Evaluation of Sustainable Agriculture Outcomes from Regional Investment (NAP and NHT)

Final Report

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Prepared by

RM Consulting Group

with

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# Table of Contents

**Executive Summary** .......................................................................................................................... 3

1 **Introduction** .................................................................................................................................... 10

2 **Methodology** .................................................................................................................................... 11

3 **Key findings** .................................................................................................................................... 14

   3.1 Introduction ................................................................................................................................... 14
   3.2 Integrating conservation and production values in regional planning ........................................ 15
   3.3 Setting priorities and developing strategies to deliver sustainable agriculture outcomes ............ 16
   3.4 Consultation in regional planning.................................................................................................... 18
   3.5 Knowledge base underpinning regional planning ......................................................................... 18
   3.6 Building a well developed package of activities............................................................................ 19
   3.7 Partnerships for promoting sustainable agriculture ....................................................................... 22
   3.8 Best management practices and farming systems........................................................................ 24
   3.9 Support for tackling intractable sustainable agriculture issues.................................................... 25
   3.10 Engaging Indigenous Communities in Sustainable Agriculture ................................................ 25
   3.11 Aligning Australian Government programs and the regional delivery model............................ 26
   3.12 Governance and Accountability of Regional Organisations....................................................... 27

Appendix 1 **Contributors to the Case Studies** ................................................................................. 28

Appendix 2 **Evaluation Framework** .............................................................................................. 30

Appendix 3 **NHT and NAP Funding** ............................................................................................. 32

Appendix 4 **Policy Context** .......................................................................................................... 36

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**Common Acronyms used in this Report**

BMP - Best Management Practice  
CMA - Catchment Management Authority  
DAFF - Department of Agriculture, Fisheries and Forestry  
DEH  - Department of the Environment and Heritage  
MAT  - Management Action Target  
NLP - National Landcare Programme  
NAP - National Action Plan for Salinity and Water Quality  
NHT - Natural Heritage Trust or ‘the Trust’  
NRM - natural resource management  
RCT - Resource Condition Target  
RDC - Research & Development Corporation  
SCRIPT - South Coast Regional Initiatives Partnership  
Regional Strategy - the accredited natural resource management plan developed by each NRM regional body
Executive Summary

The sustainable use of natural resources by agriculture (sustainable agriculture) is a key objective of the Natural Heritage Trust (NHT) and is also incorporated into the objectives of the National Action Plan for Salinity and Water Quality (NAP). The purpose of this evaluation was to assess the effectiveness of regional planning and investment in working towards the sustainable natural resource use and the achievement of sustainable agriculture outcomes of the Trust and the NAP. It also examined ways to improve the NHT and NAP to support improved sustainable agriculture outcomes at the regional level.

Around 60% of the Australian landscape is devoted to agriculture of some form. In many regions, primary producers are the principal owners and managers of natural resources. Many of the identified national, state and regional natural resource management priorities are directly linked to on-farm land, water and vegetation management practices. The impact of on-farm behaviour on off-farm assets is an important driver of investment in sustainable agricultural outcomes.

Improving the sustainability of agriculture through developing and adopting better management practices and/or farming systems is expected to maintain or enhance the resource base and related ecosystems both on and off the farm. Equally, if there are no suitable technologies then there is adjustment out of agriculture and/or research and development of new technologies.

Improving sustainability requires engaging landholders, building their understanding of natural resource management issues (and building the understanding within NRM regional bodies about agriculture and regional socio-economics) and creating an environment that supports and influences them to make changes to the way in which they manage natural resources. It also requires engaging with many other stakeholders in agriculture such as land use planning agencies, state agencies, farmer R&D groups, research and development organisations, scientists, other land users (e.g. plantation forestry) and agribusiness.

The evaluation process, which was overseen by a Steering Committee comprising government and industry experts, occurred over four stages:

1. Developing the evaluation framework and selecting 15 regions across Australia for high level evaluation.

2. High level evaluation of the effectiveness of regional planning and investment in working towards the sustainable agriculture outcomes of the Trust and NAP in 15 regions and identifying key issues influencing the achievement of these outcomes.

3. Detailed evaluation conducted in seven regions to provide a more thorough analysis of the key issues and sustainable agriculture outcomes from investment.

4. Collation and critique of observations and findings into the conclusions and recommendations contained in this report.

This evaluation has sought to answer the question of whether the regional delivery model been valuable to date in achieving sustainable agriculture outcomes. In short, the answer is – yes, however there is still a great deal of potential to be realised, particularly as the maturity and capacity of the regional delivery model grows.

