



Final Report

**Jurisdiction Report -
South Australia**

**National Framework
for the
Management and
Monitoring of
Australia's Native
Vegetation**

**Prepared for
Environment Australia
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URS

in association with

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1 Introduction

1.1 What is the National Vegetation Framework?

In June 1998, ANZECC agreed to the development and implementation of the National Framework for the Management and Monitoring of Australia's Native Vegetation (National Vegetation Framework). The intention of this policy initiative was to provide a unified, multilateral forum through which to pursue improvements to native vegetation management and monitoring.¹

In February 1999, ANZECC Standing Committee on Conservation (SCC) agreed that it would be appropriate to engage an independent consultant to conduct a preliminary assessment of the jurisdictions against the draft National Vegetation Framework. A report was subsequently produced - "Native Vegetation National Overview" - which documented the key challenges for vegetation management and monitoring within each jurisdiction.

For the purpose of the NVF, eight jurisdictions were identified in Australia comprising the 7 states and territories, and the Commonwealth. Following endorsement of the NVF and the jurisdiction interim Work Plans by ANZECC in December 1999, each jurisdiction continued preparation of an interim Work Plan that is considered to be the principal means of implementing the National Vegetation Framework. The Work Plans identified the vegetation management and monitoring activities, time frames for when each activity was to occur, responsibility for implementation of the activities and indicators for measurement of success.

The native vegetation outcomes being sought in the Framework are:²

- a reversal in the long-term decline in the extent and quality of Australia's native vegetation cover by:
 - conserving native vegetation, and substantially reducing land clearing;
 - conserving Australia's biodiversity; and
 - restoring, by means of substantially increased revegetation, the environmental values and productive capacity of Australia's degraded land and water;
- conservation and, where appropriate, restoration of native vegetation to maintain and enhance biodiversity, protect water quality and conserve soil resources, including on private managed land for agriculture, forestry and urban development;
- retention and enhancement of biodiversity and native vegetation at both regional and national levels; and
- an improvement in the condition of existing native vegetation.

¹ Environment Australia, n.d , *Consultancy Brief*, Canberra.

² ANZECC, 1999, National Framework for the Management and Monitoring of Australia's Native Vegetation, ACT.

The more specific vegetation outcomes being sought within the context of integrated natural resource management for the South Australian Work Plan are described in Section 3 below.

At the ANZECC July 2000 meeting it was agreed to publicly release the Work Plans. At the commencement of the evaluation in October 2000, the Commonwealth and ACT had publicly released their final version of the Work Plan, with interim work plans available from other jurisdictions.

1.2 Purpose of the evaluation

At the December 1999 meeting, the ANZEC SCC noted that an independent evaluation of progress against the National Vegetation Framework and the fulfilment of Work Plan Commitments should commence mid 2000, with the report presented to the Council at the December 2000 meeting.

ANZECC identified the purpose of the evaluation was 'to assess progress against the National Framework for the Monitoring of Australia's Native Vegetation and fulfilment of the Work Plan commitments' (that were developed by each jurisdiction). Incorporated into the evaluation process was the additional focus of evaluating the appropriateness and effectiveness of the Work Plans for achieving long term sustainable vegetation management. The Terms of Reference for the Evaluation are provided below.

Terms of Reference

A. Assessment of effectiveness of Work Plans and their implementation

1. Assess current vegetation management and monitoring practices in jurisdictions against those set out in the respective Work Plans and against best practice.
2. Assess anticipated long term vegetation management and monitoring outcomes against the Work Plans.
3. Assess progress by jurisdictions in meeting the Work Plan success measures within the identified timeframes.

B. Propose improvements

4. Propose improvements to Work Plan management mechanisms that are feasible, practical and relevant to jurisdictions and take into account best practice. Proposed improvements should be within the context of National Framework objectives.
5. Suggest a process for jurisdictions to review and refine Work Plans on a continuing basis, to provide, amongst other things, for improvements in understanding of how best to achieve best practice native vegetation management.

C. Propose suitable ongoing independent evaluation arrangements

Propose a mechanism and time frame for independent evaluation of Work Plans on an ongoing basis, noting that vegetation management and monitoring activities are to be evaluated against agreed native vegetation outcomes and identified best practice.

D. Assess progress against the National Framework for the Management and monitoring of Australia's native vegetation

Evaluate how far actions in Work Plans enable each jurisdiction to achieve the vision and principles underpinning the National Framework especially the national goal to reverse the long-term decline of native vegetation in Australia.

The evaluation examined the performance of the jurisdiction Work Plans, from the release of NVF by ANZECC in December 1999, until September 2000. Our work examined the vegetation management and monitoring activities undertaken by the lead agencies in each jurisdiction that contribute to the progress of the Work Plan.

The review was implemented within a tight time frame to meet the reporting requirements of ANZECC. State agencies were the primary contributor to the Jurisdiction Work Plan evaluation. Other non-government stakeholders' views were also sought to contribute to the evaluation, but the timetable contributed to a reduced level of interaction by some stakeholders. A list of participants involved in this jurisdiction review is provided in Annex 4.

