

*Independent Evaluation of the National
Framework for the Management and
Monitoring of Australia's Native Vegetation
and Jurisdiction Work Plans*

Report

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for *ANZECC*

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Executive Summary

In June 1998, ANZECC agreed to the development and implementation of the National Framework for the Management and Monitoring of Australia's Native Vegetation (NVF). The intention of this policy initiative was to provide a unified, multilateral forum through which to pursue improvements to native vegetation management and monitoring. The purpose of this evaluation is to assess progress against the NVF and fulfilment of the Work Plan commitments 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 evaluation assessed the jurisdictional Work Plans developed as part of the NVF and in order to do this it has reviewed the NVF itself. As a result, it has made conclusions about implementation progress and effectiveness of the Work Plans. It has also identified a series of issues that require action at various scales to improve the implementation of the Work Plans and achievement of the NVF Desired Outcomes.

Generally jurisdictions could demonstrate good progress in implementing their Work Plans over the past twelve months. While it is difficult to attribute activities directly to the NVF, it demonstrates the scope that exists in the future, for stronger integration and collaboration of vegetation management and monitoring, and subsequently improved quality and condition of vegetation. It highlighted the broad range of vegetation management and monitoring activities that are currently being initiated or undertaken by all jurisdictions. A beneficial aspect of the review, was the concerted effort by jurisdictions to review the Actions and Indicators. In some jurisdictions this resulted in an increased prominence of the NVF and the Work Plans amongst key vegetation managers.

Stakeholders consulted for this evaluation accepted the NVF Vision as being appropriate as a national goal but the difficulty was to understand how various actions worked together to achieve the Vision (and certainly not achievable by June 2001).

The NVF provides an overarching set of national outcomes and principles for native vegetation management. However, these are too broad to translate into operational work plans, while the more specific Desired Outcomes and Best Practice Principles of the NVF do not apply consistently at a jurisdictional level. The jurisdictional Work Plans are operational level documents and are generated in line with the Management and Monitoring Mechanism in the NVF but they are not linked to the NVF Outcomes or the Vision. An appropriate response would be for jurisdictions to develop a set of quantifiable objectives for native vegetation management for the jurisdiction, based on NVF overarching goals. This could be undertaken through a vegetation strategy or other appropriate natural resource strategy. The jurisdiction objectives would be better drivers of the work plans and would provide a better basis for planning, implementation and evaluation.

Most Work Plans were assessed as being a loose collection of vegetation-related activities currently being undertaken by agencies. In some cases the Work Plan did not even reflect

all the activity. Part of this problem is due to the Work Plans being an annual instrument and hence past achievements and ongoing action is not always noted. Another issue is that the Work Plans are not always developed in association with all relevant agencies. The provision of a strategic layer would provide an opportunity for each jurisdiction to define priorities specific to their jurisdiction, methods of measuring progress, and roles and responsibilities.

One of the primary purposes for developing a planning instrument such as the NVF is to coordinate effort to address priority issues and focus resources to this task. An important part of determining priorities and ensuring coordinated action is to provide all stakeholders with an opportunity to be involved in setting priorities. During most jurisdiction reviews, a level of bias was noted because implementation of the NVF Work Plans often occurs through one specific agency in the jurisdiction and hence it was focussed on conservation or production-orientated aspects of vegetation management rather than a balance of both. To emphasise the importance of the NVF and consolidate the multiple values of vegetation management and monitoring, stronger recognition and demonstration of NVF support by other natural resource sectors is required. If ARMCANZ and MCFFA were signatories, there would be greater chance of involvement by agriculture and forestry agencies at the jurisdictional level. This would assist in the determination and resourcing of the actions under the NVF and in the development of multi-purpose objectives for native vegetation management consistent with the broad range of outcomes already documented for the NVF.

The NVF provides an overarching national policy framework and vision but not all of its principles and practices apply uniformly across the country and this needs to be taken into account in assessment of progress. Jurisdictional responsibilities are not adequately recognised in establishing the evaluation arrangements for the NVF. A related issue is that evaluation without agreed criteria, measurable objectives, or against non-defined responsibilities is not effective or useful. Future evaluations should not be attempted until the NVF process establishes a mechanism to link quantified goals with MMM actions in a jurisdiction level strategic set of objectives. Then, progress would be best evaluated through a consistent monitoring of vegetation extent and condition at regional or jurisdiction scales through a coordinated national program in a regular cycle. A degree of uniformity in methods and a timetable for achieving minimum national standards in vegetation assessment is needed and should be formally agreed to by each jurisdiction through the NVF. This current evaluation has not been able to check measures of cover and condition because the consistent indicators do not exist, they are not integrated with the NVF outcomes, and the review resources are too limited in time and budget. Even so, further independent evaluations should only be required at 8-10 year intervals if the national and jurisdiction indicators are well chosen, integrated and relate to the NVF Goals.

The following recommendations have been made as a result of the evaluation:

1. ANZECC should acknowledge the actions being undertaken by all jurisdictions under the NVF and consider the following improvements.
2. The NVF should contain quantifiable and time dependant 'Goals' relating to the 'Desired Outcomes' at the national level. Jurisdictions should then develop strategies that addresses the specific requirements of native vegetation management for their

jurisdiction. These jurisdiction strategies will have explicit links with the NVF, a vision and quantifiable Objectives that drive the Work Plan. The strategy may be primarily for native vegetation or it may have another purpose such as biodiversity but include native vegetation as a major component.

3. Future Work Plans should be based on the NVF overarching goals and the consequent jurisdiction objectives. Specific activities that should occur as a consequence of this include:
 - Key Challenge statements to be reviewed to ensure current validity and phrasing as a problem statement;
 - Work Plan actions to be developed against challenges and outcomes ; and
 - Success measures for actions to be developed with indicators that are verifiable in terms of quantity and time for periodic monitoring and evaluation.
4. ARMCANZ and MCFFA should become a joint signatories of the National Vegetation Framework to ensure that the multiple values of vegetation management are incorporated into future strategic directions of vegetation management and that implementation and monitoring is more adequately resourced.
5. Establish a National Strategic NVF Management Team with representatives from each jurisdiction plus ARMCANZ and MCFFA to manage the 'national component' of the NVF which includes establishing national priority actions and associated resource allocations, plus coordination of evaluations and appropriate NGO involvement.
6. It is recommended that ANZECC (through the proposed NVF Strategic Management Team, Recommendation 5) in consultation with the jurisdictions, develop a set of key performance indicators that can be selectively used by jurisdictions but allow for consistent reporting against the NVF Goals established through Recommendation 2.

1 Introduction

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 seven 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.

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

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

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

1.1 Purpose of the Evaluation

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.

1.2 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 individual jurisdiction Work Plan evaluations. 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.

1.3 Description of the Evaluation

1.3.1 Scope and Scale of the Evaluation

The evaluation was structured as a four phased approach (refer below). The four phases were designed to provide for collation of background information and wider consultation as efficiently as possible, in the limited time frame. The four phases include:

- (1) *Develop a collaborative approach with jurisdictions* that ensures that stakeholders are aware of the evaluation and are clear on how they can effectively input into the process.
- (2) *Establish a clear and transparent process for evaluation* that pulls the key team together and uses a 'work group' process that answers the key questions that address the objectives of the NFV evaluation.
- (3) *Participatory consultation with jurisdictions using workshops and interviews* (including agency officers, senior policy and natural resource management advisers). The URS/Griffin nrm team comprised a core team of consultants, who were assisted in most jurisdictions by consultants based in centres around the country, and a reference panel was established for provision of specialist vegetation knowledge as required.
- (4) *Evaluation and reporting of the outcomes* of the analyses of data and wider consultations based on assessments of measures of effectiveness, efficiency and appropriateness.

1.3.2 Identification of Constraints

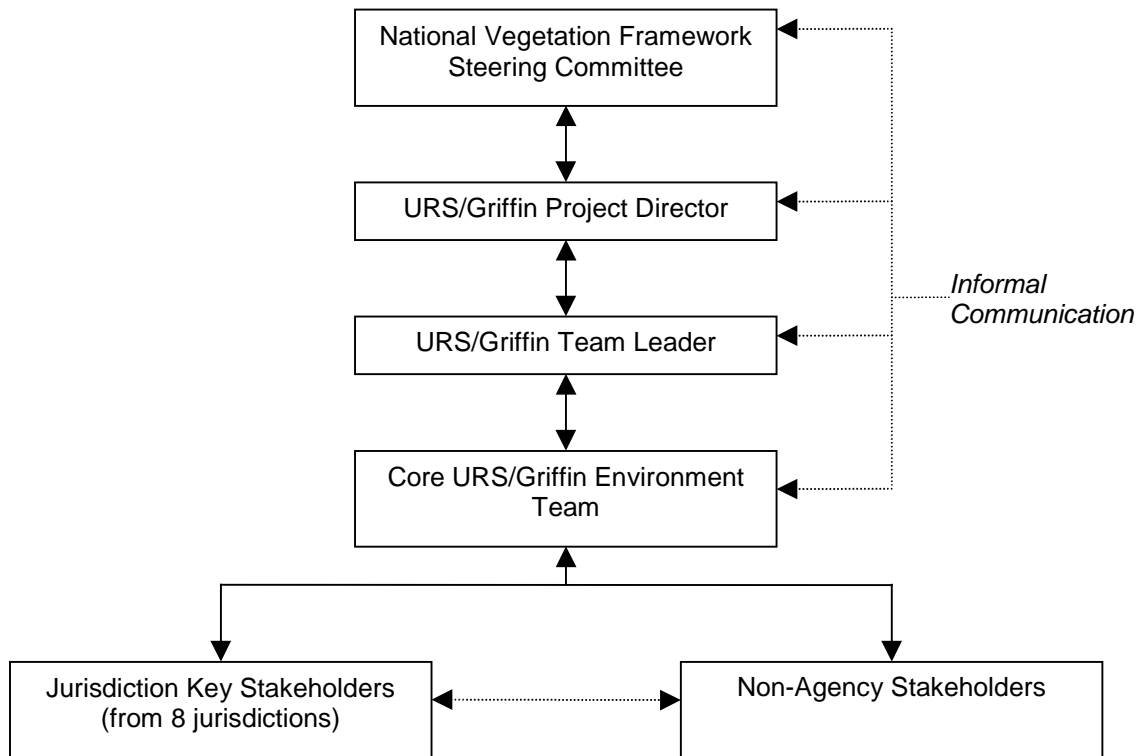
During most evaluations there are normally some factors that limit the effectiveness of the evaluation. Factors that were identified as reducing the effectiveness of the evaluation in (decreasing order of magnitude) include:

- *Stakeholder availability* - inability to respond in short time frames can often be a consequence of other demands and pressures. This evaluation was no exception and jurisdiction representatives expressed frustration at the extremely short time frames within which to review documents and respond effectively to meetings (and be available to participate).
- *Stakeholder representation/cooperation* – Primarily a response to the short time lines, representation of all agencies with vegetation management responsibilities at Jurisdiction meetings was limited. A similar issue was experienced in some jurisdictions when attempting to interview non-agency representatives.
- *Information availability* – some information necessary for the study was not appropriately documented, or was unavailable. The Work Plans are at early inception stage, and therefore some outputs and outcomes still need to be realised.

1.3.3 Management Strategy for Evaluation

The evaluation was undertaken by a combined team of nine URS Australia and Griffin-nrm consultants. The project management organisation and interaction with stakeholders and Steering Committee is summarised in Figure 1, and was designed to take advantage of team geographic distribution in the various jurisdictions.

Figure 1 : NVF Project Management



2 Approach and 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 provides a description of the approach employed for the evaluation, and method used to evaluate the jurisdiction Work Plans. Copies of the supporting documents used for the evaluation are available in Annex 1.

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 desktop analysis was undertaken by the consultant team, reviewing each jurisdiction Work Plan against a number of criteria. This information was circulated to all participants prior to the Work Plan evaluation meetings to allow for stakeholder review.
- **Jurisdiction Meetings** – jurisdiction meetings were conducted to discuss progress of Work Plan and identify opportunities for improvement. The process used during the meeting is described in Section 2.2.
- **Team review to check data collation consistency** - Following commencement of the data gathering exercise, the Project Director conducted a meeting between all core team members via telephone to ensure that any initial problems encountered were resolved quickly. This ensured consistency of data collection and reporting, and checked progress against existing timeframes.
- **Consultation with non-agency stakeholders** – In all jurisdictions, stakeholders that were perceived to have a vested interest in the jurisdiction Work Plans, but not directly involved in implementation were contacted to seek their involvement in the evaluation. Methods for involvement in the process were through involvement during the jurisdiction Work Plan meeting, or through a separate interview process.
- **Draft Jurisdiction Reports** - 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 all participants in the jurisdiction Work Plan evaluation meeting and other stakeholders, for comment.
- **Jurisdiction Final Report** - Comments were then incorporated into jurisdiction reports and prepared as Annexes for the final NVF report.
- **Preparation of NVF Draft Report** – Following distribution of draft jurisdiction reports, seven members of the consulting team participated in a meeting to determine major findings from the NVF evaluation and develop recommendations. This information was prepared into a draft document that was circulated amongst team members to ensure that primary issues were adequately addressed.
- **NVF Draft Report** – The NVF Draft report was circulated to key stakeholders in each Jurisdiction and additional representatives identified during the evaluation process, to allow for a period of review prior to finalising of the NVF report.
- **NVF Final Report** – All comments received from jurisdiction stakeholders and non-agency representatives were compiled and incorporated into the final report for presentation to Environment Australia.

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 jurisdiction 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. The matrix template with a simple worked example is shown in Annex 1.

Following discussions with the primary jurisdiction 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 was 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. A template for the matrix is shown in Annex 1.

Each action for each Management and Monitoring Mechanism (listed across the X-axis) was assessed in regards to contribution to the NVF Desired Outcome, listed on the Y-axis. The rating criteria used in Section A (High/Medium/Low Influence) was also 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 criterion 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 for in depth investigation from a Best Management Practice perspective during the jurisdiction meeting, rather than the entire set of MMM's. This process addressed the range of BMP's identified in the ANZECC framework for the nominated mechanism, and reported as a Case Study in the relevant jurisdiction reports (Annex 4 –12).

The ANZECC framework BMP's was used as the main guide to discuss Incentives during the Jurisdiction evaluation meeting. 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, number of key indicators of overall progress were identified and analysed to evaluate the likely long-term impact of the National Vegetation Framework.

For consultation with stakeholders that were not directly part of the Work Plan meetings, the plausible process method (described in E) was used to identify general achievements and gaps in an informal interview process.

3 Information Collection and Identification of Key Issues

The evaluation produced a range of specific information on the progress and impact of Work Plans in each jurisdiction. In many jurisdictions the process resulted in the Work Plans being updated to reflect progress, more relevant challenges and evolving priorities. The detailed assessments and updated Work Plans are provided in the Jurisdiction Reports attached at Annex 4.