The evaluation involved an initial desktop review of the regional plans and investment strategies, supplemented with interviews with representatives of 15 regions, and then a more detailed analysis occurred for seven case study regions. The regions involved in the evaluation are listed in Table 1 below.
Table 1 Regions involved in evaluation

<table>
<thead>
<tr>
<th>State</th>
<th>Case Study Region (High Level Evaluation)</th>
<th>Case Study Region (Detailed Evaluation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>West Gippsland, Wimmera, North East</td>
<td>West Gippsland, Wimmera</td>
</tr>
<tr>
<td>New South Wales</td>
<td>Lachlan, Central West, Western</td>
<td>Central West</td>
</tr>
<tr>
<td>Western Australia</td>
<td>South Coast, South West, Rangelands</td>
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<td>Alinytjara Wilurara</td>
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<tr>
<td>Tasmania</td>
<td>North</td>
<td>North</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>7</td>
</tr>
</tbody>
</table>

Collectively, the case studies have reinforced the effectiveness of the regional delivery model. The characteristics of the regional delivery model that have been instrumental in the achievement of sustainable agriculture outcomes to date are:

- the understanding that production and conservation outcomes are inherently linked and the capacity of NRM regional bodies to identify the synergies between ‘sustainable’ agricultural production programs and natural resources management objectives;

- strong linkages with the agricultural community via a range of mechanisms, including the regional organisation’s structure which provides an appreciation of the challenges facing agricultural enterprises in the region; and

- the targeted approach to addressing issues involving agriculture, particularly offsite impacts such as water quality decline.

In addition, NRM regional bodies appear to be more effective in addressing sustainable agriculture where they operate in regions having a high degree of common agricultural interest across the community, or effective sub-regional groups.

Despite the mechanisms in place, for example community engagement processes, partnerships, strategies and programs, all case study regions recognise that current levels and terms of investment alone will not achieve landscape change in land use practice. This is primarily due to the challenge of influencing such a large number of agricultural enterprises each with their own reasons for making decisions about practice change.

The evaluation has highlighted the strengths of the regional model, the work of NRM regional organisations, and has also identified areas which could improve the effectiveness of NRM regional bodies in delivering sustainable agriculture outcomes.
1.1 Integrating conservation and production values in regional planning

The capacity and responsiveness of NRM regional bodies in integrating both conservation and production perspectives within regional planning approaches is a strength of the regional model. This could be further improved through better communication and representation of the NHT program as a vehicle to achieve this integration. This would help to dispel some perceptions held within regions of the NHT as a program with a greater focus on biodiversity and conservation outcomes.

Recommendation 1:

Current arrangements for addressing sustainable agriculture be assessed to determine if more detailed guidance is required, including greater clarity on the role of NHT as both a conservation and production based focus for improving NRM. In addition clearer messages regarding the sustainable agriculture priorities of the NAP and NHT need to be communicated and promoted to NRM regional bodies and other key stakeholder groups.

1.2 Developing strategies to address sustainable agriculture

The extent to which NRM regional bodies address their priorities ranges from high level strategies, such as the Sustainable Landscapes program in the Fitzroy Basin Association’s investment plan, through to formally structured sub-programs, as developed by SCRIPT (WA), to individual management actions for research, on-ground works or extension and capacity building activities at a local level which are distributed through the different asset classes of the regional plan.

Where sustainable agriculture activities have been woven through many themes, sustainable agriculture outcomes can get ‘lost’; the direction, targets and actions relating to sustainable agriculture are not readily identifiable. This presents a challenge from an evaluation perspective, but also makes it quite difficult for the NRM regional body (and therefore the funding bodies) to readily demonstrate the achievement of sustainable agriculture outcomes.

Recommendation 2:

A greater strategic focus on setting sustainable agriculture goals and clarifying the outcomes being sought would significantly assist NRM regional bodies develop the right mix of activities to deliver results and enable them to report on those results.

1.3 Knowledge base underpinning regional planning

The regional NRM management strategies were generally developed through a combination of local knowledge and external advice and in all cases it appears that the NRM regional bodies have sought the best advice that was available at the time. There was a tendency for information to be sought from agencies and bodies within the networks of the regional organisations, rather than actively going outside of their known networks.

The most common areas needing more work in regional plans were soil condition and land use matched to capability (land capability).
Recommendation 3:

The Australian Government should consider how NRM regional bodies can be supported in better accessing current science and best practice to apply in regional planning. In particular NRM regional bodies should be supported in developing their knowledge base in the areas of soil health and land use capability.