2 Evaluation approach & methodology

2.1 Evaluation approach

A central component of the evaluation was to devise an effective method that would allow evaluation of the eight jurisdictions Work Plans in a restricted time frame, while still allowing for jurisdiction input and discussion. The following describes the approach and method used to evaluate the jurisdiction Work Plans. Copies of the supporting documents used for the evaluation are available in the Annex.

The approach to the evaluation consisted of the following :

- **Team meeting to confirm evaluation approach** – all members of the team that were leading the evaluation in the various jurisdictions met over a two day period, shortly after signing of the contract. The purpose of this meeting was to ensure an evaluation approach was devised that addressed the Terms of Reference and ensure that all members of the team had an opportunity to input and understand the agreed approach to ensure consistency in data-gathering and familiarity with process.
- **Contact with jurisdictions** – managers of each Jurisdiction evaluation directly contacted agency stakeholders to inform them of the NVF evaluation process and invite participation. A time for a stakeholder meeting to be undertaken to discuss the Work Plan was confirmed.
- **Pre-meeting preparation** – Due to time limitations, a preliminary desk-top analysis was undertaken by the consultant team, reviewing the South Australian Work Plan against a number of criteria. This information was circulated to all participants prior to the Work Plan evaluation meeting to allow for stakeholder review.
- **Jurisdiction meeting** – a jurisdiction meeting was conducted to discuss progress of Work Plan and identify opportunities for improvement. The process used during the meeting is described in Section 2.2.
- **Draft jurisdiction report** - the manager for each jurisdiction evaluation prepared a draft report that documented the outcomes from the jurisdiction meeting and included points made during consultation with other stakeholders such as non-Government agencies and select interest groups external to the formal jurisdiction evaluation meeting.
- **Jurisdiction review** –the draft jurisdiction report was then sent to participants in the South Australian Work Plan evaluation meeting for comment.
- **Jurisdiction final report** Comments were then incorporated into the South Australian jurisdiction report and presented to Environment Australia as the Final Jurisdiction Report.

2.2 Evaluation method

A consistent approach was employed in each jurisdiction meeting to address the Terms of Reference. Each section is briefly described below.

Session A Review Work Plan against Key Challenges

Key Challenges were identified for each jurisdiction in the Dore Report. As these were developed prior to the Work Plans, they were presumed to be drivers for the Work Plan Actions. Therefore, to determine the effectiveness of the Work Plans, the Actions were reviewed to determine how well they address the challenges. A matrix was prepared that compared South Australian key challenges with Work Plan actions and level of influence. For each Management and Monitoring Mechanism (MMM), a rating was given for the level of influence each action could have in addressing the Key Challenge for that mechanism.

Following discussions with the primary South Australian Work Plan contact, the draft matrix was presented at the Jurisdiction meeting and revised for its validity and for the individual and collective impact of the action(s) in addressing all the key challenges listed for the Jurisdiction. Modifications to the list of Actions was made to increase the beneficial impact on the Key Challenges and applicability of the Key Challenges for their current relevance to the achievement of the outcomes listed in the NVF. Where Key Challenges have become less relevant – i.e. they have been addressed or the program has moved in a different direction; the need for contributing actions was reviewed. Where new challenges were identified these were incorporated into the Work Plan.

Session B. Assessment of Work Plan Success Measures

In order to evaluate Work Plan progress, quantification of achievements was provided against the Success Measures (or Performance Indicators) for each Work Plan activity. For each listed Success Measure, quantified information on the achievement to date was provided by the jurisdiction and further discussed during the evaluation meeting. If no progress had been made, this was also noted and discussed during the meeting (what was the reason for lack of progress, what needed to change etc.) Where performance indicators were deemed inappropriate, these were reviewed and amended during the evaluation meeting.

Session C Appropriateness of Work Plan Activities against the NVF Management and Monitoring Outcomes

Our initial reading of the NVF, the Dore report and the individual Work Plans suggested that the relationship between the management mechanisms in the Work Plans and the Key Challenges is generally straightforward. However the relationship with the Desired Outcomes in the NVF was less so.

Our approach to assessing this relationship was to test how well the individual actions in the Work Plans contributed to the Desired Outcomes using another matrix.

Each action for each Management and Monitoring Mechanism (rows) was assessed with regard to contribution to the NVF Desired Outcome, (columns). The rating criteria used in Section A (High/Medium/Low/No Influence) was applied in Section C.

Recognising that a desk-top assessment was undertaken subjectively, and relying on limited information, the jurisdiction evaluation meeting was used to review the matrix for its validity and the implications for achievement of the NVF outcomes. The jurisdiction meeting was then used to modify the list of Actions to improve contribution to the achievement of the NVF Desired Outcomes where necessary.

Session D Best Management Practices

A key criteria of the Terms of Reference was to determine if and how Best Management Practices (BMP) are being applied when undertaking vegetation Management and Monitoring Mechanisms and Activities in each jurisdiction.