The evaluation was conducted to examine individual Work Plans and from this, to develop an overall view of progress towards NVF vision and goals after the first year of implementation. It is not appropriate to attempt a detailed comparison of jurisdictions in relation to progress and achievements because they are all at different points in the ongoing business of native vegetation management, and they are dealing with vastly different situations. As a consequence, the way that jurisdictions respond to different Management and Monitoring Mechanisms varies considerably. Further, because the evaluation provides a snapshot of activity relating to annual NVF Work Plans it can not properly reflect past achievements and forward plans.

3.1 Linking the Jurisdiction Work Plans with Key Challenges

There are, in general, good direct links between Work Plan Actions and the key challenges identified in the 1999 stocktake (Griffin nrm Pty Ltd, 1999). Annex 4 provides a detailed discussion of this matter for each jurisdiction. Most challenges have Actions associated with them that are likely to have a high impact. Of the relatively few cases overall where challenges are not met by Actions likely to have a high impact, they generally reflect jurisdictional priorities at this point in time or are cases where the challenge has already been met in that jurisdiction.

The following sections summarise issues under the NVF management and monitoring mechanisms. However, we point out that these mechanisms vary in applicability across the jurisdictions, reflecting current priorities in the evolving overall programs of vegetation management in the jurisdiction.

Planning and Assessment (NVF Mechanism 4.2).

Key challenges exist under this mechanism for all jurisdictions and all Work Plans have Actions that will address these challenges, although there are a number of gaps. In some cases the institutional arrangements to ensure comprehensive coverage and use of appropriate data sets are still developing; or rely on other jurisdiction-based strategies and programs with an indirect relationship to vegetation protection (eg. soil conservation legislation, salinity strategies). The roles of stakeholders in planning and assessment require clarification in some instances and this would lead to better coordination between responsible agencies. In particular, there is a need to clearly define the roles, responsibilities and priorities of the Commonwealth in the NVF process and to improve overall coordination and ownership of the NVF among all of the jurisdictions.

Reserve System (NVF Mechanism 4.3).

The Formal Reserve system does not meet the requirements for ‘comprehensive, adequate and representative (CAR)’ criteria at IBRA scale in any jurisdiction. Actions are in place in each jurisdiction that will allow progress towards a CAR reserve system, including through the RFAs. The following points were raised:

- The Formal Reserve System can not alone meet CAR criteria given the spatial heterogeneity in Australia’s biodiversity. The importance of off-reserve outcomes is increasingly recognised and successful programs are addressing these - for example, see the NT and SA Jurisdiction Reports at Annex 4.
- Resources available to manage the expanded area held within the Formal Reserve System are limiting in all jurisdictions.

Communication and capacity (NVF Mechanism 4.4)

The challenges for this mechanism in most jurisdictions are concerned with increasing the coordination across the array of support programs available, based on integrated approaches to NRM. In most cases, Actions are in place to promote coordination. Extension systems dealing with vegetation management are being reviewed and upgraded (eg see the Queensland and NT Jurisdiction Reports at Annex 4). Activities are required to strengthen coordination of Commonwealth vegetation management and monitoring programs. Adequate resources are required for successful programs (such as ‘Land for Wildlife’) in WA and NSW, and there is widespread recognition of the need for strategic approaches to R&D. Less frequently mentioned issues relate to ensuring the continuation of investment in this area after conclusion of NHT, and building skills and capacity in extension staff.

Incentives (NVF Mechanism 4.5).

In most jurisdictions, challenges are listed that relate to building the array of attractive incentives (including market mechanisms) that will encourage increased vegetation management and protection on private land. Actions in all jurisdictions are addressing this challenge, although resourcing issues are significant in provision of market based incentives. The NT is pursuing incentive schemes of more relevance to their situation while NSW and Vic are researching a range of mechanisms as part of salinity management programs.

Financing of incentives to limit clearing on private land remains a vexed issue in several jurisdictions (Tasmania, WA, Queensland). It would appear that in WA and Queensland, recently initiated government programs are leading to complimentary incentives for protection of remnant vegetation.

Regulatory measures (NVF Mechanism 4.6).

Regulatory challenges variously revolve around the need to clarify and update legislation, clarify agency responsibilities, and ensure full coverage of regulations across all vegetation resources. The quality of Actions to address specific challenges across the jurisdictions is mixed. In Queensland and Tasmania, the Actions in the Work Plans will have a high

influence in addressing the challenges. In Queensland, agencies consulted have devoted considerable resources in getting their regulatory mechanisms in place to deal with land clearing demands. The effectiveness of Queensland's new regulatory system will be tested in the near future. In NSW, Work Plan Actions will have limited impact on addressing the challenges because new legislation has been enacted and new action is not required. In the NT, agencies are confident that existing controls are appropriate for the current level of threat. In WA, progress in implementing new legislation is very slow although the level of land clearing in areas covered by existing controls has declined.

Monitoring and evaluation (NVF Mechanism 4.7).

The key monitoring and evaluation challenges relate to improving coverage, especially in high risk and high value areas. Jurisdictions have in place Actions to address these challenges although all are constrained by resources. National standards are required for monitoring condition.

3.2 Measuring the Success of Work Plans

The Work Plans have nominated success measures and timetables for achievement. As a general comment, the evaluation process revealed that many of the indicators of success were difficult to measure. In all jurisdictions, the evaluation process provided the opportunity for these to be revised. The Work Plans with revised success measures are provided in the Jurisdiction Reports at Annex 4. These Work Plans will provide a better basis for future evaluations they are a more realistic representation of expected progress.

The lapsed time since the inception of the NVF process in the jurisdictions (12 months) is not sufficient to allow a thorough evaluation of progress against success measures. Many of the activities will take longer than 12 months to impact, and are linked to preceding and planned activities, sometimes across other government programs.

Progress towards success measures identified in the Work Plans is generally on track (see Jurisdiction Reports at Annex 4 for details). The evaluation enabled revision and updating of timetables to reflect progress and other circumstances. The most common reason given for delays in expected progress was shortfall in funding.

It is not possible to compare progress across jurisdictions because there are no common success measures for actions, mechanisms or desired outcomes. The NVF does not contain performance indicators or quantifiable objectives that would enable an overall evaluation of progress. The NVF states that it will use "existing monitoring processes such as the National Land and Water Resources Audit". The Audit is not yet available for such monitoring.

The NVF also states that Work Plans will be used to "measure progress towards best practice native vegetation management". Again, because jurisdiction differ in their use and interpretation of 'best practice', it will not be easy to compare such progress across jurisdiction but simply to consider progress within a jurisdiction. Even for these internal

evaluations it will be necessary for jurisdictions to develop a strategic plan that will drive the annual work and provide the quantifiable objectives for the evaluation framework.

3.3 Linking Work Plan outputs with National Vegetation Framework Desired Outcomes

The evaluation found that the Work Plans are not clearly and logically linked to the NVF Desired Outcomes. There is no administrative mechanism in the NVF process for the Outcomes to influence the Work Plans and this created considerable difficulty in evaluating the relationships.

Overall, the evaluation found that the NVF works best as a national policy framework with overarching goals and principles. Attempting to apply the more detailed Desired Outcomes uniformly across the nation will have limited success and does not encourage ownership. It is more appropriate that the jurisdictions develop the operational objectives required for the link between the national goals and the Work Plans; and from these objectives, then develop responsive Actions, drawing from the range of management and monitoring mechanisms as relevant.

There is general recognition that the Commonwealth activities are influencing most NVF outcomes, though some gaps exist and some influence will take place over a long (inter-generational) timeframe. Within government, primary responsibility for vegetation management rests with the jurisdictions. The Commonwealth's influence is through indirect mechanisms (such as incentives, education kits etc).

NSW stakeholders concluded the Work Plan is not worded to address outcomes. The suggestion was made that the Work Plan, as an annual operational document, needs to be linked with NVF outcomes via a State Strategy. In NSW this link will be provided by the Native Vegetation Conservation Strategy to be released in November 2000.

Although native vegetation management in Victoria is seeking multiple outcomes (eg. biodiversity and land and water resource protection) the Work Plan focussed on addressing identified NVF key challenges. Consequently the Victorian stakeholders consulted saw little value in linking Work Plan outputs against the other NVF desired vegetation outcomes. Similarly, Tasmanian stakeholders stressed that the Work Plan was primarily developed to address biodiversity issues and if Actions deliver other outcomes they should be considered as secondary effects.

Some Desired Outcomes are considered to be of low relevance in the NT and Queensland. The NVF desired outcomes for hydrology for instance, relate exclusively to control of salinity and protection of water catchments. These issues have significantly higher profile in the southern jurisdictions, where they are primary drivers for vegetation management. They are not important drivers for vegetation management in the NT although they are receiving increasing recognition in Queensland.

The conclusion from this aspect of the evaluation is that the NVF Desired Outcomes are all embracing but not helpful in determining jurisdiction actions or the associated priorities. They are a useful 'check list' but need to be put into context and translated through a strategy at the jurisdiction level before they can drive annual work plans.

3.4 Best Practices

A key feature of the National Vegetation Framework is descriptions of best practice (BP) attributes for each vegetation management and monitoring mechanism. To determine how the various jurisdictions are applying best practice, each jurisdiction was allocated a management and monitoring mechanism as a case study. The jurisdiction and specific mechanism allocated for review are provided in Table 1 below.

Table 1 Jurisdiction and allocated BP Case Study

<i>Jurisdiction</i>	<i>BMP Monitoring and Management Mechanism</i>
Australian Capital Territory	Incentives
Commonwealth	Communication and Capacity Building
New South Wales	Communication and Capacity Building
Northern Territory	Time did not permit this aspect to be addressed by the NT
Queensland	Regulatory Arrangements
South Australia	Planning and Assessment
Tasmania	Planning and Assessment
Victoria	Incentives
Western Australia	Formal Reserve System

Findings for each jurisdiction are briefly presented below. A summary of the BP case studies is provided in Annex 2, and complete assessment is provided in each of the individual jurisdiction reports in Annex 4.

- **Australian Capital Territory** – In 1999, the Dore Report identified issues in the ACT leasehold Estate as one of the pressing challenges for the vegetation management in the ACT. In early 2000, a new rural policy to provide a better basis for sustainable rural enterprises and secure a high level of protection of natural values in rural areas was launched by the ACT Government. It was perceived by the ACT stakeholders that the application of this policy embodied a number of best practice principles identified in the NVF including:
 - simple and clear rules;
 - clearly defined objectives;
 - relatively uncomplicated administration systems;
 - voluntary participation is encouraged through a range of incentive programs; and
 - there is scope for targeting wider community benefits.

- **Commonwealth** – The Commonwealth identified implementation of a NHT training initiative for extension officers and community leaders in natural resource management, consistent with the competency standards as an example of best management practice application. The aim of the initiative is to support and build on the skills of a range of people working on the ground to implement NHT programs, and is jointly managed by Environment Australia and Agriculture, Forestry and Fisheries Australia. The activity had a strong positive influence on communication and capacity building outcomes through strong market research, comprehensive identification of stakeholder groups and use of an action learning methodology. The BMP case study demonstrated weaknesses in the areas of vegetation infrastructure; the use of local resource persons as local experts for training; the use of an integrated, nationally coordinated approach.

- **New South Wales** - The NSW Government and landholders have recognised the need for a single mechanism (an integrated property management plan), which provides integration of extension and advisory services with planning; regulatory; incentive; and research frameworks. The NSW Department of Land and Water Conservation is piloting Integrated Property Management Plans (IPMPs) as a cooperative effort between a number of government agencies and the community. Features of the IPMPs that are aligned with best practice as described in the NVF include:
 - a target of diverse community sectors across a geographic spread within each of the NSW pilot regions;
 - use of a range of communication channels, including workshops series, field trips, phone contact, newsletters and individual site visits;
 - applying an action based learning process, involving people directly in activities, which are linked to their own properties and local communities as well as to the regional landscape;
 - recognition that the revegetation and management of remnant vegetation rests with landholders; and
 - coordinated series of best practice native vegetation management extension that allows for group discussion, two-way interaction, joint learning, information and experience sharing, recognition of anecdotal information and practical experience, and specific targeted advice to participants.Through analysis of future options for the property an IPMP identifies, documents and promulgates best practice on-ground native vegetation management and revegetation.

- **Queensland** - The regulatory mechanisms for delivering NVF outcomes in Queensland are largely related to the recent *Vegetation Management Act 1999*, the *Land Act, 1994*, and two scientific initiatives that predate and support the basis for the legislation - the Statewide Land Cover and Trees Study (SLATS) and the Regional Ecosystem mapping of Remnant Vegetation. The Queensland Draft Work Plan reflects these relatively recent developments in the following aspects:
 - the role of the State and Local Government has been clarified and codified with respect to land clearing where previously these had been unclear or where there had been no role firmly established;

- a seamless inventory of vegetation and its conservation status is essentially in place; and
- a process for monitoring of changes in land cover capable of producing seamless results across the state is in place.

Within the context of the NVF, these essentially regulatory driven initiatives provide a state, regional and even property level (via the proposed permit system for clearing) framework for formally managing and monitoring changes in land cover in Queensland. The data presently available is able to clearly identify (at the regional ecosystem level) where the greatest threats from clearing exist in the state. The regulatory system effectively embodies most of the principles of best practice for land clearing regulation as defined in the NVF. Remaining challenges in meeting best practice for regulatory mechanisms generally are:

- strengthening the emphasis on duty of care and effective incentives and programs to encourage acceptance and adoption by landholders and rural communities;
 - accelerated emphasis on recovery planning and action; and
 - critical habitat identification, protection and monitoring.
-
- **South Australia** - under the Biological Survey of SA program, the systematic surveys of the state's flora and fauna commenced in 1985, with 72 per cent 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. 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. 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. 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 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.
 - **Tasmania** - Vegetation mapping programs are recognised as critically important to Tasmania's biodiversity conservation and management capacity. The current mapping program in Tasmania aims to complete an initial coverage of the state using 140 vegetation types at 1:25000. A small team of staff has a huge degree of technical skill

and efficiency but has a problem with 'skills leakage'. The potential loss of expertise is a serious risk. Maintenance of both technical capacity and corporate knowledge is needed to complete the program. A tight timeframe for the work has encouraged some technical innovation:

- overlays of GIS layers (geology, topography, climate etc) are used to support extrapolation of vegetation types based on expert judgements. These judgements are then verified by periodic ground truthing.
- modelling has been used to work out likely patterns of Pre-European vegetation for the National Vegetation Information System.
- automation of some of the mapping processes – transfer of line-work from period photos to the map base.

The correlation with the NVF BMPs was not explicitly identified during this case study.