1.4 Understanding social and economic drivers influencing the adoption of sustainable agriculture

The ability of NRM regional bodies and their partners to work effectively with landholders to achieve sustainable agriculture outcomes will in part be helped by understanding the social and economic drivers influencing decision making on farms (beyond attitudes towards the environment). This information can provide NRM regional bodies with a better understanding of their community and how best to target investment in sustainable agriculture outcomes. Such information and research will be most relevant to regions where there is a low participation rate in natural resource management programs. For any new studies it is important that research relates to region-specific issues as more general knowledge about NRM behaviour is already widely available.

Recommendation 4:

Support regions to access or undertake socio-economic research applicable to their region or resource industries, for example NRM regional bodies work in collaboration with research providers to undertake socio-economic research at the regional scale on a range of issues including landholder attitudes, drivers, and behaviour to provide them with an objective understanding of their community.

1.5 Public good versus private benefit issues affecting regional activities

Regional bodies expressed some uncertainty surrounding the eligibility of different sustainable agriculture projects to put forward in investment plans for funding. This uncertainty relates to the issue of public good outcomes versus private benefits. A number of stakeholders stated they were not confident about putting forward some projects relating to sustainable agriculture for funding because of the difficulty in determining the exact nature of the benefits and how they would be assessed by investors. In particular it was noted that projects with stronger private benefits, for example soil health/productivity activities, were generally more difficult to attract funding, despite the stated objective of NHT. The evaluation notes there is no clear guidance on the issue of public and private benefits at either the national or state level and is a key area that should be addressed.

Recommendation 5:

Greater clarification is required in NHT/NAP guidelines to assist NRM regional bodies better determine the merits of funding proposals (under investment plans). The Australian Government should provide clear guidelines on the investment considerations when public and private benefits accrues from proposed activities.

1.6 Structural adjustment

Structural adjustment occurring in regions tends not to be understood or acknowledged in the regional strategies despite its influence on the natural resource management outcomes of the regional strategies. This
is an area that is expected to evolve as NRM regional bodies and their partners experience the impacts of structural issues which exist in most regions.

NRM regional bodies are in a position to influence this issue however, they need to be aware of the structural change in the region and the implications for their sustainable agriculture targets. This will place them in an informed position to consider how and if they respond, and who they engage as partners in that response.

**Recommendation 6:**

*Support NRM regional bodies to understand the implications of structural adjustment on sustainable agriculture outcomes and to determine how and if they might respond.*

### 1.7 Partnerships for promoting sustainable agriculture

There is a growing awareness by the NRM regional bodies of the need to build partnerships and collaborate with players in the agricultural industry, such as producer groups, industry peak bodies, research and development corporations, Landcare groups, agribusiness advisers and industry driven best management practice (BMP) programs. NRM regional bodies are addressing this to various extents through a range of ways but there is considerable scope to do more.

**Recommendation 7:**

*Research and development bodies and NRM regional bodies should be encouraged to develop partnerships to develop and deliver sustainable agriculture programs in order to achieve complementary outcomes. It may be beneficial to request NRM regional bodies to provide case study examples of their activities and achievements in engaging partners that influence sustainable agriculture outcomes.*

### 1.8 Support for the adoption of best management practices and farming systems

Regional bodies and their partners need to effectively link with industry groups to leverage NRM outcomes through industry best practice models. NRM regional bodies have an opportunity to use their funding ‘clout’ to leverage desired investment by industry.

**Recommendation 8:**

*Regional bodies work with industry sectors to define best practice standards that can then be applied and promoted within the regional planning process and management activities.*

### 1.9 Support for tackling intractable sustainable agriculture issues

The extent of degradation from past land management policies and practices is severe in many parts of Australia. With agriculture continuing in many of these areas, there is concern that to achieve the scale of change required to effect planning targets, NRM regional bodies will need to deal more with people other than the ‘converted’ and develop alternative land use solutions. This will require significant investment in innovative approaches and cost sharing arrangements beyond current levels of investment. It will also require some boldness in dealing with structural issues in agriculture that are currently seen as too risky for NRM regional bodies to address.
Recommendation 9:

Regional bodies should be given specific support to explore innovative solutions to intractable agricultural issues, in particular to encourage change that may have short-term difficulties but long-term benefits. These innovations may involve land use changes, structural adjustment, and capacity building for landholders facing significant changes.