The National Vegetation Framework identifies a range of BMPs against the seven Management and Monitoring Mechanisms. Due to the time limitations associated with the evaluation, the URS/Griffin nrm team nominated one Management and Monitoring Mechanism per jurisdiction that will be investigated in depth from a Best Management Practice perspective during the jurisdiction meeting, rather than the entire set of MMM's. This process will, across the jurisdictions, address the range of BMP's identified in the ANZECC framework for the nominated mechanism, and be reported as a Case Study in the relevant jurisdiction report.

For South Australia, the Best Management Practice for *Planning and Assessment* was used as the Case Study example. The ANZECC framework BMPs were used as the main guide to review Planning and Assessment as a Management and Monitoring Mechanism for South Australia. This information was then compiled into a 'snap shot' of BMP for inclusion into the Jurisdiction report.

Session E Visioning - evaluation of overall progress and likely long term impact of the National Vegetation Framework

This session in the Jurisdiction evaluation meeting looked collectively at the Visions in the Work Plans to assess how effectively the mechanisms being implemented now, will achieve those Visions in future. Plausible process methods were used for this assessment. In using plausible process, you work back from a major goal or vision to identify what would be needed now to achieve the goal or vision within anticipated timeframes.

For instance, if an overall goal is to better integrate management of native vegetation management, you might expect the work plans to include management and monitoring measures which will effectively support integrated management. If an overall goal is to attain a net gain in extent and quality of native vegetation, then the work plans ought to include measures which are likely to have the effect of controlling clearing and/or compensating with equivalent plantings within the anticipated timeframe of the Framework.

From this type of assessment, a number of key indicators of overall progress were identified and analysed to evaluate the likely long-term impact of the National Vegetation Framework.

3 South Australian work plan output

3.1 South Australian Work Plan – Setting the scene

The South Australian Work Plan was compiled by Dr Bob Inns, Manager of the Biodiversity Policy and Planning Section, Heritage & Biodiversity Division, Department for Environment & Heritage (DEH). Current jurisdiction vegetation programs and actions were inserted into the framework model. Some background information has been included as a prelude to the various Actions listed under the Management and Monitoring Mechanisms identified in the South Australian Work Plan.

The Heritage and Biodiversity Division has its own Biodiversity Plan, and involvement in the NVF is a component of the bigger plan, the Biodiversity Directions Action Strategy which is modelled on the National Strategy for the Conservation of Australia's Biological Diversity. All regions in the state are developing Action Plans to address the overall goal of the National Strategy for the Conservation of Australia's Biological Diversity.

Initial timeframes for states to prepare Work Plans was too short. Primary Industries and Resources SA (PIRSA) made some comment on the initial Work Plan, but had little involvement overall, and this is reflected in the Work Plan. It should be noted that the SCARM representative on the ANZECC Framework Working Group was from PIRSA. The interim Work Plan was circulated to the SA Farmers Federation, Nature Conservation Society of SA and some other stakeholders.

The State is currently preparing a draft Integrated Natural Resource Management bill with a Cabinet submission scheduled for December 2000. The bill is proposing a process for coordinating programs across agencies and facilitating future change. It will not attempt to change existing legislation. It is recognised that there is a need for better linking and coordination between departments to get a total overview and the time is considered now to be right for this to proceed. In practice, there are currently few established linkages that enable integration of vegetation activities in the jurisdiction Work Plan between PIRSA and DEH (departments identified with primary responsibility for native vegetation management). In addition, others with some vegetation management responsibilities such as Department of Water Resources, Forestry SA and Transport SA, do not have strong links with the current Work Plan. The intent of the new bill is to facilitate better integration in future.

3.2 Linking the Work Plan with Key Challenges

The agreed levels of influence that Management and Monitoring Mechanisms have toward addressing the Key Challenges are listed in the Annex 2. All Key Challenges have at least one relevant Action directed towards achieving a balanced outcome, but there are a few areas where Actions are weak. The consultation highlighted some minor adjustments to several Key Challenges and areas where an Action could be added or amended are suggested in the following sections.

3.2.1 Planning & assessment

Key Challenge 3 is *Develop efficient mechanisms for updating and maintaining the baseline data that has been collected*. An Action should be added to cover this. Data base management is occurring but no action is outlined.

Key Challenge 5 was not considered to be ideal, and as written is more like a target. Planning is an ongoing function. Reword as *Facilitate the various regional planning efforts being undertaken by DEH, PIRSA, Soil Boards & CWMBs*.

Regional Vegetation Management Planning section should have Actions that include the roles of Local Government and others in regional biodiversity planning.

Key Challenge: *Ensure that native vegetation (remnant, reveg etc) is considered within the biodiversity & sustainable agriculture context of integrated NRM*. For this to be achieved there must be a lot of co-ordination at agency level to ensure ongoing support for the role of integrated NRM groups at regional level. There must also be cross-agency coordination and cooperation.

3.2.2 Reserve system

There are gaps in Actions for addressing the Key Challenge: *Improve linkages between on and off-reserve conservation mechanisms*.