- **Victoria** - Given its history with voluntary vegetation management programs and Conservation Covenants, Victoria is now moving to enhance its incentives programs with the funding of management agreements. These agreements will have differing degrees of complexity and will be more or less prescriptive depending on the land and vegetation involved. Victoria will be attempting an innovative auctioning system to establishing some of these agreements and to target the funding in the most cost effective manner. The auctions will target where vegetation on private land is a high priority for conservation. Under the planned auction systems land-holders will nominate what they will do in terms of changing the use and management of vegetated land eg (stop grazing, firewood harvesting, fencing, controlling weeds and feral animals etc.) The government may agree to 'purchase' the changed management if the offer meets their priorities at an acceptable price. This year a trial will be under taken. It will target priority regions where there is good information and support in the community. The trial will be designed to learn about the process and develop protocols and methods for:
 - developing a biodiversity benefit index;
 - improving the auction system; and
 - determining the necessary information disclosure requirements.
- **Western Australia** - The Department of Conservation and Land Management has responsibility for establishing and managing a formal conservation reserve system. Current activities were assessed against the five key features required for best practice as described in the NVF. Current strengths are:
 - Identification and reservation of areas for conservation follows a strategic approach, with a focus on comprehensiveness, using detailed descriptions of vegetation at Interim Biogeographic Regional scale (IBRA).
 - Perth's Bushplan is the vehicle for identifying a CAR Reserve System within the Perth region and this model is likely to be extended into other areas with high population density.

- The percentage of land managed for conservation across the state increased from 7.5 per cent in 1997 to 8.42 per cent in 2000. The main change has been the increased area managed for conservation across the Gascoyne-Murchison area.
- Management plans are being prepared and published for land being managed for conservation purposes, as resources permit.
- Community input for planning CAR reserves is occurring through development of regional natural resource management strategies and these groups are active in managing urban reserves.
- The Department of Conservation and Land Management maintains excellent detailed statistics of the land managed for conservation in the various categories for each IBRA.

Challenges are:

- The suggested impossibility of achieving CAR criteria in a reserve system in the south-west of Western Australia which is one of the world's 25 'hot spots' for biodiversity – more attention to off-reserve conservation will be required.
- Agency funds for reserve acquisition, management on reserved and surrounding lands, and monitoring are inadequate.

Insufficient enrolment of indigenous people in reserve identification and management; and in off-reserve conservation, especially on the large areas of pastoral leasehold land now held by Aboriginal communities.

3.4.1 Assessment of BP

Attempting to assess if BPs were being applied effectively and appropriately was limited for the following reasons:

- comparison with the BPs identified in the NVF were very broad which meant that reviewing activities in comparison with specific jurisdiction activities (and vegetation communities) was difficult;
- success measures have not been developed with a criteria to allow for incorporation of BP into ongoing monitoring and analysis; and
- timeframes available within which to undertake a review were not sufficient to allow for detailed examination of specific Actions against the BP.

3.5 Evaluating against NVF Vision and Goals

Overall, the information provided by stakeholders in each jurisdiction suggests that steady but variable levels of progress are being made towards the NVF vision and goals. In all situations, jurisdictions have implemented or are implementing legislation, policies and programs that will increase their capacity to achieve the NVF goals. It is clear that responsibility for vegetation management and protection is being addressed as a serious issue at government level, with programs being developed to build partnerships between all stakeholders. However, the NVF goal of reversing long term decline in native vegetation will not be achieved by June 2001 and it is further apparent that most jurisdictions will not be in a position to consistently verify their progress towards this goal by June 2001.

Most jurisdictions (NT, Victoria, Tasmania, NSW, WA, ACT) deal with vegetation management as part of a wider natural resource management policy with overarching sustainable development goals. These goals, while broadly consistent with the NVF goals, tend to be oriented towards sustainable management. The NVF is perceived by most jurisdictions to be more strongly focussed on vegetation protection.

Although it is difficult to generalise across eight jurisdictions and the large number of separate activities in vegetation management across Australia, Table 2 is presented to indicate current strengths and weaknesses in progress towards the NVF vision and goals. The table has been compiled from similar tables discussed at each of the jurisdiction workshops. More detail on individual jurisdiction responses is provided at Annex 4. Section 2 of this report provides an explanation of the plausible process methodology used in derivation of Table 2. This process enabled participants in the evaluation to comment on progress towards the NVF Vision and goals against a common set of plausible indicators even though the NVF does not contain any specific indicators.

Strengths

- Legislation, policy and strategic instruments have been modified or are gradually being upgraded to meet the needs for vegetation management and protection (see the Jurisdiction Reports for further details on relevant Work Plan activities at Annex 4). While not perfect, most jurisdictions report progress in this area. An extension in applicability to ecosystem-process level is still required to ensure that not only vegetation cover but also biodiversity values are protected.
- Although the NVF goal to reverse long term decline in native vegetation is still far from being achieved nationally and clearing rates remain high in some jurisdictions, the ability to control clearing activities has been improved across all jurisdictions, most notably in WA and more recently in Queensland. Further improvements are being addressed to ensure comprehensive coverage of control mechanisms. The effectiveness of the controls now in place and planned, needs to be evaluated through consistent monitoring of cover with some reference to biodiversity values.
- There is an array of programs developing to encourage and promote improved vegetation management on privately-managed landholdings, although some concerns remain about how well these programs are coordinated and targeted at jurisdiction scale. Some jurisdictions are currently boosting regulatory systems to target the freehold estate (eg Queensland) while others are expanding and coordinating extension programs to tackle NRM at property level (eg NT).
- As a consequence of these programs there has been an increase in human and financial resources devoted to vegetation management and protection across Australia. It is too early to assess the outcomes of these additional resources in relation to NVF vision and goals.

Weaknesses

- Coordination between agencies at jurisdiction level is limiting progress in some jurisdictions, and role of local authorities in vegetation management needs to be extended in a way that translates NVF and jurisdiction vegetation management goals onto the ground.

- The level of resourcing of successful programs both on and off reserves remains a constraint to achievement of the NVF goals.
- Monitoring and evaluation of changes in vegetation extent and quality are seen to be adequate in very few situations (e.g in some rangeland regions). Techniques and resourcing are inadequate in most jurisdictions to achieve consistent monitoring and assessment of native vegetation in relation to NVF goals, particularly with regard to condition and biodiversity values.

Table 2 : Jurisdiction performance against NVF objectives

NVF Vision	Plausible Process Indicators	Comments on Progress
A reversal in the long term decline in the extent and quality of native vegetation	Planning undertaken.	<ul style="list-style-type: none"> Legislative and administrative arrangements in place or progressing. Plans in place through the NHT at Commonwealth-State partnership level Planning generally in place in jurisdictions, and moving to the regional level
	Plans resourced and being implemented	<ul style="list-style-type: none"> Increased acquisition of CAR reserves Increased resources for planning and assessment (eg through salinity strategies) Plans being resourced, but achievement of vision constrained by resource limitations in some jurisdictions. A proportion of funding is dependent on NHT
	People with knowledge and skills required	<ul style="list-style-type: none"> Significant increase in the number of people working in vegetation management and protection, but demand for services is still putting pressure on available resources Capacity in local government lagging Difficulties in developing and retaining skills and knowledge in some jurisdictions
	Monitoring and evaluation of all aspects leading to revision of plans	<ul style="list-style-type: none"> Variable performance across jurisdictions – generally good assessment of status, less ability to measure trends Poor links between measurement, targets and subsequent management Actions
Conservation and where appropriate, restoration of native vegetation to maintain and enhance biodiversity, protect water quality and conserve soil resources, including on private land managed for agriculture, forestry and urban development	Native vegetation is protected by effective clearing controls on all land	<ul style="list-style-type: none"> Receiving a high level of attention in all jurisdictions. Considerable improvement across all jurisdictions with mechanisms, processes and monitoring in place Gaps in clearing controls identified and new measures being developed eg Queensland. Effectiveness in protecting vegetation not tested yet.
	Programs in place to restore, where appropriate, native vegetation to maintain/enhance biodiversity and protect land and water resources on private all land	<ul style="list-style-type: none"> Restoration not seen as relevant in NT or Queensland. Less than 1% is cleared and it is not seen as cost effective to rehabilitate degraded landscapes in the extensive pastoral zones. Programs being put in place in other jurisdictions, with varying levels of take-up by private landholders and local authorities Concerns with some design aspects that limit take-up or do not allow targeting of resources or do not provide a comprehensive package of options and information
	Programs and measures in place to encourage development and adoption of best management practices for native vegetation management in rangeland, agricultural, forest and urban enterprises	<ul style="list-style-type: none"> Wide array of programs in place – e.g. Regional Vegetation Management Planning, Bush management Advisers, Operation Bounceback, Land for Wildlife, Remnant Vegetation Protection Scheme, EMS development in some locations, investment in high water use farming systems, Best Management Practices (BMPs) Concern about some gaps in coverage and the ability of landholders to access programs (e.g. ability to pay, resource limitations in programs)

NVF Vision	Plausible Process Indicators	Comments on Progress
	Appropriate monitoring and assessment programs are in place to detect change in native vegetation quality and geographic extent	<ul style="list-style-type: none"> • Assessment of status generally good in all jurisdictions (e.g through audit programs) • Quality of systems and extent of coverage to measure change varies across jurisdictions – good in Queensland, good in WA rangelands, mechanisms in place in Victoria, poor in South west WA, good in SA rangelands, good for woody perennials at Commonwealth level. • Ability to track clearing is improving in all jurisdictions • Some coordination and resourcing constraints to improved performance
Retention and enhancement of biodiversity and native vegetation at both regional and national levels	Appropriate environment protection policies and measures are in place to protect biodiversity at regional and state levels	<ul style="list-style-type: none"> • Legislation and policies either in place and adequate to the perceived risk, or being developed • Some mechanisms species-based only – need to go to community and eco-system-based measures • Regional level planning and regulatory systems developing (eg. clearing controls, Perth's Bushplan, off-reserve protection measures)
	Biodiversity and native vegetation targets are set and measures are in place to achieve those targets at both regional and national levels	<ul style="list-style-type: none"> • Vegetation retention targets are being set, sometimes down to regional and local authority level • Targets for CAR Reserve acquisition in place in some jurisdictions, mainly at State level • Variable progress in setting other targets across jurisdictions
	Appropriate monitoring and assessment programs are in place to detect change in native vegetation biodiversity	<ul style="list-style-type: none"> • Variable ability to detect change across jurisdictions – where programs are available they mainly operate at large scales. • Rangeland program if funded will provide good trend data across all jurisdictions
An improvement in the condition of existing native vegetation	Policies and programs are in place to manage native vegetation to conserve condition as well as cover- through duty of care; native vegetation covenants, partnerships etc	<ul style="list-style-type: none"> • Good programs in place in all jurisdictions – eg. Land for Wildlife, covenanting programs, management planning, codes of practice, Duty of Care linked with incentives, cross-compliance measures, Heritage Agreements. These are mainly government, but some NGO involvement in program design and management • Coordination between programs could be improved in some jurisdictions • Demand for service is outstripping supply in some situations
	Policies and programs are in place to restore native vegetation quality where appropriate	<ul style="list-style-type: none"> • Most action focused on retention of remnant vegetation – with improvement achieved through removal of grazing. Further mechanisms not seen as relevant in Queensland, Tasmania and NT • Programs developing at jurisdiction and regional scales – e.g. Regional Biodiversity Plans, recovery planning, weed strategies. • Concern at Commonwealth scale about a lack of overall strategic approach, and a lack of understanding of landscape level process to interpret and define condition.
	Appropriate monitoring and assessment programs are in place to detect change in native vegetation quality	<ul style="list-style-type: none"> • Programs adequate in Victoria, guidelines for condition available in NSW. • Good processes in rangelands in NT, SA and WA- needs expansion generally. • Generally inadequate and / or under-resourced elsewhere.

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

In this section of the report, the information from section 3 and the individual jurisdiction reports in Annex 4 is used to address the four main terms of reference. As indicated in section 3, it is not feasible to undertake detailed comparisons across jurisdiction for most aspects of the NVF. The individual jurisdiction evaluation reports provide specific comments under these same terms of reference headings.

4.1 Assessment of the Jurisdiction Work Plans and Implementation

All jurisdictions have completed a Work Plan at least to draft level and some have begun wider stakeholder consultation. The Commonwealth and the ACT have final versions, other jurisdictions use them as annual documents to be revised as activities change and key challenges evolve, consequently they may be termed as interim documents. The Work Plans include a number of activities that directly and effectively address the majority of the key challenges identified in the 1999 stocktake (Griffin nrm Pty Ltd, 1999) unless these have been otherwise addressed in a particular jurisdiction.

Key challenges were updated during the evaluation process, some new challenges and ongoing challenges include (see individual jurisdiction reports in Annex 4 for a comprehensive listing):

- achieving a balance between CAR system goals and off-reserve protection of native vegetation in a climate of tight resources for conservation overall;
- expanding specific programs to include indigenous people in native vegetation management and protection (some programs are in place in the NT and SA) both on Aboriginal land and more generally- to incorporate historic indigenous knowledge as well as active involvement;
- boosting local government and regional capacity for local level planning and implementation of state-wide and national policies and strategies;
- achieving a comprehensive monitoring capacity for native vegetation extent and condition;
- achieving effective coordination between vegetation management agencies and resource management, and other agencies across all levels of government and with community and other NGO groups. There are numerous examples described in jurisdiction reports of contradictory government programs, which while perhaps not directly related to native vegetation management, have had an adverse effect on native vegetation and counter efforts of vegetation management programs;

- boosting and better targeting of native vegetation protection resources across and within jurisdictions (largely dependent on achieving a good comprehensive mapping database);
- recognition that the priority management issues (eg. salinity, remnant size and isolation, grazing regimes, fire, feral animals and weeds) for native vegetation protection may differ between southern and northern jurisdictions and that the mix of MMM activities to address these issues needs to vary accordingly.

The NVF requires a process to update Key Challenges at the jurisdiction level and to state those at a national level. It is not appropriate to have ongoing evaluations against outdated challenges. This issue would be best dealt with through a strategic planning process at each level of vegetation management to establish challenges and set relevant objectives to address them.

The review of each jurisdiction indicates that each can generally demonstrate good progress in implementing their Work Plan activities over the past 12 months (as indicated in Annex 4). This may partly reflect the fact that the Work Plan activities were already in progress, or planned, as part of ongoing jurisdiction vegetation management programs at the time of developing the Work Plans. However two key areas that require greater progress across jurisdictions are:

- establishing a comprehensive and consistent monitoring base with the capacity for assessing both extent and condition of native vegetation; and
- achieving targeted native vegetation protection and management on private lands.