1.10 Capacity in Indigenous Communities to engage in Sustainable Agriculture

Indigenous communities have needs for improvements in health, education, employment, access to traditional lands and a real voice in NRM, which impact on their capacity to contribute to sustainable agriculture and natural resource management programs. If communities do not have good access to services and employment, and are not afforded real mandates in NRM including in their traditional lands, they are less likely to engage effectively with these programs.

Recommendation 10:

The Australian Government needs to identify and support synergies in programs in Indigenous land management being managed by the Australian Government including the Indigenous Land Corporation, DAFF and DEH and ensure that cohesive delivery occurs at regional scale. The emergence of the concept of “ecosystem services” could be explored as an opportunity for Indigenous communities that may assist in providing economic, social and environmental benefits. The use of market based instruments should be investigated to assess whether it offers any innovative solutions to issues faced by Indigenous communities in managing natural resources.

1.11 Aligning Australian Government programs and the regional delivery model

Some NRM regional bodies commented that funding relating to NRM should all be delivered through the regional investment process. This was not a view universally shared by bodies other than the NRM regional bodies that were interviewed during this evaluation. The regional delivery model has a number of advantages however, there will be always sustainable agriculture outcomes that are more efficiently and effectively pursued outside the regional delivery model especially those that have a national focus. Where possible national programs and projects should seek to engage with relevant NRM regional bodies and ensure consistency with regional strategies.

It is important in future program delivery that there is a clear understanding of why programs will or will not be administered through the regional process, which will require communication between the programs, states and regions.

Recommendation 11:

Consideration should be given to strengthening the alignment of programs that have complementary objectives, such as NLP and Envirosfund, with the regional investment process.
1.12 **Governance and Accountability of Regional Organisations**

Throughout the evaluation, interviewees from a range of organisations, including regional organisations, raised their concerns about issues relating to administration, reporting and funding. These concerns were raised in the context of how they impact on the effectiveness and efficiency of sustainable agriculture investment.

**Recommendation 12:**

*Consideration could be given to allowing greater autonomy to regional organisations, subject to their demonstrated capability, skills, and knowledge, maturity and record of delivery, to improve the effectiveness of sustainable agriculture investments.*
1 Introduction

Sustainable agriculture is a key objective of the Natural Heritage Trust (NHT). This objective is also incorporated in the National Action Plan for Salinity and Water Quality (NAP). The purpose of this evaluation was to assess the effectiveness of regional planning and investment in working towards the sustainable use and sustainable agriculture outcomes of the Trust and the NAP. It examines a number of NRM regional bodies and the sustainable agriculture activities being delivered under the NHT and NAP and comments on where the delivery of sustainable agriculture outcomes at the regional level could be strengthened.

There are various definitions or interpretations of what constitutes sustainable agriculture. This evaluation did not seek to redefine it, but it did use the definition provided in the Natural Heritage Trust Act 1997 as a common guide. The Act defines ‘sustainable agriculture’ as:

‘the use of agricultural practices and systems that maintain or improve the following:

(a) the economic viability of agricultural production;
(b) the social viability and well-being of rural communities;
(c) the ecologically sustainable use of Australia’s biodiversity;
(d) the natural resource base; and
(e) ecosystems that are influenced by agricultural activities.”

More specifically, the evaluation explores and provides advice on:

- the extent to which sustainable use and sustainable agriculture objectives are being delivered through the regional delivery model and the likely effectiveness of the investments;
- the extent to which sustainable agriculture is integrated across the NAP and Trust, including the degree to which sustainable agriculture is being utilised as a tool to deliver upon resource and environmental condition targets, and the extent to which activities aimed at delivering resource and environmental condition targets are impacting upon the sustainability of agriculture; and
- the lessons learned that might assist regional planning processes and their associated investment strategies that might shape future sustainable use investments under the regional delivery model.

The structure of the report is as follows:

- a description of the methodology used to conduct the evaluation (section 2);
- a discussion of the evaluation findings and recommendations (section 3);
- a list of all people consulted for the evaluation and development of the case studies (Appendix 1);
- a description of the evaluation framework (Appendix 2);
- an overview of NAP and NHT2 investment in the case study regions (Appendix 3);
- a brief description of the policy framework for sustainable agriculture outcomes of the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality (Appendix 4); and
- Terms of Reference for the evaluation (Appendix 5).
Methodology

As stated in the Request for Tender documentation, the key task for this evaluation was to assess how effectively regions have developed strategies for improving the sustainability of agriculture including:

- identifying priority issues for sustainable agriculture specific to their region;
- identifying or developing strategies for addressing these priority issues;
- identifying the means by which change to more sustainable practices can be encouraged; and
- constructing an integrated and balanced package of measures to engage with landholders to help them deliver more sustainable agriculture and resource use.