The intent of Key Challenge 3 was not clear- *Use the budget process to strengthen the linkages between Reserve Management plans and yearly operational plans*.

3.2.3 Communication & capacity building

Key Challenge relating to supporting the emerging role of NHT coordinators in targeting extension programs to effectively deliver the objectives of regional strategies and programs – the workshop participants thought it was important to ensure that those programs continued.

3.2.4 Regulatory arrangements

The first facet of the Key Challenge, *Clarify responsibilities for the management of crown lands that lie outside the responsibility of state NRM agencies*, was not clear to any one at the workshop. The second facet was acceptable.

It is clear that in order to address in full the second Key Challenge under this MMM, the Action *Provide recommendations and amend legislation*, should be split into two Actions. The legislation must be amended, but this is subject to political constraints.

3.2.5 Monitoring & evaluation

Key Challenge: *Develop formal links between data collection, management & State-wide indicators, including the establishment of baseline indicators that are supported by data*. An Action to cover the formal linkage is needed. There are linkages within the data

collection system itself, as representatives from all groups involved in data collection, data maintenance and survey are on the Biological Survey Co-ordinating Committee.

A definite lack has been identified regarding the use of indicators for identifying knowledge gaps, to inform decision-makers and guide policy priorities for example. There is a weak connection between the State of Environment reporting and Departments and the current process was not really serving the needs of the Departments for reporting and assessment.

Key Challenge: Develop indicators at finer scales including the distribution of ecological communities – It is hard to identify where indicators are being developed. An Action needs to be developed to cover the ‘distribution of ecological communities’, probably under a different MMM, as well as relevant indicators.

Key Challenge: Develop cost effective measures of the condition of areas of native vegetation to guide management priorities and decisions. The NVIS will eventually develop indicators at a broad scale. Some direct Actions relating to condition assessment would seem to be warranted now that much of the baseline data has been collected.

3.3 Measuring Work Plan success

Progress in the State against the listed Success Measures, or Performance Indicators, have been reported in the SA Work Plan (Annex 1). Quantified indications of achievement to date have been provided wherever possible. Some information was supplied prior to the jurisdiction workshop, and the remainder obtained during the workshop from relevant officers responsible for the action.

3.4 Linking Work Plan outputs with National Vegetation Framework desired outcomes

The Work Plans indicate linkages between the Activities and MMMs but not necessarily between Activities and Outcomes. The appropriateness of Activities in the Work Plan with respect to the National Framework’s Desired Outcomes was evaluated using rating criteria as follows:

- *High influence* – The Action has direct relationship to the Desired Outcome and when implemented will have a high impact in addressing the Challenge;
- *Medium influence* – the Action has a moderate to high relationship to the Desired Outcome and when implemented will have a moderate impact in addressing the Challenge; or only some relationship but with a high impact.
- *Low influence* – the Action has some relationship to the Desired Outcome but when implemented will have only a low impact in addressing the Challenge; and
- *No influence* – the Action may have some relationship to the Desired Outcome but when implemented it will have no effective impact in addressing the Challenge.

Results from the jurisdiction consultation are reported in the Annex 3. Results have been summarised to show the main areas where Desired Outcomes of the NVF have not been addressed adequately by Actions in the Work Plan.

Table 1 : Summary of linkages are between the SA Work Plan Actions and NVF Desired Outcomes*

Outcome category	Roles & Responsibilities of Government	Planning & Assessment	Formal Reserve System	Communication & Capacity Building	Incentives	Regulatory Mechanisms	Monitoring & Evaluation
Biodiversity							
Soil & water resources							
Hydrology							
Land productivity							
Sustainable land use							
Natural & cultural heritage							
Indigenous peoples							
Climate change							

* note shaded areas depict areas of strong links with the NVF desired outcomes, non-shaded areas identify those that have weaker links to the NVF desired outcomes.

3.5 Best Management Practices – Planning and Assessment

As a case study for the evaluation we looked at current practices in SA and how they compared with best management practices related to the ‘Planning and Assessment’ Management and Monitoring Mechanism under the NVF. The following section briefly summarises best management practice as it relates to ‘Planning and Assessment’ in the SA Work Plan.

3.5.1 Vegetation inventory, data collection and mapping

Much of the state’s work in this area occurs under the Biological Survey of SA program, managed by Dr A Robinson. Systematic surveys of the state’s flora and fauna commenced in 1985, with 72% coverage achieved to date. There is an ongoing 10 year program to complete the initial baseline assessment of the State’s biodiversity based on vascular plants and vertebrates. All sampling quadrats are permanently marked in the field therefore replication is possible. A one-off assessment of condition is made. A quantitative set of attributes is used for pastoral lands assessment to include changes in condition. The baseline is established in pastoral areas.

Site sampling is appropriately scaled, sampling methods are standard and all site data is contained in the Oracle data base.

Mapping is a significant component of the approach to the Biological Survey, with mapping responsibility shared between National Parks and Wildlife SA and Planning SA. There is standardisation in procedures and mapping.

