart.

About the NERP Landscapes and Policy Hub

The Landscapes and Policy Hub is one of five research hubs funded by the National Environmental Research Program (NERP) for four years (2011–2014) to study biodiversity conservation.

We integrate ecology and social science to provide guidance for policymakers on planning and managing biodiversity at a regional scale. We develop tools, techniques and policy options to integrate biodiversity into regional-scale planning.

The University of Tasmania hosts the hub.

www.nerplandscapes.edu.au



National Environmental Research Program



UNIVERSITY of TASMANIA



ANTARCTIC CLIMATE & ECOSYSTEMS CRC



Australian National University



Murdoch UNIVERSITY



Griffith UNIVERSITY



Charles Sturt University

December 2014