Approaches to native vegetation management vary widely across Australia, in part reflecting the differing biophysical and socio-political landscapes of the jurisdictions. Priority MMMs differ between jurisdictions and will also change within jurisdictions as progress is made. Although direct comparison of progress between jurisdictions is not feasible at this early stage in the development of the NVF and the jurisdiction Work Plans, common targets need be achieved within future agreed time lines if the Vision is to be achieved. At present progress is only assessed against each jurisdictions Work Plan and success measures.

The Work Plans do not necessarily include of all the activities being planned or undertaken within a jurisdiction to address native vegetation management challenges. For example:

- NGO activities and some complementary actions by agricultural and catchment management agencies have often been excluded because these stakeholders were not a party to the development of the Work Plans.
- Many initiatives underway or planned are more broadly cast in state or regional NRM programs, property management programs, rangeland management programs or other strategies relating to issues such as salinity or forestry.

- The Work Plans tend to only include activities directly targeting native vegetation management. Most Work Plans don't include the full range of government programs across all agencies. This is particularly the situation where 'production agencies' were less involved in the process of developing the plans
- The Work Plans tend to be historical or current. The lack of direct linkages to jurisdiction strategic plans does not encourage forward planning of activities.

The Work Plans were assembled by the Commonwealth, States and Territories to meet NVF obligations as agreed under ANZECC. At this point in time, the Work Plans are not recognised as 'driving' vegetation management. This is partly because the NVF is a new framework, and is just one element of an evolving government response to sustainable development challenges, including vegetation management. The evaluation also reflects a perception that the NVF process is not as beneficial or relevant to the jurisdictions as it could be – the Work Plans are more an administrative requirement than an effective management tool.

4.2 Improvements to Jurisdiction Work Plan

The evaluation process provided most jurisdictions with an opportunity to revise and update the draft Work Plans, this included processes to:

- incorporate new activities;
- reflect progress; and
- update challenges and indicators.

Over time, the Work Plans will reflect an evolution in priorities. As achievements are made the emphasis will shift to new priorities. For instance, Queensland focused for much of 1999 on putting the new legislative framework in place and developing supporting administrative systems. Once these are working efficiently, the priority will be focused more on other complimentary MMMs eg- capacity building and incentives. This progress will not be evident over a short timeframe but the process can be made explicit.

Work Plans are not required to respond directly to desired outcomes or goals outlined in the NVF, but rather to the key challenges and best practice principles identified for native vegetation management in the jurisdictions. The strategic layer needed to link the Work Plans to NFV outcomes and goals is missing. A jurisdiction level strategic set of objectives is required to interpret the NVF goals, outcomes and best practice principles in the context of the jurisdiction. The Work Plan would then be driven by the jurisdiction's strategic objectives. Victoria and NSW are progressing with this level of strategic planning and while not specifically related to the NVF, these could provide an example of the strategic level planning required to properly implement the NVF.

The Work Plans would provide a better process for native vegetation management activities if they were more broadly cast to encompass the range of NRM, property

management, rangeland management and other programs, which manage and protect native vegetation as a component of a wider production or landscape system. Many of these other programs address threats to native vegetation.

The Work Plan success measures were reviewed and often updated during the evaluation. Many of the original measures were not quantifiable, not specific in their description, or not directly related to outcomes. They were often found to be poor indicators of progress or measures of success. Where needed their revision was a useful outcome of this review.

The NVF goal to reverse long term decline in native vegetation by 2001 is unrealistic and unhelpful in galvanising ownership of the problem. It cannot be measured by existing monitoring capacity. The NVF process needs to be made more relevant, reflect existing jurisdiction processes, and provide a basis for positive interaction and shared learning between jurisdictions.

4.3 Jurisdiction Progress against the National Vegetation Framework

The evaluation found mixed progress by individual jurisdictions against the National Vegetation Framework. Whilst there are many positive outcomes some major deficiencies remain:

- Government policy and programs were cited as not always delivering consistent signals and outcomes for native vegetation protection. For example, it was suggested that an unintended consequence of the RFA process has been an increase in the rate clearing of native vegetation for plantation forestry. While this issue is addressed in the Best Practices of the NVF, annual Work Plans will not alert jurisdiction to the problem.
- Some jurisdictions still lack a cohesive, comprehensive and co-ordinated statewide planning approach. Coordination deficiencies between agencies at jurisdiction level was said to be limiting progress in some jurisdictions, and role of local authorities in vegetation management needs to be extended in a way that translates NVF and jurisdiction vegetation management goals onto the ground. Good progress was made with, for example, the development of a draft Biodiversity Strategy in Tasmania and enhanced coordination between State and regional activities with the release of Draft Vegetation Management Plans in Victoria. Again, this issue is raised in the Best Practices of the NVF, but annual Work Plans will not address the problem.
- It was accepted that there is an ongoing decline in vegetation condition throughout Australia but this cannot be consistently verified in any jurisdiction. Victoria has made progress in this area and Tasmania is beginning to address it. The NVIS process must facilitate the adoption of a consistent method for mapping and monitoring condition nationally.
- A consistent and repeatable process for assessing extent and quality of native vegetations will also contribute to better identification of priorities for native vegetation management, protection and regeneration.

- The NVF goal to reverse long term decline in native vegetation is still far from being achieved nationally and clearing rates remain high in some jurisdictions. The ability to control clearing activities has been improved but uniform clearing controls across all tenures are still not in place in all jurisdictions and where they exist their implementation is still recognised as requiring improvement.
- Legislation, policy and strategic instruments have been modified or are gradually being upgraded to meet the needs for vegetation management and protection (see the Jurisdiction Reports for further details on relevant Work Plan activities at Annex 4).
- Off- reserve conservation outcomes in general are more difficult to secure and there are also resourcing issues that need to be addressed to achieve CAR goals in some jurisdictions.
- There are gaps in the knowledge of restoration requirements and much of the local knowledge that has been learned from experience has not been captured or made widely available. The need to develop restoration guide manuals has been identified.
- There is an increasing suite of programs being developed to encourage and promote improved vegetation management on privately-managed landholdings (see the Jurisdiction Reports for further details on relevant Work Plan activities at Annex 4).
- At this stage not all jurisdictions have a coherent monitoring and evaluation framework to be applied for monitoring and evaluation of activities and for undertaking Work Plan revisions. However, most are working towards achieving the base data for targeted monitoring of key areas and issues (see the Jurisdiction Reports for further details on relevant Work Plan activities at Annex 4).

For the jurisdictions to more strongly adopt the NVF process, it needs to be made more directly relevant and of benefit to each jurisdiction, while still providing the national goals and vision. For example, the jurisdictions would benefit from a process to enable sharing of technology and best practice experiences. The NVF could also provide benchmarks of vegetation management – a stated purpose but one that is not evident.

The inclusion of a strategic jurisdiction planning process would make the NVF considerably more relevant and of benefit to the jurisdictions. This would also assist in providing better coordination at the jurisdiction level. The strategic plan should be driven by the NVF which would then in turn drive the structure and operation of the Work Plans. This would enable jurisdictions to interpret the NVF overarching goals and principles in context, and through this, link the desired outcomes with MMM activities.

The NVF has as a stated purpose to ‘guide the strategic allocation of Commonwealth funding’. However, the mechanism for this is unclear because there are no priorities allocated at either the national or jurisdiction levels in the NVF or through the Work Plan process. Completion of this aspect of the NVF would make it more relevant.

Another benefit from a more structured NVF process would be to foster jurisdictions to view their native vegetation management programs and activities across a range of MMMs linked to objectives. This would allow them to view the balance in efforts in legislation, capacity building, incentives, planning and assessment, monitoring etc.

4.4 Ongoing Independent Evaluation Arrangements

Management of native vegetation is primarily a State/Territory responsibility in association with individual private, public and corporate managers. The NVF provides an overarching policy framework and vision for the nation but not all of its principles and practices apply uniformly across the country and this needs to be taken into account in assessment of progress.

Future evaluations should not be attempted until the NVF process establishes a mechanism to link quantified goals with MMM actions in a jurisdiction level strategic framework. Then, progress would be best evaluated through a consistent monitoring of vegetation extent and condition at regional or jurisdiction scales through a coordinated national program in a two-year cycle.

Although independent evaluations are unlikely to provide better or more informative data than that which can be provided by the jurisdictions in consultation with regional and local delivery agencies, regular independent evaluation enables a consistent review across jurisdictions. An ongoing independent evaluation process would be strengthened by:

- involvement of regional groups and agencies responsible for delivery;
- better negotiation with the jurisdictions regarding timeframes and scope;
- adequate lead times and time for review of the outcomes of the independent evaluation;
- a focus shifts from an evaluation of process onto an evaluation of bio-physical outcomes as the cycle matures. For that to happen it is essential that each jurisdiction develops and applies a capability to assess both the extent and quality of their native vegetation. A degree of uniformity in methods and a timetable for achieving minimum national standards in vegetation assessment is needed;
- agreement on a defined timetable for reaching a range targets implied in the NVF will support future evaluations; and
- the review processes could include a communication process to facilitate sharing of experience between jurisdictions and play an important role in ensuring the best of each jurisdiction is seen, understood and taken up by the others.

This evaluation suffered from being:

- not adequately understood and negotiated with all jurisdiction;
- required in a very short time frame; and
- focussed on Work Plans rather than all aspects of NVF implementation.

5 Conclusions and Recommendations

This Evaluation of the National Vegetation Framework has assessed the jurisdictional Work Plans developed as part of the NVF and in order to do this it has reviewed the NVF itself. As a result, it has made conclusions about implementation progress and effectiveness of the Work Plans. It has also identified a series of issues that require action at various scales to improve to implementation of the Work Plans and achievement of the NVF Desired Outcomes.

5.1 Achievements

The Evaluation of the NVF proved to be a useful and constructive exercise. What it did highlight was the broad range of vegetation management and monitoring activities that are currently being initiated or undertaken by all jurisdictions. While it is difficult to attribute activities directly to the NVF, it demonstrates the scope that exists in the future, for stronger integration and collaboration of vegetation management and monitoring, and subsequently improved quality and condition of vegetation.

Generally jurisdictions could demonstrate good progress in implementing their Work Plans over the past twelve months, partly reflecting that Work Plan activities were already in progress or planned as ongoing jurisdiction vegetation management or broader natural resource management programs. Achievements include:

- Legislation, policy and strategic instruments have been modified or are being upgraded to meet the needs for vegetation management and protection. Most jurisdictions report progress in this area.
- Clearing controls are in place to protect native vegetation across land tenure types in most jurisdictions. However, implementation is patchy, particularly on private land where issues of property rights are unclear and contentious. This evaluation was not resourced to determine the extent of land clearing or whether 'Best Practice' is being implemented for land clearing regulation although most jurisdictions indicated improvements in regulations or in their usage.
- Most jurisdiction consider that they are reducing the rate of decline in native vegetation extent but there is no consistent way of verifying this. Some jurisdictions are better placed than others to monitor the extent of native vegetation.
- Vegetation condition throughout Australia cannot be consistently verified in any jurisdiction although some are making progress in this area. It is hoped that NVIS will provide a consistent method for mapping and monitoring condition nationally.
- Once the weaknesses in the monitoring base are addressed, jurisdictions will be much better placed to identify priorities for native vegetation management and protection.
- There is an array of programs developing to encourage and promote improved vegetation management on privately-managed landholdings, although some concerns remain about how well these programs are coordinated and targeted at jurisdiction

scale. The off- reserve outcomes in general are more difficult to secure but there are also significant resourcing issues in achieving CAR goals in some jurisdictions.

- A consequence of these programs is that there has been an increase in human and financial resources devoted to vegetation and management protection across Australia.
- Northern Australian jurisdictions, where extensive native vegetation cover remains, are less concerned with revegetation (except in very high value riparian areas) and no net loss concepts, than with management of native vegetation to protect the biodiversity and other values of the remaining vegetation while facilitating continued economic development of land in a manner which does not put the former at risk. The capacity to achieve these outcomes with new native vegetation management mechanisms in place is largely untested but is likely to be strongly challenged.
- In the southern jurisdictions, the focus is on no net loss and Victoria has a policy of net gain. However, it would appear that these jurisdictions it is still not possible to adequately monitor native vegetation extent and condition.
- Government programs across the board do not deliver consistent outcomes for native vegetation. For example, a decline in clearing for agriculture has been achieved in Tasmania but at the same time, the RFA process has increased some clearing of native vegetation for plantation development. There are no doubt examples of other programs across the spectra of economic development and conservation portfolios which work in counter directions. It would appear that, overall, the policies and measures to reverse decline are not winning.

A beneficial aspect of the review, was the concerted effort by jurisdictions to review the Actions and Indicators. In some jurisdictions this resulted in an increased prominence of the NVF and the Work Plans amongst key vegetation managers.

Although the NVF has made achievements, it is limited in its impact because it does not provide stakeholders with:

- quantifiable objectives to work towards;
- a mechanism to go from the national visionary level to the operational level;
- a mechanism to establish priorities for resourcing and action;
- adequate involvement and ownership or responsibility; and
- it does not provide for appropriate monitoring and evaluation.

To overcome these deficiencies a series of recommendations have been made.

Recommendation 1

ANZECC should acknowledge the action being undertaken by all jurisdictions under the NVF and consider implementing the improvements in recommendation 2-6.

5.2 Objectives of the NVF

The NVF Vision provides a challenge for all vegetation managers ‘ to reverse the long-term decline in the quality and extent of Australia’s native vegetation cover’ but the Framework does not translate this into objectives that are quantified such that they can be put into action and progress can be measured. Stakeholders consulted for this evaluation accepted the Vision as being appropriate as a national goal but the difficulty was to understand how various actions worked together to achieve the Vision (and certainly not achievable by June 2001).

It could be argued that the Desired Outcomes in Section 3.3 of the NVF provide overall guidance but there are three problems with these. As general outcomes they are appropriate to most areas and as such indicate a long-term result but they do not easily translate to time dependant and quantifiable targets – the level of objectives is missing. Secondly, to evaluate against these outcomes it would be necessary to monitor change in vegetation extent and condition over time and report on progress. While cover and condition monitoring is in the NVF as a Management and Monitoring Mechanism (section 4.7.1), these two components of the Framework are not explicitly linked as would be the case in most strategic action documents. Thirdly, the Desired Outcomes do not apply generally across the country and many have limited relevance to some jurisdictions. For these reasons, they have limited applicability as targets but can be used to guide jurisdictional objectives.