The Biological Survey will continue and complete coverage by 2015 at current funding levels. Best practice is adopted for development and storage of vegetation maps, however the constraints of funding have an impact on the degree of adoption. The current GIS vegetation map cover in SA is one of the top 3 vegetation classification and mapping databases in Australia. Vegetation mapping fields have been converted to NVIS standards.

3.5.2 Biodiversity status assessment

In SA, vegetation condition is assessed and an interpretation included into mapping. Interpretation and mapping of pre-European vegetation is ongoing and assists to determine vegetation condition assessment at the time of monitoring and data recording. There is progress toward providing percentage figures for the original vegetation coverage remaining with one area completed.

There was uncertainty on what was meant in the jurisdiction by the wording of the BMP in the NVF: 'target or purpose for conservation, including scientific and community based targets'. This is perhaps because targets are not generally utilised as a management tool in vegetation management in SA.

There is adoption in practice in SA of all BMPs under both the Broad-scale and Local-scale assessment components of the NVF.

There is a strong link in SA between the Biodiversity Status Assessment component of the MMM and the Reserve System MMM and best practices should be linked.

The SA Work Plan Actions address conservation status rather than assessment of the conservation status and perhaps belong under Reserve System. 15 IBRA regions and the state's unique 382 Environmental Associations have been largely defined and priorities assigned. The Work Plans do not reflect best practice in the wording, but all NVF BMPs are adopted at varying degrees in practice.

Ongoing Assessment of Biodiversity Status and conservation status will be reliant upon assessment of change in condition. The relevant BMP is found under 'Monitoring & Evaluation' in the NVF although in the SA Work Plan Biodiversity Status Assessment is placed under the Planning and Assessment MMM. This is just a problem with the way BMPs are categorised in the NVF. The State felt that there was ambiguity surrounding best practice that refers to measuring vegetation condition – and they asked the question, "is assessment of change implied?" There is overlap in best practice between Vegetation Inventory, Data Collection and Monitoring and Evaluation MMM (Cover & Condition Monitoring) because the two are linked in practice. Again, this could be solved by having references in the NVF to look at other related BMPs.

Biodiversity Status Assessment is a component of the Regional Biodiversity Planning mechanism in SA. Initially regional biodiversity information is collated, including significant species and plant communities and main conservation threats. Community consultation is utilised to assist in identifying key issues and priorities and developing strategies for achieving on-ground conservation actions.

3.5.3 Regional vegetation management planning

Regional Biodiversity Planning was established in 1997 to develop plans based on the bioregions of SA. The community is consulted regionally.

The Plans are intended to provide a guide to priority on-ground actions for the conservation, management and rehabilitation of species and vegetation communities and provide a framework for integrating biodiversity conservation with agricultural production.

The vision for Regional Biodiversity Plans is: *Together, we will conserve, rehabilitate and manage SA's biodiversity for future generations.*

The program objectives are to:

- Improve our knowledge of biodiversity;
- Provide a strategic focus for the conservation of biodiversity;
- Provide guidance on priority conservation actions;
- Promote community awareness, understanding and involvement in biodiversity conservation; and
- Integrate biodiversity conservation actions with other natural resource management plans and strategies.

The program is a partnership between the Department of Environment and Heritage, the SA Farmers Federation, the Nature Conservation Society of SA and the Local Government Association.

Five Regional Biodiversity Plans have been completed and the agricultural region of SA will be covered by 2001 end. There is some targeting of areas for Heritage Agreements and these have statutory protection. There are projects for corridor development to link fragments.

3.6 Evaluating against NVF vision and goals

A general discussion on overall progress in Vegetation Management was undertaken in the workshop. South Australia's progress in meeting the vision and goals of the NVF is documented in Annex 5. There was not enough time available to fully explore the likely impact of the NVF in the workshop, but details of progress towards the NVF vision served to highlight gaps. Some gaps are due to a lack of input from other agencies to the Work Plan (eg, PIRSA and Forestry SA), which can be remedied in future. The major points from this exercise are noted here.

The lack of a cohesive, comprehensive and co-ordinated statewide planning approach is clear. The other major gap identified by this process was the lack of an evaluation system that incorporates the use of monitoring, targets, benchmarking and performance indicators. There is a lack of connection between an evaluation system relating to vegetation/biodiversity management and State of the Environment Reporting. The need for better linkages between planning and decision making and research carried out has been noted with respect to Park management.

In order to address threatening processes in a comprehensive and strategic manner, all agencies must be involved. This gap is due to the lack of an integrated institutional response to NRM issues and management. The current proposed legislative bill must take account of these needs. The comprehensive legislative framework is achieving reversal in the extent of clearing, however, in effect, the decline in quality of vegetation due to other threatening processes is not adequately addressed. It is not clear if this is due to flaws in legislation or lack of resources and co-ordination to implement the necessary programs and policies.

A level of baseline data is on the way to being finished covering the State's biodiversity through the Biological Survey program. This has empowered those responsible for biodiversity management as they are now in a position to take stock and start making strategic plans and decisions and to negotiate for a larger slice of NRM funding.