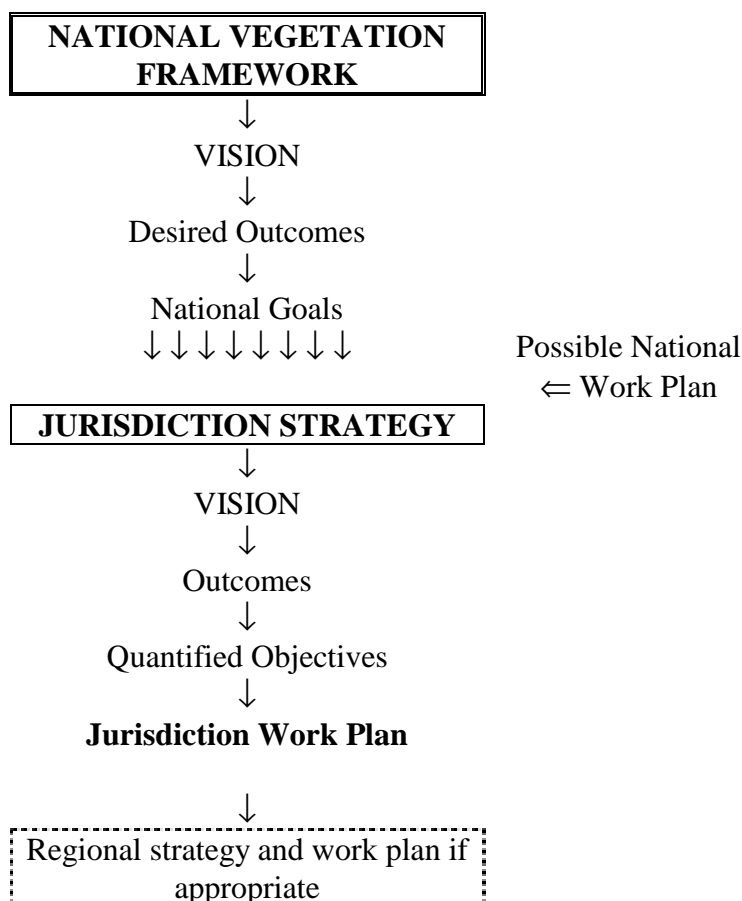
The NVF provides an overarching set of national outcomes and principles for native vegetation management. These are too board to translate into operational work plans, while the more specific Desired Outcomes and Best Practice Principles of the NVF do not apply consistently at a jurisdictional level. The jurisdictional Work Plans are operational level documents and are generated in line with the Management and Monitoring Mechanism in the NVF. However, these are not linked to the NVF Outcomes or the Vision. Many of the Management and Monitoring Mechanisms can deliver benefits to more than one outcome and hence it is difficult to review Work Plan actions against outcomes to evaluate efficiency or effectiveness. An appropriate response by the jurisdictions to the NVF would be to develop a set of quantifiable objectives for native vegetation management for the jurisdiction, based on NVF overarching goals.

Quantifiable, time dependant objectives at the jurisdictional level can be developed from the NVF ‘Goals’ and then they will drive the actions in the Work Plans. The jurisdiction objectives would be consistent with overarching Goals at the national level which need to be formulated from the NVF Desired Outcomes and be stated within the NVF to provide focus and establish priorities. These could be produced either as specific native vegetation management objectives (more critical in the southern jurisdictions), or as part of overall NRM management strategies. The jurisdiction objectives would be better drivers of the work plans and would provide a better basis for planning, implementation and evaluation.

At the NVF level, examples of overarching ‘Goals’ for Outcome 1 (reversal in decline) could include ‘reduce land clearing in Australia by a certain percentage per annum’ or ‘restore vegetation in Australia by a certain area (hectares) per year’. In this case the Goal

would come from national or international agreements. It would also be possible to assign responsibilities by negotiating targets for each jurisdiction.

At a jurisdictional level, the NVF Goals would be translated into quantified Objectives for the jurisdiction and subsequently through the Jurisdiction Strategy to more specific regional plans and targets, if appropriate and through consultation.



The jurisdiction level objectives could be developed as part of a State/Territory native vegetation management strategy, biodiversity strategy or through more general NRM strategic plans. The jurisdiction level objectives should be consistent with the NVF overarching Goals. The following diagram indicates the hierarchy of this arrangement.

At all three levels this would allow:

- priorities to be established for allocation of action resources;
- responsibilities to be assigned;
- monitoring to be meaningful; and hence
- strategic progress towards the outcome at the relevant level.

Recommendation 2

The NVF should contain quantifiable and time dependant 'Goals' relating to the 'Desired Outcomes' at the national level. Jurisdictions should then develop strategies that addresses the specific requirements of native vegetation management for their jurisdiction. These jurisdiction strategies will have explicit links with the NVF, a vision and quantifiable Objectives that drive the Work Plan. The strategy may be primarily for native vegetation or it may have another purpose such as biodiversity but include native vegetation as a major component.

Most Work Plans were assessed as being a loose collection of vegetation-related activities currently being undertaken by agencies. In some cases the Work Plan did not even reflect all the activity such that when evaluating progress towards outcomes or against Key Challenges, the jurisdictional meetings resulted in additional activity being described. Part of this problem is also due to the Work Plans being an annual instrument and hence past achievements and ongoing action is not always noted. Another issue is that the Work Plans are not always developed in association with all relevant agencies.

The NVF is a document that provides broad visions and nominates outcomes that are also relatively generic but do not necessarily apply in all jurisdictions or regions. The provision of a strategic layer would provide opportunity for each jurisdiction to define priorities specific to their jurisdiction, methods of measuring progress, and roles and responsibilities. Each Work Plan could then be developed in accordance with the jurisdiction 'vegetation or other appropriate' strategy. Some jurisdictions have or are currently going down the path of providing this strategic layer. Where this is in place, the jurisdiction Work Plans appear to be integrated, rather than an inventory of activities. Greater attention can then be placed on identifying/developing and measuring joint cross-sectoral coordination and priority setting mechanisms that result from the strategic planning process within the jurisdiction.

A strategic layer of objectives between the NVF and Work Plans at the jurisdiction level would overcome the following issues:

- (a) *broader stakeholder input and ownership* – non-agency representatives involved in the review process indicated concerns with of the limited or non-existent opportunity to input into existing Work Plan process and future direction (ie commenting on draft versions of Work Plans was perceived as too late in the process, little time to respond during past review processes).
- (b) *appropriate balance across management and monitoring mechanisms* – specifically aboriginal and climate change vegetation outcomes appear to be only included if action is occurring rather than as integral components of the Plan.
- (c) *Social and economic factors* - these are perceived to drive much of the vegetation management in jurisdictions but they are not addressed in the existing NVF.
- (d) *NVF objectives and desired vegetation outcomes are difficult to measure* – most jurisdictions expressed some concern about the ability (or inability) to measure progress of their jurisdiction against the objectives or the desired vegetation outcomes in the NVF because these are expressed in broad terms.

- (e) *Relevance and measurement of best management practice* – the relevance of the BMPs to some jurisdictions was queried and secondly, how to measure if the actions or Monitoring and Management Mechanisms reflected BMP proved difficult.

Recommendation 3

Future Work Plans should be based on the NVF overarching goals and the consequent jurisdiction objectives. Specific activities that should occur as a consequence of this include:

- ***Key Challenge statements to be reviewed to ensure current validity and phrasing as a problem statement;***
- ***Work Plan actions to be developed against challenges and outcomes ; and***
- ***Success measures for actions to be developed with indicators that are verifiable in terms of quantity and time for periodic monitoring and evaluation.***

5.3 Priority mechanisms and ownership

One of the primary purposes for developing a planning instrument such as the NVF is to coordinate effort to address priority issues and focus resources to this task. An important part of determining priorities and ensuring coordinated action is to provide all stakeholders with an opportunity to be involved in setting priorities. Through ‘ownership’ of the process and result, people and organisations are more inclined to accept responsibility and fully participate in agreed objectives, through agreed inputs.

During most jurisdiction reviews, a level of bias was noted because implementation of the NVF Work Plans often occurs through one specific agency in the jurisdiction and hence it was focussed on conservation or production-orientated aspects of vegetation management rather than a balance of both. It was anticipated that representatives from all relevant agencies would attend the evaluation meetings/workshops and that activities reflecting all desired vegetation outcomes would be incorporated into the jurisdiction Work Plans. However, at some jurisdiction meetings there was limited input by representatives that manage vegetation according to the different outcomes. This bias is also realised in areas where Work Plans appear to strongly address some of the desired vegetation outcomes (ie biodiversity) but have indicated limited influence in other important desired vegetation outcomes (eg soil and water). To emphasise the importance of the NVF and consolidate the multiple values of vegetation management and monitoring, stronger recognition and demonstration of NVF support by other natural resource sectors is required.

Currently ARMCANZ and MCFFA receive regular reports about the NVF, but they have not formally endorsed the national framework. If ARMCANZ and MCFFA were signatories, there would be greater chance of involvement by agriculture and forestry agencies at the jurisdictional level. This would assist in the determination and resourcing of the actions under the NVF and in the development of multi-purpose objectives for native

vegetation management consistent with the broad range of outcomes already documented for the NVF. As stated in the NVF, vegetation management is essential for many natural resource management issues and sustainability of the landscape. The related and integrated benefits will not occur unless the respective stakeholders are 'owners' of the NVF together with related jurisdictional strategies and work plans. Currently the appropriate Councils to secure these benefits are ARMCANZ and MCFFA but this should be reviewed if there are changes in institutional arrangements.

Recommendation 4

ARMCANZ and MCFFA should become a joint signatories of the National Vegetation Framework to ensure that the multiple values of vegetation management are incorporated into future strategic directions of vegetation management and that implementation and monitoring is more adequately resourced.

Defining roles and mechanisms to integrate activities with jurisdictions at Commonwealth, state, territory and regional levels is important to deliver effective and appropriate on-ground vegetation management and monitoring. Therefore, strong and workable partnership arrangements are required. Deficiencies related to this underlying issue of jurisdiction communication and coordination is reflected in most of the management mechanisms at the jurisdiction scale of implementation.

The NVF was designed to be used as a "guide to the strategic allocation of Commonwealth funding towards native vegetation management and monitoring activities in the states and territories." This is an important purpose but cannot be achieved unless the NVF determines priority objectives at the national level. These priorities, in combination with the jurisdictional strategies and priorities, would provide an appropriate basis for funding allocations and negotiated cost sharing.

In northern areas, the NVF is perceived to have a 'southern focus' because the range of Desired Outcomes and Best Practices in the NVF are considered as biased to the southern context and more explicitly reflect southern drivers. The focus on protection and enhancement of remnant vegetation in the NVF needs to be sufficiently broad to accommodate the northern Australian development situation if it is to be a useful and driving framework for cooperative vegetation management across all jurisdictions. There is a perceived risk that northern Australia will be inaccurately assessed in relation to progress towards meeting NVF outcomes but this can be overcome through the jurisdictional strategy process and objectives recommended in section 5.2.

Some jurisdictions indicated concern that the NVF did not establish priority areas for vegetation communities identified to be at risk and of national significance. With finite resources, potential vegetation loss or degradation is of concern. Individual jurisdiction strategies will establish priorities for vegetation areas/communities of significance in each jurisdiction. However, it is suggested that the NVF needs to establish priorities for managing and monitoring vegetation communities perceived to be of national significance, thereby allocating a national responsibility based on shared responsibility.

Recommendations 1 and 3 should ensure greater participation and ownership of the NVF and Work Plans but a separate process is necessary to establish and manage national priorities and actions (not Commonwealth). These tasks are currently not undertaken but have the potential to improve the NVF outcomes by:

- coordinating NGO involvement in the NVF national processes (for example, Greening Australia, NFF);
- determining national success measures and appropriate monitoring methodologies (for example, condition criteria or extent mapping);
- establishing and promoting benchmarks for the NVF;
- establishing national native vegetation management objectives and priorities for the NVF (for example, national priority vegetation communities for conservation);
- recommending national resourcing requirements for coordinated actions to ANZECC, MCFFA and ARMCANZ (for example, cost sharing for nationally significant actions); and
- overseeing the periodic evaluation of the NVF at a national level (as discussed in section 5.3).

This could be undertaken by a NVF National Strategic Management Team with representatives of each jurisdiction plus ARMCANZ and MCFFA.

Recommendation 5

Establish a National Strategic NVF Management Team with representatives from each jurisdiction plus ARMCANZ and MCFFA to manage the 'national component' of the NVF which includes establishing national priority actions and associated resource allocations, plus coordination of evaluations and appropriate NGO involvement.

5.4 Monitoring and evaluation

The NVF provides an overarching national policy framework and vision but not all of its principles and practices apply uniformly across the country and this needs to be taken into account in assessment of progress. Native vegetation management and monitoring is primarily a State/Territory responsibility with some Commonwealth responsibilities and much of the vegetation is privately owned. However, these responsibilities are not adequately recognised in establishing the evaluation arrangements for the NVF. Evaluation without agreed criteria, measurable objectives, or against non-defined responsibilities would not be effective or useful.

Future evaluations should not be attempted until the NVF process establishes a mechanism to link quantified goals with MMM actions in a jurisdiction level strategic set of objectives. Then, progress would be best evaluated through a consistent monitoring of vegetation extent and condition at regional or jurisdiction scales through a coordinated national program in a regular cycle.

There must be adequate capacity to monitor vegetation cover and condition in each jurisdiction if the NVF is to be evaluated. It is therefore essential that each jurisdiction develops and applies the capability to assess both the extent and condition of their native vegetation. A degree of uniformity in methods and a timetable for achieving minimum national standards in vegetation assessment is needed and should be formally agreed to by each jurisdiction through the NVF. These indicators need to be based on the NLWRA as stated in the NVF and on existing indicators such as State of Environment reporting to prevent duplication of effort and minimise cost.

Monitoring and subsequently evaluating Work Plan activity or progress against jurisdictional vegetation or other appropriate strategies is a separate but related process. The main issue here is for the NVF to contain a set of agreed performance indicators or success measures against which the jurisdictions can report. If these are integrated with some nationally verifiable indicators for the NVF Objectives, the system should be self-checking. This current evaluation has not been able to check measures of cover and condition because the consistent indicators do not exist, they are not integrated with the NVF outcomes, and the review resources are too limited in time and budget. Even so, further independent evaluations should only be required at 8-10 year intervals if the national and jurisdiction indicators are well chosen, integrated and relate to the NVF Goals.

Future evaluation under the NVF process would benefit from:

- involvement of regional groups and agencies responsible for delivery;
- better negotiation with the jurisdictions regarding timeframes and scope; and
- adequate timeframe and budget for evaluation and review of outcomes.

Recommendation 6

It is recommended that ANZECC (through the proposed NVF Strategic Management Team, Recommendation 5) in consultation with the jurisdictions, develop a set of key performance indicators that can be selectively used by jurisdictions as appropriate for their objectives, and also allow for consistent reporting against the NVF Goals established through Recommendation 2.