The Heritage Agreement scheme has been very successful in bringing private land under conservation management, but other levels of entry were seen as necessary for private land owners wanting to be involved but on a different footing (Land for Wildlife, sanctuaries).

4 Evaluation of progress against Work Plan commitments and the National Framework

4.1 Assessment of the effectiveness of the SA Work Plan and its implementation

4.1.1 Current practices assessed against Work Plans and best practice

Currently, most of the management and monitoring practices carried out by South Australia have been slotted into the obvious section of the Work Plan, thereby giving the Actions relevance in terms of the overall National Framework. The process of consultation highlighted a few vegetation management and monitoring activities that were not reflected in the Work Plan. These activities can be incorporated into the Current Work Plan, and are listed in Section 3.2. The state is well on the way to best practice with most of its management and monitoring practices, however, some important gaps have been highlighted by this review. Some of these flaws can be linked with flaws in the NVF.

A significant achievement has been the launch of the Strategy for Aboriginal Managed Lands in SA (SAMLISA) initiative in February 2000. Aboriginal lands comprise 20% of the State. Funding has been provided through PIRSA and the Bushcare project Aboriginal Lands On Ground Works for on-ground projects that comply with SAMLISA and the NHT. Reference to these and other related Actions need to be included in the Work Plan. Some most noticeable gaps are:

Roles and Responsibilities of Government – policy and evaluation components are missing from the Work Plan. It is not clear whether effectiveness is reduced as a result because the scope of the evaluation did not allow exploration of this important aspect. The NVF itself does not develop the important role of the State in the development of policies and standards relevant to native vegetation management.

The cost-sharing practices and models have been successful and it was suggested that it was time to review this area. There was not enough time in the evaluation to explore this in detail.

Monitoring and evaluation – baseline monitoring is progressing along best practice lines, but assessment of change is not occurring in any depth other than Rangelands. There is a need to develop formal and robust links between data collection and management and performance assessment and reporting.

Evaluation based upon a best practice model is not well placed in the NVF, therefore, the State will have difficulty improving its practices within the confines of the NVF.

Biodiversity Status Assessment and Reserve System

A link between these components could be made in the Work Plan for clarity in placing Actions and in meeting the objectives of the NVF.

4.1.2 Anticipated long term vegetation management and monitoring outcomes and Work Plan alignment

Long term outcomes may be realised in many cases in practice but not reflected in the Work Plan. Closer collaboration of relevant agencies in review of the Work Plan will reflect other Actions that address some of these gaps. Clearly climate change and indigenous people outcomes are less than desired under the NVF. Soil, water and land use/productivity gaps reflect a lack of input from PIRSA so it was not possible to determine overall State progress in these areas currently. Dryland salinity amelioration and revegetation is significantly under-actioned in the Work Plan.

4.1.3 Progress in meeting Work Plan Success Measures within identified timeframes

Generally there has been exceptional correlation between timeframe and accomplishment of Actions. Most delays were not irregular, but caused primarily by funding and resourcing deficiencies.

4.2 Proposed Improvements to the South Australian Work Plan

4.2.1 Proposed improvements to Work Plan management mechanisms

Several suggestions to improve Actions, to add Actions or alter Success Measures (performance indicators) can be found in section 3. More substantially, the following suggestions relate to improvements to Management & Monitoring Mechanisms in the NVF itself. These changes are suggested for the purposes of improving the effectiveness of South Australia's Work Plan as a management tool.

Separation and recombination or linkage of two of the Management & Monitoring Mechanisms as outlined in the NVF is proposed to place emphasis on the effective combination of Work Plan Actions toward the vision of the NVF: 'Planning and Assessment' and 'Monitoring and Evaluation'. There is ambiguity surrounding the subjects 'Assessment' 'Evaluation' and 'Monitoring'.

- 'Planning' (inclusive of policy and evaluation) makes adaptive decisions and policies in light of the information supplied from the monitoring and assessment areas. 'Planning' and 'Evaluation' are logically grouped if evaluation is to be at all effective.
- 'Evaluation' as a MMM in the NVF itself is not well documented. Evaluation should be a tool for continuous improvement. Evaluation will improve resource allocation and implementation. It measures effectiveness and efficiency. It links inputs, outputs and outcomes. Most importantly, it identifies future risks.*
- The area of performance assessment and reporting which is an important aspect of planning and evaluation in a continuous improvement system is severely underdeveloped in SA. The development of targets and performance indicators as a basis for program evaluation are necessary components of the set of information available to management for good ongoing adaptive management.
- 'Monitoring' is the collection of data on an ongoing basis for aspects that Management wants to evaluate.
- 'Assessment' is *interpretation* of the condition and stock of vegetation/biodiversity and entails technical analysis. It should be related to targets and performance indicators set by management.