5.5 Summary of recommendations

1. ANZECC should acknowledge the actions being undertaken by all jurisdictions under the NVF and consider the following improvements.
2. The NVF should contain quantifiable and time dependant 'Goals' relating to the 'Desired Outcomes' at the national level. Jurisdictions should then develop strategies that addresses the specific requirements of native vegetation management for their

jurisdiction. These jurisdiction strategies will have explicit links with the NVF, a vision and quantifiable Objectives that drive the Work Plan. The strategy may be primarily for native vegetation or it may have another purpose such as biodiversity but include native vegetation as a major component.

3. Future Work Plans should be based on the NVF overarching goals and the consequent jurisdiction objectives. Specific activities that should occur as a consequence of this include:
 - Key Challenge statements to be reviewed to ensure current validity and phrasing as a problem statement;
 - Work Plan actions to be developed against challenges and outcomes ; and
 - Success measures for actions to be developed with indicators that are verifiable in terms of quantity and time for periodic monitoring and evaluation.
4. ARMCANZ and MCFFA should become a joint signatories of the National Vegetation Framework to ensure that the multiple values of vegetation management are incorporated into future strategic directions of vegetation management and that implementation and monitoring is more adequately resourced.
5. Establish a National Strategic NVF Management Team with representatives from each jurisdiction plus ARMCANZ and MCFFA to manage the 'national component' of the NVF which includes establishing national priority actions and associated resource allocations, plus coordination of evaluations and appropriate NGO involvement.
6. It is recommended that ANZECC (through the proposed NVF Strategic Management Team, Recommendation 5) in consultation with the jurisdictions, develop a set of key performance indicators that can be selectively used by jurisdictions as appropriate for their objectives, and also allow for consistent reporting against the NVF Goals established through Recommendation 2.

Glossary

Abbreviation/Acronym	Definition
ALGA	Australian Local Government Association
ACF	Australian Conservation Foundation
ACT	Australian Capital Territory
AFFA	Agriculture Fisheries Forestry - Australia
ANZECC	Australia New Zealand Environment and Conservation Council
BP	Best Practice
BRS	Bureau of Resource Sciences
CALM	Conservation and Land Management (WA)
CAR	Comprehensive, Adequate and Representative
DEH	Department of Environment and Heritage (SA)
DNR	Department of Natural Resources (Vic & Qld)
EA	Environment Australia
IBRA	Interim Biogeographic Regional Association
IPMP	Integrated Property Management Plans
MMM	Management and Monitoring Mechanisms
NFF	National Farmers Federation
NVF	National Vegetation Framework
NVIS	National Vegetation Information System
PIRSA	Primary Industries and Resources (SA)
R&D	Research and Development
SCC	Standing Committee on Conservation
SLATS	Statewide Land Cover and Trees Study (Qld)
SoE	State of Environment
TOR	Terms of Reference
WWF	World Wide Fund for Nature
WP	Work Plan

Annex 1

Evaluation Methodology

Session A Review Work Plan against Key Challenges

Key Challenges have been identified for each jurisdiction in the Dore Report. As these were developed prior to the Work Plans, they are presumably drivers for the Work Plan Actions. Therefore, an evaluation of the effectiveness of the Work Plans must consider how well the actions address the challenges.

We will do this by building a matrix between the two, for the purpose of determining strengths, weaknesses and gaps in the existing Work Plans. For each Management and Monitoring Mechanism (MMM), a rating will be given for the level of influence each action could have in addressing the Key Challenge for that mechanism. The matrix template with a simple worked example is shown in Figure 1.

Figure 1. Assessing Work Plan effectiveness in addressing Key Challenges

Key Challenge	5.5.1.1 Management and monitoring mechanism						
	5.5.1.2 Planning and Assessment 4.2						
	5.5.1.3 High influence	5.5.1.4 Medium influence	5.5.1.5 Low influence	5.5.1.6 No influence			
Planning and Assessment							
• Issue/Point 1 ...	Action 4.2.1 (2.1) etc						
• Issue/Point 2 ...		Action 4.2.2 (2.2) etc					
• Issue/Point 3 ...	Action 4.2.3 (2.3) etc						

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

We recognise that our assessment of the relative influence of the Actions will be very subjective and superficial, given that our Team members have only the Work Plan to refer to. To improve the validity and value of the matrix, we will send you the initial desktop ratings for your scrutiny and amendments. David Marston will be in contact with you before the end of the week to check progress

and if necessary work through the matrix with you. The draft matrix will be 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 New South Wales. If necessary, modifications to the list of Actions can be made to increase the beneficial impact on the Key Challenges.

The jurisdiction meeting will also review the 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 will be reviewed. Alternatively, if new challenges can be identified, we will need your advice on actions to address these.

- A confirmed list of Key Challenges, incorporating changes as identified;
- Agreement on the level of influence the Actions have on the Challenges; and suggested modifications to the list of Actions to increase their individual and collective impact.

5.6 SUMMARY OF ACTION REQUIRED

What URS/Griffin nrm will do:

- undertake desktop review of Key Challenges against the Jurisdiction Work Plan and send to jurisdictions by close of business 26th September 2000
- raise questions in the Jurisdiction meeting for clarification or to facilitate discussion on how the Work Plan is addressing the key Challenges.

What you need to do:

- review the document and discuss with David Marston prior to the jurisdiction meeting

Session B. Assessment of Work Plan Success Measures

In order to evaluate Work Plan progress, a critical aspect involves quantifying achievements against the Success Measures (or Performance Indicators).

For each listed Success Measure, please provide quantified information on the achievement to date. If no progress has been made, please note this in the allocated column in the attached Work Plan.

If space is insufficient to give adequate details on success measures, please attach separately with reference to the relevant success measure and management and monitoring mechanism. If in your opinion, any of the performance indicators are inappropriate and require changes, please note and make your suggestion for an alternative. An example is provided below using part of a Work Plan (*NOTE THAT THE LEVEL OF ACHIEVEMENT IS AN EXAMPLE ONLY*)

**You will need to add this
column to your Work Plan and
complete**



5.6.1 Management Mechanisms	Action	Responsibility	Timeframe	Success Measure	Level of Achievement
ACT Weeds Strategy	In accordance with principles and policies set out in the ACT Weeds Strategy, determine an annual program of weed control for priority species in predetermined areas; assess control	Commonwealth and Territory Government land managers, rural lessees,	Annual program	Continuing support for annual weed control program; control programs result in decline in	Performance Indicator not easily discernible INSTEAD: 5 major weed species identified (nominate species) baseline surveys

	effectiveness of each years program.	community interest groups		weed abundance/distribution	undertaken for areas to document abundance and distribution
5.6.2 Evaluation of urban ecological assets	A survey of urban open space vegetation condition and habitat value was undertaken during 1998-99. Assessment of the ecological significance of assets identified will be undertaken to allow management requirements and priorities to be developed.	Canberra Urban Parks and Places, Environment ACT	6/01 – subject to funding priorities	Assessment completed and management measures being developed	Assessment completed and document prepared. Management measures are 50% complete. Anticipated completion June 2001

6 Management of threatening processes	Determine the most effective mechanism for identifying and providing for the coordinated management of ecological threats. Statutory processes are available, but an alternative approach may be more productive.	Environment ACT, Flora and Fauna Committee	01-02 for substantive project completion	A preferred mechanism or combination of mechanisms is identified for each threatening process	Threatened processes identified and documented in publicly available document. Mechanisms identified for 5 of 10 processes, other 5 are 70% complete. Complete by 2002
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6.1 SUMMARY OF ACTION REQUIRED

What you need to do:

- compile quantifiable information against each success indicator on your jurisdiction Work Plan and email back to David Marston before the jurisdiction meeting.

What URS/Griffin nrm will do:

- Review ‘Success Measures’ information prior to jurisdiction meeting when it has been received from the jurisdictions
- Raise questions in the Jurisdiction meeting to seek further input or check understanding of progress against the Work Plan targets.

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

Our initial reading of the NVF, the Dore (Griffin-nrm) report and the individual Work Plans (WPs) suggests that while the relationship between the management mechanisms in the WPs and the Key Challenges is generally straightforward, their relationship with the Desired Outcomes in the NVF is less so.

6.1.1 Figure 2: Assessing the contribution of Actions to NVF Outcomes

6.1.1.1.1.1.1 Desired Outcome from NVF	6.1.1.1.2 Management and Monitoring Mechanism in WP			
	4.2 Planning and assessment		4.3 Formal reserve system (etc)	
	4.2.1 (2.1) Inventory	4.2.2 (2.2.) Biodiversity status assessment (etc)	(3.1) - Identify areas for reservation	(3.2) Govt and Agency support (etc)
Biodiversity	Action 1-High Action 2- Low	etc	etc	etc
Soil and water resources	Medium			
Hydrology	Action 1-Low			
Land productivity	Action 2- High			
Sustainable land use	Medium			
Natural and cultural heritage	Etc			
Indigenous peoples				
6.1.1.1.2.1 Climate change				

Note some WP has more than one Action for a given Mechanism but some do not.

The task will be to consider each action for each Management and Monitoring Mechanism (listed across the X-axis) and assess their contribution to the NVF Desired Outcome, listed on the Y-axis. The rating will use the same criteria proposed for relating the actions to the Key Challenges in Session A.

David will also do an initial assessment of these relationships as a desk-top analysis and provide you with the assessment for checking and modification. Again, we recognise that our assessment will be done very subjectively and using limited information – the preliminary step is only being used to save time in the overall process.

After you review the content of Figure 2 please return it to David prior to the Jurisdiction meeting. It will also be considered at the jurisdiction meeting for its validity and the implications for achievement of the NVF outcomes. David will facilitate discussion at the jurisdiction meeting in deciding if there are modifications required in the list of Actions that will improve their contribution to the achievement of the NVF Desired Outcomes.

6.2 SUMMARY OF ACTION REQUIRED

What URS/Griffin nrm will do:

- Compile draft matrix that links Work Plan activities with MMM's and NVF Desired Outcomes
- Facilitate discussion at the Jurisdiction meeting to explore gaps in the matrix and briefly consider ways to improve the WP by addressing the Desired Outcomes.

What you need to do:

- Check information prior to Jurisdiction Meeting.

Session D Best Management Practices

A key criteria of the Terms of Reference is 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 BMP against the seven Management and Monitoring Mechanisms (Appendix B, pages 39-66). Due to the time limitations associated with the evaluation, the URS/Griffin nrm team has 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 MMMs. This process will, across the jurisdictions, address the range of BMPs identified in the ANZECC framework for the nominated mechanism, and be reported as a Case Study in the relevant jurisdiction report.

The BMP focus for each jurisdiction meeting is nominated in the table below. These have been selected at random and can be altered prior to the jurisdiction meeting in negotiation with your key contact. The ANZECC framework BMP's will be the main guide for us to develop Case Study questions during the meeting.

Jurisdiction	Management and Monitoring Mechanism BMP's	Page Number in ANZECC Framework
Australian Capital Territory	Communication & Capacity Building	50-51, Section 4
Commonwealth Government	Regulatory Arrangements	55-61, Section 6
New South Wales	Communication & Capacity Building	50-51, Section 4
Northern Territory	Planning & Assessment	42-49, Section 2
Queensland	Monitoring & Evaluation	61-63, Section 7
South Australia	Planning & Assessment	42-49, Section 2
Tasmania	Incentives	52-55, Section 5
Victoria	Incentives	52-55, Section 5
Western Australia	Formal Reserve System	48-50, Section 3

6.3 SUMMARY OF ACTION REQUIRED

What URS/Griffin nrm will do:

- compile questions for the jurisdiction meeting against the NVF BMP's and the Case Study developed by you for your nominated Mechanism in your jurisdiction.

What you need to do:

- check and make sure you are comfortable with the allocated MMM BMP for your jurisdiction and be familiar with the BMPs for the jurisdiction meeting.

-
- Provide a Case Study of 1-2 pages on how your jurisdiction has used the BMP in undertaking the relevant Management and Monitoring Mechanism and the Actions within.
 - Make this Case Study available to David prior to the Jurisdiction meeting.

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

This session in the Jurisdiction meeting will look collectively at the Visions in the Work Plans and will assess how effectively the mechanisms being implemented now, will achieve those Visions in future. We are suggesting the use of plausible process methods 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, we can identify a number of key indicators of overall progress and analyse these to evaluate the likely long-term impact of the National Vegetation Framework.

In the next few days, we will be sending you our preliminary assessment of the measures that are likely to impact on the overall Goals and Visions of your Work Plan. We will identify the types of measures we would expect to find if the goal or vision is going to be met and will make preliminary assessments of gaps in the current work plans in relation to achieving the overall goals.

We would like your feedback on these assessments. We are working from limited information and, while we appreciate that we are placing demands on your time, we are also very keen to work with you to achieve a positive outcome in a process in which you are an integral part. We would like your feedback before the Jurisdiction meeting so that we can revise the assessments and discuss them with you at the meeting.

At the Jurisdiction meeting, we will also discuss progress towards the National Vision by all Work Plans.

6.4 SUMMARY OF ACTION REQUIRED

What URS/Griffin nrm will do:

- Facilitate discussion at the Jurisdiction meeting to explore overall NVF goals and vision.

What you need to do:

- Check information sent to you prior to Jurisdiction Meeting.

Annex 2

Best Management Practice Summaries

BMP Summaries

Roles and responsibilities of Government and community (Mechanism 4.1).

This was not analysed as a case study in Best Management Practices as part of the evaluation.

Planning and Assessment (Mechanism 4.2) – South Australian case study.

Vegetation Inventory, Data Collection and Mapping

Much of the state's work in this area occurs under the Biological Survey of SA program. Systematic surveys of the state's flora and fauna commenced in 1985, with 72 per cent 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. 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.

Biodiversity Status Assessment

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

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.

Regional Vegetation Management Planning

Regional Biodiversity Planning was established in 1997 to develop plans based on the bio-regions of SA. The community is consulted regionally. A vision is in place, given as : 'Together, we will conserve, rehabilitate and manage SA's biodiversity for future generations.' 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.

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.

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.

Biodiversity status assessment (Mechanism 2.2 – Tasmanian case study)

Vegetation mapping programs are recognised as critically important to Tasmania's biodiversity conservation and management capacity. A tight timeframe for the work has encouraged some technical innovation:

1. Overlays of GIS layers (geology, topography, climate etc) are used to support extrapolation of vegetation types based on expert judgements. These judgements are then verified by periodic ground truthing.
2. Modelling has been used to work out likely patterns of Pre-European vegetation for the National Vegetation Information System.
3. Automation of some of the mapping processes – transfer of line-work from period photos to the map base.

The current mapping program in Tasmania aims to complete an initial coverage of the state using 140 vegetation types at 1:25000. A small team of staff has a huge degree of technical skill and efficiency but has a problem with 'skills leakage'. The potential loss of expertise is a serious risk. Maintenance of both technical capacity and corporate knowledge is needed to complete the program.