- The BMP for Monitoring & Evaluation is listed under 'Regional Vegetation Management Planning' in the NVF, but it also applies to every other plan and program including at agency level, which do not have a reference to such a BMP, so it is therefore misplaced. This should be strategically moved to a major heading within 'Planning and Evaluation' (ie, monitoring provides input to Planning & Evaluation and involves analysis or assessment of the data)
- Currently Actions for Cover & Condition Monitoring (MMM Monitoring & Evaluation) are aligned with Actions for Vegetation Inventory, Data Collection & Mapping in practice, but vastly separated in the Work Plan. Vegetation Inventory, Data Collection & Mapping & Cover & Condition Monitoring are the basis of assessment of the stock of vegetation/biodiversity. Clearly the various aspects of these two MMMs are linked and should be more logically grouped.

*The NVF unhelpfully assigns two dot points only under Cover & Condition Monitoring and a section under Regional Vegetation Management Planning. These should be reworked and developed into a section to adequately cover evaluation. The Best Practices under Cover & Condition Monitoring that more appropriately relate to Evaluation are:

- Inclusion of feedback loops and mechanisms to incorporate outcomes of the monitoring strategy into policy review or development and land management practices; and
- Appropriate dissemination/communication of the information component of monitoring activities.

Continued emphasis on the NVF and reference to other states' performance will provide good benchmarking opportunities for reference by management.

Staff with the scientific background to advise policy, planning and evaluation must be the interpretive interface between the monitoring area and the policy and evaluation area.

The specific inclusion of Targets would improve quantification of Actions. Not all Actions would require a target.

The Timeframe column could be used to give an estimated range of times for phases and to allow for uncertainty in some cases. This would improve flexibility and adaptability of the Plan and give better reporting against success measures.

Funding constraints have some impact upon the achievement of some Actions. Dependence upon funding should be written into the Work Plan and Success Measures to enable the roll-over of Actions subject to barriers. A flag in the Work Plan would enable reporting of the degree of hindrance or consequence to Actions based on funding or other delays.

4.2.2 Suggested process for review & refinement of Work Plans

A State NVF committee is proposed.

- Comprised of management representatives from most relevant departments and divisions.

- Would need to meet on a periodic basis, perhaps quarterly, to review and report progress with Work Plans.
- Greater integration of the Work Plan concept with agency planning should be an initial focus along with prioritisation of MMMs. The preliminary discussion on the proposed state legislation on NRM must take account of the NVF and the Work Plan concept.
- The Chair or other nominated person would be required to have independence from other agencies and have power to manage the process in line with the requirements of the NVF.
- The role of the Native Vegetation Council should also be considered and whether it is appropriate for them to be on the committee or provide a Chair.
- A jurisdiction NVF evaluation program should be implemented and integral to Departmental planning cycles.

4.3 South Australian Progress assessed against the National Vegetation Framework

South Australia is progressing well with the management of vegetation and biodiversity, but it is the overall integration of management at all levels and across all agencies that is not on par with the NVF's vision and principles. This definitely will require a significant effort and will to succeed by all stakeholders. The NGO stakeholders have been progressing well although do not have their Actions recorded in the Work Plan. The efforts of the Nature Conservation Society of SA and Trees for Life (Bush for Life) are to be commended. It would be sobering to know what the number of NGO volunteer hours are that contribute to the goal of the NVF.

Certain aspects where the State is also progressing well such as with native vegetation legislation have some less than ideal outcomes. An example is the clearing for agricultural or residential purposes of scattered but significant trees in a landscape with little overall remaining biomass. Such clearance represents a loss of propagules of local provenance and adds to greater fragmentation of that which does remain even if the clearance has been approved by a trade-off such as revegetation.

There is a lack of clear knowledge on the change in condition of the overall cover and extent of vegetation in a state where levels are already relatively low.

It would appear that the State still faces a significant challenge in overcoming threatening processes for much of the state's vegetation in the agricultural regions. This reflects a lack of recognition on the behalf of landowners and their political allies that protecting existing vegetation is the most efficient way of conserving biodiversity. There could be greater exploration of the trade-offs, incentives and alternative options available to landowners.

Threatening processes are a major cause of decline in the extent and condition of native vegetation, and these are not given a clear management and monitoring mechanism within the NVF. This is reflected in the lack of cohesion in attention to ameliorating threatening processes within the State's Work Plan. To be effective, threatened species and ecological community protection needs more than regulatory protection.

4.4 Proposed Ongoing Independent Evaluation Arrangements

Future independent evaluations would profitably cover in depth the assessment of best practice for each Management & Monitoring Mechanism. This could be carried out successively after prioritisation of the Management & Monitoring Mechanisms had selected a strategic order of attack.

Future evaluations should review the jurisdiction progress from the top down, ie, review management structures, policies and evaluation system across Departments.

More time in preparation for future evaluations would allow better preparation and cost-effectiveness, as the people that must be consulted often have limited availability and time to dedicate to the process. Ongoing evaluations might only occur every three to five years if the jurisdiction implemented its own integrated evaluation program.

5 Conclusions and recommendations

Key Challenges for the State identified in the Dore Report have been addressed in the SA Work Plan. There are, however, some areas where Actions are weak to adequately address the Key Challenges. These have been identified by the Evaluation and are listed in Section 3.2.