Tasmania plans to underpin the mapping generated information with detailed plot assessment. The intensively sampled plots will yield information on;

- Ecological processes
- Species composition and change over time and
- Responses to episodic events such as fire.

The plot sampling will be used to establish the quality of the vegetation.

A manual is planned which specifies the minimum standards for plot survey and sampling so as to ensure that plots are sampled using a comparable set of standards. The information generated by the mapping and modelling is made available via the web and is being used or will be used for a range of different purposes at a range of different scales.

- At the state-wide scale it will be used to assist in the CAR assessments and further reserve planning.
- At the regional scale it is being used to support the development of regional NRM plans and ICM plans
- At the property scale it is being used to identify areas of conservation significance and to support improved management

The information is available on the web where species overlays are linked to management advice for different species and communities. Access privileges to threatened species locations vary.

The vegetation mapping has supplied valuable information for a range of uses. It has proven valuable for:

- Design and targeting of incentive programs, such as helping to allocate the incentives to meet targets eg via targeting the covenanting program
- To support the work of vegetation (and revegetation practitioners) who can access and use the vegetation data
- Assisting the RFA process by helping to support the setting of conservation targets.

In conclusion, mapping and inventory should be seen as an important foundation investment which supports improved planning and management in a wide range of ways at a range of scales.

Reserve System (Mechanism 4.3) – Western Australian Case Study

The NVF describes best practice in establishing and managing a formal conservation reserve system under five headings. Inquiry of agency and NGO representatives focused on assessing current practice against these headings.

Identification of areas for reservation

Interim Biogeographic Regions (IBRA) in Western Australia form the basis for the establishment of a comprehensive, adequate and representative (CAR) Reserve System managed by the Department of Conservation and Land Management. Current work identifying areas for reservation is moving from an opportunistic acquisition program to a more strategic approach, with a focus on comprehensiveness. *Perth's Bushplan* is the vehicle for identifying a CAR Reserve System within the Perth region and is expected to be endorsed by Cabinet in November 2000. This model is likely to be extended into other areas with high population density.

Concern has been expressed that it will be impossible to achieve CAR criteria in the south-west of Western Australia which is one of the world's 25 'hot spots' for biodiversity – more attention to off-reserve conservation will be required. Further, there is scientific concern that current selection criteria are still too 'species-focused' and does not address ecological communities and processes sufficiently.

Establishing reservation areas

Land managed for conservation in Western Australia includes the Nature Conservation Estate with lands held as National Parks, Nature Reserves and Conservation Parks. The remainder of the lands managed for conservation occur variously as Multiple Purpose Crown Reserves under CALM management (including State Forest, Timber Reserves, Special 5(g) Reserves and Multiple Purpose Reserves) and as Non-Crown Reserves acquired as leasehold and freehold land.

The percentage of land managed for conservation across the state increased from 7.5 per cent in 1997 to 8.42 per cent in 2000. Examination of the detail shows considerable progress in increasing the area managed for conservation across the Gascoyne-Murchison area (using federal funds to acquire pastoral leasehold land) with minor gains elsewhere. However, these data also show that the required level of protection is achieved in only a few of the regions and many of these are located in very remote areas of the state where competing demands for land use are very low. Agency funds for reserve acquisition are quite inadequate.

Managing reserved areas for vegetation protection

While management plans are being prepared, resource constraints in government have resulted in slower than desired progress in developing regional and reserve-specific management plans for vegetation management and protection. An Agency representative suggested that funding for reserve management is probably only 30 to 50 per cent of what is required. Increasingly, urban and peri-urban reserves rely on 'Friends Groups' for management, using their own resources and sometimes NHT funds.

Complementary management approaches are reasonably adequate in areas surrounding reserves within forested lands. However there is limited or no complementary management for land surrounding reserves in the rest of the state.

There are difficulties in attracting suitably qualified/experienced staff to manage reserves, particularly in remote locations. There are opportunities for former pastoralists to manage reserves in rangelands through management contracts. While some have been offered contracts, there is concern that proposals from Aboriginal groups for similar arrangements have not been successful.

Community involvement in all aspects of the process

The establishment and management of CAR reserves is a role for government, with community support through public consultation in the development of management plans and specific management actions. Further, acquisition is often commercially sensitive which limits opportunities for community involvement. Community input for planning CAR reserves comes through development of regional natural resource management strategies. Community groups are active within urban reserves but there is little involvement of either local or state government agencies. However, local Agenda 21 committees are beginning to take an active role in urban bushland management.

Representatives from NGOs are concerned that there has been insufficient enrolment of indigenous people in reserve identification and management; and in off-reserve conservation, especially on the large areas of pastoral leasehold land now held by Aboriginal communities.

Monitoring and reporting progress

The Department of Conservation and Land Management maintains excellent detailed statistics of the land managed for conservation in the various categories for each IBRA.

However, resources for monitoring vegetation change are quite inadequate. Landscape function and process monitoring are recognised as being important but resource constraints also prevent action in this area. NGO representatives contacted believe that more use could be made of local communities as a resource for monitoring changes in the condition of land managed for conservation.

Communication and capacity (Mechanism 4.4) – Commonwealth and New South Wales case study.

Community Education (Mechanism 4.1)

The following example for comparison with best management practices is taken from the Commonwealth Work Plan, and was analysed by Environment Australia.

Management Action	Responsibility	Timeframe	Success Measure	Progress
4.9 Implement NHT training initiative for extension officers and community leaders in natural resource management, consistent with the competency standards above.	AFFA, EA and State/Territory Partners and community organisations.	Pilot stage completed June 2000.	Extension network has access to training relevant to regional circumstances and individual needs.	The pilot phase is almost completed and evaluation and analysis of the pilots is ongoing and adoption of future direction yet to be decided. The course has been successful with good attendance (info derived from evaluation forms)

Background

The Natural Heritage Trust Ministerial Board approved funding from the Bushcare and National Landcare Programs for the development and implementation of a pilot NHT training initiative (*Building Regional Capacity: natural resource management short course*). The aim of the initiative is to support and build on the skills of a range of people working on the ground to implement NHT programs. It is jointly managed by Environment Australia and Agriculture, Forestry and Fisheries Australia.

The pilot is being trialed in eight regions across Australia. Participants include coordinators and facilitators, volunteer community members, Regional and State Assessment Panel members, leaders of regional organisations and relevant local and State/Territory government officers. The courses are of either 6 days (3 x 2) or 8 days (3 x 2, 2 x 1) duration. The course content has been developed based on needs analysis in each region. And is properly evaluated. Identified local Registered Training Organisations assess those participants who wish to be assessed for a diploma under the Natural Resource Management (Community programs) Course. (This course forms part of the NHT Skills

Tool Kit that has been developed jointly by AFFA and EA and accredited through the South Australian Accreditation Board).

Results

The Management and Monitoring Mechanism *Communication and Capacity Building* contain the following elements: Community Education; Research, Development and Extension and Vegetation Management Infrastructure. Each best practice attribute has been given a rating (in italics) as to how well the best practices is being incorporated / addressed through the activities of Management Action 4.9 in the Commonwealth Work Plan.

(i) Community Education. Best management practice incorporates urban and rural communities and a range of engagement programs, emphasising diverse delivery means and activities closely tied to the values and aspirations of target groups. Attributes considered to constitute best practice approach are:

- comprehensiveness in terms of the range of community sectors targeted - for example, school students, households, service clubs, industry, public land managers, opinion leaders –*medium (NB schools, industry and public land managers given the greater focus)*;
- A strong foundation of market research to determine the information needs of each target audience - *high (a needs analysis was conducted in each regions and form the basis for the course focus)*;
- information prepared and presented for specific target audiences- both the type and content of information, and the mode of presentation - *high*;
- use of a range of different communication channels including publications, print and electronic media and direct involvement according to the needs of different sector – *high (education folders/newsletters/website)*;
- integration of community education and information materials and activities into existing structures, activities and media- eg. School curricula, community newsletters and functions, service clubs, industry groups – to complement stand alone activities and publications – *medium (mainly a focused target group but using registered training organisations for assessment (TAFE) and state training bodies for accreditation. There is the capacity to be used in the wider arena – school curricula)*;
- wherever possible, use of action learning principles to involve people directly in activities which are meaningful to them in their own locality, on issues which affect them directly –*high (locally focus, adult learning principles)*.

(ii) Research and Development, and Extension. Incorporating the integration of research and practice; the provision of awareness, knowledge and skills and access to resources; and group approaches based on adult learning principles. Ratings against each best practice attribute are as follows:

- integration with extension, planning, monitoring and evaluation activities *medium (what the course delivered was based on core competence developed by consultants following extensive research)*;

- recognition that much practical knowledge in revegetation and management of remnant vegetation rests with landholders, and hence extension services need to be designed around sharing, extending and consolidating this knowledge and experience. Vegetation management extension should be based on two-way interaction and joint learning between professionals and land users, rather than models based on transferring the fruits of scientific endeavour to farmers –*medium*;
- constructive use and resourcing of non-government networks through for example, the conservation movement, field naturalists, bird observers and organisations such as the Society for Growing Australian Plants, Greening Australia, Trees for Life, Men of the Trees, Australian Forest Growers and the Australian Trust for Conservation Volunteers – *medium to high*;
- facilitation where appropriate and practical, of the engagement of enthusiastic ‘amateurs’ alongside scientists carrying out research projects – *low*;
- a hierarchical approach with different levels of extension from input into regional plans, through group facilitation, to individual site advisory services– *medium to low*;
- strong coordination between the levels and individual elements of the extension network– *medium (one aim of the course to increase communication, use of electronic discussion)*;
- a tailored approach to extension based on community and regional needs and issues - *medium*.

(iii) Vegetation Management Infrastructure. Incorporating ‘hard’ infrastructure such as seed banks and nurseries; and ‘soft’ infrastructure such as databases and knowledge systems. Ratings against each best practice attribute are as follows:

- seedbanks with the full suite of local provenance germplasm, appropriately stored, documented and labelled – *medium to low*;
- nurseries producing sufficient quantities of the full suite of local species and provenances – *medium to low*;
- revegetation equipment such as direct seeding machines, planters and sprayers – *medium*;
- specialist services for monitoring and management of remnant vegetation –*medium (Greening Australia attends the course and provided technical input)*.

Research and Development, and Extension (Mechanism 4.2)

NSW provided a case study on Integrated Property Management Plans that addresses the Best Practices documented in the NVF for *Community Education and Research, Development and Extension*.

Integrated Property Management Plans – A Case Study

The NSW Government and landholders have recognised the need for a single mechanism (an integrated property management plan), which provides integration of extension and advisory services with planning; regulatory; incentive; and research frameworks. The single mechanism would specifically meet the vegetation and other natural resource management requirements of all relevant government agencies for consents, licences and certain incentives under a number of pieces of legislation.

In response, the NSW Department of Land and Water Conservation (DLWC) is piloting Integrated Property Management Plans (IPMPs) in the Hunter, Murray and Central West Regions of NSW. The pilots are a cooperative effort between DLWC, NSW Agriculture, the National Parks and Wildlife Service, Farming For The Future (FTFF), the community and other agencies.

IPMPs are a single integrated property-based plan, which will:

- Allow a landholder, with one document, to meet the requirements of various agencies and funding providers;
- Be initiated by landholders and are developed through a process where the landholder works in partnership with government agencies and other relevant organisations;
- Be simple in format and wording, practicable and implementable, and allow landholders to integrate vegetation, soil and water management practices with other physical, financial and personal aspects of their property's management;
- Be flexible so that an integrated property management plan can be easily reviewed and upgraded to incorporate any development components

The pilot projects are guided by the best management practices outlined in the '*National Framework for the Management and Monitoring of Australia's Native Vegetation*'. The IPMP Pilots are particularly guided by the best management practice detailed in Section 4.1 - *Community Education* and Section 4.2 - *Research and Development, and Extension* of Appendix B: *Best Practice Attributes of Native Vegetation Management and Monitoring Mechanisms* (p. 50-52).

The IPMPs have the following features which are aligned with best practice as described in the NVF.

- They target a diversity of community sectors including large and small landholders, individual and corporate owners, landholders who are interested in the regulatory process; landholders who are interested in the incentives available, and both landholders who have and have not participated in the FTFF workshops. The landholders involved also have a geographic spread within each of the pilot regions and across New South Wales.
- A range of communication channels are used including workshops series, field trips, phone contact, newsletters and individual site visits. The IPMPs have integrated vegetation management information and networks with conventional extension services through combining advice from qualified agency staff with the FTFF program.
- The pilots follow a process of action based learning involving people directly in activities, which are linked to their own properties and local communities as well as to the regional landscape. An IPMP is initiated by a landholder and is developed in partnership with government agencies and other relevant organisations for the landholder's own property. The landholder works on an IPMP which contains general information regarding: location; ownership; vision for the property, biophysical features; existing management and enterprises; cultural features; existing land use and

infrastructure; water balance; physical limitations; land use problem areas; ecological significance and future options for the property. Rectified aerial photographs, and in most cases geographic information systems (GIS) are used to prepare this information for the IPMPs.

- The IPMP process recognises the practical knowledge of revegetation and management of remnant vegetation rests with landholders. The development of an IPMP is primarily focussed on group-based actions and learning via integration with targeted workshops, conducted by trained and experienced facilitators, and field trips to examine vegetation types and land degradation issues. The development process also includes site visits to other landholder's properties and individual property visits by agency staff.

This coordinated series of best practice native vegetation management extension allows for group discussion, two-way interaction, joint learning, information and experience sharing, recognition of anecdotal information and practical experience, and specific targeted advice to participants. Landholders are encouraged to provide their local knowledge of their property and its vegetation.

Through analysis of future options for the property an IPMP identifies, documents and promulgates best practice on-ground native vegetation management and revegetation. The IPMPs also identifies land use problem areas where best management practices may not be sufficient to achieve ecologically sustainable native vegetation management.

All of the IPMP pilots have links to non-government networks. For example, in the Hunter pilot the Australian Forest Growers contribute to IPMP pilot. The Central West pilot project was initiated by landholders from the Macquarie Marshes Catchment Management Committee, Macquarie River Food and Fibre and the Macquarie Valley Landcare Group.

The IPMPs advice, workshops and documentation are based on individual, community and regional needs and issues. Each IPMP provides information on linkage to existing (and planned) legislation, Local Environment Plans, sub-catchment plans and landcare group plans, Regional Vegetation Management Plans, Regional Environment Plans and Catchment Management Plans. The landholders are encouraged to participate in regional planning and some participants are members of Regional Vegetation Committees and newly created Catchment Management Boards.

A comprehensive review of the three pilots will be undertaken in March 2001 to examine the feasibility of possible wider implementation on a statewide basis.”

Incentives (Mechanism 4.5) – Victorian and Australian Capital Territory case study.

Victoria

In Victoria voluntary vegetation management programs have reached many land-owners. The members of the Land for Wildlife scheme (LFW) manage more than 140,000 hectares of Victoria. The stricter Conservation Covenants cover a further 10,000 hectares.

Given this history with voluntary vegetation management programs and Conservation Covenants, Victoria is now moving to enhance its incentives programs with the funding of management agreements. These agreements will have differing degrees of complexity and will be more or less prescriptive depending on the land and vegetation involved.

Victoria will be attempting an innovative auctioning system to establishing some of these agreements and to target the funding in the most cost effective manner. The auctions will target priority EVCs where vegetation on private land is a high priority for conservation. Under the planned auction systems land-holders will nominate what they will do in terms of changing the use and management of vegetated land eg:

- Stop grazing
- Stop firewood harvesting
- Fencing
- Controlling weeds and feral animals, etc.

The government may agree to 'purchase' the changed management if the offer meets their priorities at an acceptable price. This year a trial will be under taken. It will target priority regions where there is good information and support in the community. The trial will be designed to learn about the process and develop protocols and methods for:

- Developing a biodiversity benefit index
- Improving the auction system
- Determining the necessary information disclosure requirements.

The auctions may focus on permanent and decadal (10 years) management agreements. Permanent covenants will score higher than shorter-term agreements. The State has a view as to its priorities for change - eg via maps of preferred locations and or data on species but may not necessarily disclose this prior to the auctions. The State will invite land-holders to 'bid' for incentive payments. Land-holders will offer parcels of land and management packages eg 50 hectares of bush type X maintained weed free, with no grazing or firewood harvesting.

The State will assess offers and look for the least-cost way to achieve an outcome. The State will try to estimate the value of the quality enhancement resulting from the offer. The compliance effort will be based on random inspection a bit like the ATO, and the "moral hazard" of non-compliance.

The trial will compare and contrast auctions with grants. It is assumed that the competitive element will drive the price of conserving private bush down. Unlike grants it is assumed that it will provide a greater capacity and certainty to account for results. It also offers an alternative to the acquisition of land for parks and a mechanism for protecting patches that are only parts of titles.

Finally, it is hoped that the creation of a market for conservation via the auctions will provide a powerful incentive for learning about bush. The farmers in the future may learn about conservation management like they have learnt about the details of managing pastures or futures markets.

Australian Capital Territory

The 1999 Dore Report identified issues in the ACT rural leasehold estate as one of the pressing challenges in native vegetation management. In March 2000, the ACT government launched a new rural policy to provide a better basis for sustainable rural enterprises and to secure a high level of protection of natural values in rural areas.

The new policy includes the availability of 99 year leases in predetermined areas (compared with previous land rental agreement terms of up to 20 years). For new leases, it requires the development of approved Land Management Agreements for sustainable land use. The policy is supported by a range of incentives to encourage participation and to promote the concepts of partnerships in land management between the government and lessees in relation to land management and conservation:

- ***Concessions for converting to long term leases.*** Lessees in eligible areas are encouraged to opt out the land rental component of existing leases at a concessional rate and to purchase any government owned improvements on the land. In return for the concession, the government will require measures for care of the natural environment (and 50% of the capital gain if the property is sold on within a 10 year period of a new lease being granted). Lessees will be required under new amendments to the Land (Planning and Environment) Act 1991, to develop and regularly review Land Management Agreements. The Agreements will focus on features having special conservation value.
- ***Rural Conservation Fund*** is a financial assistance scheme for off-reserve biodiversity conservation and is designed to fund projects on rural leases. There may be cross compliance obligations placed on landholder through Land Management Agreements, to maintain the outcomes of the investment. The emphasis is on long term environmental outcomes. Greening Australia is a partner in this scheme.
- ***ACT Environmental Grants Program*** is designed to assist community groups to deliver goods and services that provide important environmental benefits to the ACT and surrounding areas, focussing on broader community benefits.

These new incentives schemes embody many of the best practice principles set out in the NVF:

- The rules are simple and clear
- The objectives are clearly defined
- Administration systems are relatively uncomplicated
- Voluntary participation is encouraged through a range of measures- from binding agreements to grant programs, and there is scope for cross compliance to protect government investments
- There is scope for targeting wider community benefits

The potential best practice challenges for the ACT in the new rural policy include:

- Providing the range of technical advice, education and information required by landholders to meet their sustainable land management obligations
- Targeting high priority ecosystems to encourage higher rates of participation in these areas perhaps through higher levels of incentives
- There is no explicit mention of incentives for the development of sustainable rural industries- eg native seed collection, native nurseries to encourage these over less sustainable land uses.

Regulatory measures (Mechanism 4.6) – Queensland case study

The regulatory mechanisms for delivering NVF outcomes in Queensland are largely related to the recent *Vegetation Management Act 1999* and two scientific initiatives, which predate and support the basis for the legislation - the Statewide Land Cover and Trees Study (SLATS) and the Regional Ecosystem mapping of Remnant Vegetation.

Of a total state area of 1.7 million square km, the regional ecosystem mapping shows some 1.3 million km² as remnant vegetation, or approximately 75 per cent of the state surface area. Of this remnant vegetation area, approximately 1 per cent has an *Endangered* conservation status, 3 per cent is listed as *Of Concern* with the remaining 96 per cent listed as *Not of Concern*.³ Whilst less than 5 per cent of the remnant vegetation area is considered threatened (i.e. either endangered or of concern status), almost one third of the just over 1000 regional ecosystem's currently identified to date fall into the threatened categories⁴.

Land clearing within those parts of the state which are suited for either arable farming or higher value pastoral production (because of favourable soils and climate edaphics) has been recognised as a significant threat to both the extent of the remnant vegetation and its biodiversity. Until the advent of the *Vegetation Management Act*, land clearing on leasehold land was managed under the *Land Act 1994*, however clearing was generally an *as of right* use within the freehold estate. Data supplied by the Department of Natural Resources to this study shows that the 1995 to 1997 clearing rate in the categories of *Endangered* and *Of Concern*, was approximately 1,200 km² pa of which 650 km² pa was within the freehold land tenure areas. A further 1,400 km² of land was cleared annually in the not of concern categories, 630 km² of which was from the freehold estate.

The annualised clearing rate of both remnant vegetation areas and non remnant vegetation woody regrowth areas⁵ by the 1999 has been reported in the most recent SLATS report as

³ Endangered RE's include areas where less than 10% of pre-clearing RE extent remains, Of Concern have between 10 and 30% remaining and not of concern have over 70% remaining.

⁴ RE which occurred in only small areas are also listed as endangered or of concern irrespective of the extent of clearing and this partly explains the high percentage of RE in these threatened categories.

⁵ The SLATS report estimates that approximately one third of the clearing in this period was regrowth – not remnant

some 4200 km² per year with 2510 km² of that from the freehold estate. The SLATS report estimates that approximately one third of the clearing in this period was regrowth – not remnant, one third coming from *Not Of Concern* status remnant vegetation regional ecosystems and one third from *Endangered* and *Of Concern* categories.

The recently proclaimed *Vegetation Management Act 1999* effectively results in an upgrade of the regulations for land clearing. It puts controls in place across the freehold estate for the first time, complementing the controls already in place for clearing on leasehold land. Whilst there are procedural differences between the two tenure areas, the Act requires that land uses (and those planning and development mechanisms that regulate development in the state) involving clearing adhere to policy codes. These codes in effect will prevent⁶ clearing in currently *Endangered* categories and will condition clearing in the *Not Of Concern* and *Of Concern* categories such that:

- the cumulative effect of clearing does not cause an regional ecosystem to become *Endangered* or *Of Concern*;
- the extent of remnant vegetation coverage within each of the 13 identified bioregions will remain above 30 per cent;
- preserves land cover in areas prone to land degradation or high biodiversity/habitat values; and
- the resultant land use is sustainable (for example areas to be cleared for pasture improvement will have be shown to be suited for such uses).

Implementation of the legislation will be supported by a four to five fold increase in field and regional staff dealing with vegetation management as well as an increase in vegetation inventory staff and the development of a coherent monitoring system that links approvals for clearing to the SLATS.

The Queensland Draft Work Plan reflects these relatively recent developments in the following aspects:

- The role of the State and Local Government has been clarified and codified with respect to land clearing where previously these had been unclear or where there had been no role firmly established;
- A seamless inventory of vegetation and its conservation status is essentially in place; and
- A process for monitoring of changes in land cover capable of producing seamless results across the state is in place.

Within the context of the NVF, these essentially regulatory driven initiatives provide a state, regional and even property level (via the proposed permit system for clearing) framework for formally managing and monitoring changes in land cover in Queensland.

⁶ The code for assessing clearing applications is structure such that it would be very difficult to ever get an approval to clear 'endangered' REs

The data presently available is able to clearly identify (at the regional ecosystem level) where the greatest threats from clearing exist in the state.

The regulatory system effectively embodies most of the principles of best practice for land clearing regulation as defined in the NVF. Remaining challenges in meeting best practice for regulatory mechanisms generally are:

- Strengthening the emphasis on duty of care and effective incentives and programs to encourage acceptance and adoption by landholders and rural communities
- Accelerated emphasis on recovery planning and action
- Critical habitat identification, protection and monitoring

Monitoring and evaluation (Mechanism 4.7) – Queensland case study.

The NVF sets out the following summary of best practice features in monitoring vegetation cover and condition:

- Repeatable and transparent;
- Protocols and standards for information collection and storage;
- Robust method that encompasses uncertainty; and
- Commitment to sampling timeframe and incorporating outputs.

Queensland benefits enormously from a sophisticated land cover monitoring technology (SLATS) and high quality vegetation mapping. By linking SLATS and regional ecosystem mapping, Queensland has been able to develop a system for monitoring clearing and assessing new clearing applications, based on on-line calculations of the extent of native vegetation remaining in regional ecosystems. The system will be refined by SLATS every two years.

The monitoring system provides a strong foundation for implementation of the new clearing legislation, and was a strong impetus in getting the necessary support for the legislative approach. The system has reasonably strong stakeholder support. As with any system that tries to translate landscape ecology into a regulatory system, there are ongoing issues to be addressed. The issues of effective surrogates (do regional ecosystems reflect true levels of biodiversity in the landscape?) and accuracy are being addressed by ongoing research and constant updating.

These monitoring and information support systems are examples of best practice in monitoring and evaluation of vegetation cover and clearing rates for the bulk of the state. As is the case across Australia, however, the system is not yet geared to monitoring condition. The NVF notes that monitoring of condition is difficult and that best practice is yet to be developed for this attribute.

Queensland has the capacity to monitor other vegetation characteristics such as riparian vegetation, remnant strips and clumps, salinity, acid sulphate soils and soil erosion. While these are not actively measured at the present time, there is a legislative requirement that

they be investigated, recorded and addressed in development decisions. The protection of these areas will collectively contribute to a reduction in rate of clearing. The priorities in additional mapping are salinity, erosion (DEM), acid sulphate soils etc as inputs to regional mapping and planning.

Annex 3

Stakeholders Consulted

Annex 3 : Stakeholders that participated in the jurisdiction or overarching review processes.

Name	Organisation
<i>Australian Capital Territory</i>	
Bill Logan	Environment Planning & Legislation, Environment ACT
Sarah Sharp	Wildlife Research & Monitoring Environment ACT
Frank Ingwersen	Wildlife Research & Monitoring Environment ACT
Bill Woodruff	ACT Parks & Conservation Service, Environment ACT
David Shorthouse	Wildlife Research & Monitoring, Environment ACT
Chris Nazer	Canberra Urban Parks & Places, Urban Services Infrast. Policy
Kate Duggan and Lorraine Hitch	Consultants – URS-Griffin nrm team
6.5 Commonwealth	
Karen Cody	Agriculture Fisheries Forestry - Australia
Phil Pritchard	Agriculture Fisheries Forestry – Australia
Michael Whitehead	Australian Greenhouse Office
Anne Jelinek	Australian Heritage Commission
Richard Thackway	Bureau of Resource Sciences
Bernadette O’Leary	Environment Australia
Jim Donaldson	Environment Australia
Tanya Stacpoole	Environment Australia
Bronwyn Goody	Environment Australia - Bushcare
Bruce Cummings	Environment Australia - National Reserve Systems Program
Maria Cofinas	National Land and Water Resources Audit
Philip Hutchinson	NRM Policy Unit
Julie Burke	Murray Darling Basin Commission
Carl Binning	Wildlife and Ecology, CSIRO
Charlie Sherwin	Australian Conservation Foundation
Marie Illman	Australian Local Government Association
Anwen Lovett	National Farmers Federation
Jamie Pittock	World Wide Fund for Nature
Lorraine Hitch & Michael Nurse	Consultants – URS-Griffin nrm team
<i>New South Wales</i>	
Kevin Roberts	NPWS
Jo White	NPWS

Leanne Wallace	DLWC
Peter Houghton	DLWC
Rebekah Gomez-Fort	Native Vegetation Advisory Council
David Marston	Consultant – URS –Griffin nrm team
<i>Northern Territory</i>	
Rod Applegate	Director Resource Management DLPE
Wayne Mollah	Director Policy DPIF
David Lawson	Acting Director P&W
Brian Walsh	Director Resource Management DPIF
Kate Duggan and Bill Thompson	Consultants – URS-Griffin nrm team
<i>Queensland</i>	
Adrian Jeffries	DNR
Louise Coleman	DNR
Claudia Baldwin	DNR
Tony Roberts	EPA
Brianna Casey-	Queensland Farmer’s Federation
Peta Jamieson	Local Government Association of Queensland
Kate Lecchi	Queensland Conservation Council
Kate Duggan and Bill Thompson	Consultants – URS-Griffin nrm team
<i>South Australia</i>	
Dr Bob Inns	DEH
Neil Collins	DEH
Dr Tony Robinson	DEH
Chris Morony	DEH
Ross Manthorpe	Local Government Association
Tim Milne	NCSSA
Ross Oke	Urban Biodiversity Project
Stephanie Goldfinch & Martin Andrew	Consultants – URS-Griffin nrm team
<i>Tasmania</i>	
Stephen Harris	Senior Botanist DPIWE.
Mick Brown	Assistant Chief (Projects) FT DPIWE
Peter Bosworth	Mgr Reserve Development Unit DPIWE.
Ian Marmion	Bushcare Coordinator
Evan Boardman	Local Government Association,.
Naomi Lawrence	Threatened Species Botanist DPIWE

Bruce Howard and Jason Alexandra	Consultants – URS-Griffin nrm team
<i>Victoria</i>	
Michael Crowe	DNRE
Karen Barton	DNRE
David Parkes	DNRE
Dr Kim Lowe	DNRE
Bruce Howard and Jason Alexandra	Consultants – URS-Griffin nrm team
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