Recommendation 1: That adjustments to some Key Challenges in line with present circumstances occur and that Actions be added or amended in the SA Work Plan as listed in Section 3.2.

The SA Work Plan indicates linkages between Activities and MMMs but not necessarily between Activities and Outcomes. A number of Outcomes are not currently adequately covered by Actions in the Work Plan although it is not clear whether other agencies with less than desired input to the WP are covering these areas. Further attention to input from other relevant agencies will be necessary in the near future to make the Work Plans more comprehensive.

Integrated management of the State's vegetation is improving but much hinges on the successful proposal and implementation of the Integrated NRM legislation to really allow movement to a position of strength. It is acknowledged that this is an evolutionary process, but it will be critical to the success of the initiative for goodwill and best practice based on good models to be adopted. The integration of biodiversity, amenity and agriculture whilst accounting for climate change, salinity, and social and economic drivers is overdue. Dryland salinity amelioration and revegetation are significantly under-actioned in the Work Plan.

Recommendation 2: that the following outcome categories be reviewed for action by all relevant Departments (Climate Change, Indigenous Peoples, Natural & Cultural Heritage, Sustainable Land Use, Hydrology and Soil & Water Resources).

Recommendation 3: that the MMMs for Roles & Responsibilities of Governments; Planning & Assessment and Monitoring & Evaluation receive particular attention at the review of the Work Plan by the State as they relate to NVF Desired Outcomes.

The best practice case study aspect of the evaluation looked at Planning and Assessment in SA. In general terms, the State was operating many BMPs in its operations. Some weaknesses were identified. The lack of a cohesive, comprehensive and co-ordinated statewide planning and evaluation approach regarding native vegetation management is clear. Policy and evaluation components as responsibilities of Government are missing from the Work Plan. Baseline monitoring is progressing along best practice models but assessment of change is not occurring other than in Rangelands.

Recommendation 4: that State and regional visions and objectives relating to vegetation management be aligned with the NVF vision and objectives.

Recommendation 5: there is a need to develop formal and robust links between data collection and management and performance assessment and reporting from State reporting level down through Department and regional levels.

Recommendation 6: For assessment of vegetation change to be undertaken in future, a more quantitative form of sampling would have to be built in for parts of the state other than Rangelands and Actions relating to monitoring of revegetation plantings data collection added to the Work Plan.

Recommendation 7: that the State incorporates an evaluation system into its operations involving native vegetation management. An evaluation system should incorporate the use of monitoring, targets, performance indicators and benchmarking. The Work Plan must reflect Actions relating to management and policy.

Legislation has reduced the extent of clearing of native vegetation in SA, but the serious decline in quality due to other threatening processes is not addressed. Other proposed legislation on integration of natural resource management is yet to be passed and implemented.

Recommendation 8: that threatening processes receive more co-ordinated and strategic attention in the planning and evaluation system and that this is reflected in the Work Plan.

Recommendation 9: that the proposed integrated NRM legislation be given adequate funding and attention and that agencies responsible for vegetation management co-operate in the spirit of the NVF to achieve the goal on the NVF under the aegis of the legislation.

A significant aspect to successful resource management involves the implementation of evaluation principles. The NVF is a form of performance assessment and reporting system, but it does not make use of evaluation adequately. Evaluation should be integral to the investment cycle, or planning and implementation of any program. Used well, evaluation will improve resource allocation and implementation. It can measure effectiveness and efficiency. It can identify future risks and priorities. It should be an ongoing activity and integrated as a continuous improvement tool for adaptive management. It is ideal for linking inputs, outputs and outcomes, a central platform of the NVF. The following recommendation is relevant to the State but also should be reflected in changes to the NVF itself.

Recommendation 10: that separation and recombination or linkage of 'Planning & Assessment' and 'Monitoring & Evaluation' MMMs within the NVF and the Work Plans occur to enable management and Actions to be more effective (details outlined in section 4.2.1).

In general, South Australia has a relatively good system in place given the state of evolution of this type of comprehensive planning and management. More work needs to be done, but this should be achieved without difficulty if all stakeholders are willing and able. The State is progressing well with the Work Plan as it stands currently.

Glossary

Abbreviation/Acronym	Definition
AFFA	Agriculture Fisheries Forestry - Australia
ANZECC	Australia New Zealand Environment and Conservation Council
BRS	Bureau of Resource Sciences
CWMB	Catchment Water Management Board
DEH	Department of Environment and Heritage
EA	Environment Australia
IBRA	Interim Biogeographic Regions of Australia
MMM	Management and Monitoring Mechanisms
NCSSA	Nature Conservation Society of SA
NGO	Non Government Organisation
NHT	Natural Heritage Trust
NVF	National Vegetation Framework
PIRSA	Primary Industries & Resources SA
SAMLISA	Strategy for Aboriginal Managed Lands in SA
SCC	Standing Committee on Conservation
TOR	Terms of Reference
WP	Work Plan