The evaluation project was overseen by a Steering Committee comprising government and industry representatives, as shown in Table 4.

Table 4  Steering Committee Membership

<table>
<thead>
<tr>
<th>Steering Committee Membership</th>
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<tbody>
<tr>
<td>Australian Government</td>
</tr>
<tr>
<td>Chair: Heather Tomlinson</td>
</tr>
<tr>
<td>Stewart Noble</td>
</tr>
<tr>
<td>Gerry Smith</td>
</tr>
<tr>
<td>Blair Wood</td>
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<tr>
<td>State/Territory Government</td>
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<tr>
<td>Tony Roberts</td>
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<tr>
<td>Andrew Johnson</td>
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<tr>
<td>Len Banks</td>
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<tr>
<td>Jim McDonald</td>
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<tr>
<td>Industry</td>
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<tr>
<td>Ross Donald</td>
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<tr>
<td>Peter Kenny</td>
</tr>
<tr>
<td>Susie Kidman</td>
</tr>
<tr>
<td>Angus Emmott</td>
</tr>
<tr>
<td>Natural Heritage Trust Advisory Committee</td>
</tr>
<tr>
<td>Jan Fitzgerald</td>
</tr>
</tbody>
</table>

The evaluation framework considered four broad elements:

- the structural and institutional arrangements to include landholders and managers in the decision-making of the regional NRM body;
- the processes adopted to engage sustainable agriculture stakeholders in developing (and implementing) the regional NRM plan;
- the extent to which the regional NRM plan and associated strategies and action plans take account of the factors that determine sustainability and seek to use and promote sustainable agriculture outcomes; and

- the extent to which those plans are (will be) effective in delivering the desired outcomes for sustainable agriculture.

An Evaluation Framework was developed, which encompassed the elements above, and was provided to the Steering Committee for comment and advice (refer to the Evaluation Framework in Appendix 2).

The evaluation involved an initial desktop review of the regional plans and investment strategies, supplemented with a small number of interviews with representatives of the 15 regional organisations. The 15 regions (see Table 5) were selected on the basis of:

- Geography: to provide good coverage of states and territories;

- Landscape type: to include representatives of different landscape types, for example rangelands, tropical, urban, peri-urban and coastal;

- Presence of a range of agricultural industries;

- Indigenous involvement in NRM: included regions which had Indigenous involvement, including the use of Indigenous traditional knowledge; and

- Regions at different stages of development and implementation with respect to their plans and investment strategies.

Table 5 Regions in High Level Evaluation

<table>
<thead>
<tr>
<th>State</th>
<th>Case Study Region (High Level Evaluation)</th>
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<tr>
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<td>Fitzroy, Condamine, Burdekin</td>
</tr>
<tr>
<td>Tasmania</td>
<td>North</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

The process and rationale for selecting the case study regions was provided in “Progress Report #1: Case Study Regions selected for High Level Evaluation” (14th September 2005).

The findings from the High Level Evaluation stage were documented and provided in “Report on High Level Evaluation” (22nd September 2005), which was the subject of a Steering Committee meeting held on 27th
September. This meeting discussed the report and highlighted issues to explore in the next stage of the project. The meeting also confirmed the seven regions to be the subject of the detailed evaluation (Table 6).

### Table 6  Case study regions

<table>
<thead>
<tr>
<th>State</th>
<th>Case Study Region (Detailed Evaluation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>West Gippsland (NHT only)</td>
</tr>
<tr>
<td></td>
<td>Wimmera</td>
</tr>
<tr>
<td>New South Wales</td>
<td>Central West</td>
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<td>Western Australia</td>
<td>South Coast</td>
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<tr>
<td>South Australia</td>
<td>Alinytjara Wilurara (NHT only)</td>
</tr>
<tr>
<td>Queensland</td>
<td>Fitzroy</td>
</tr>
<tr>
<td>Tasmania</td>
<td>NRM North</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
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</tbody>
</table>

In undertaking the detailed evaluation, visits were made to each of the regions and interviews conducted with a range of stakeholders in sustainable agriculture in addition to the regional NRM bodies. Typically the stakeholders included state government agencies, farmer organisations, grower groups, agribusiness, producer representatives involved with the regional organisations, Landcare representatives and research bodies (see Appendix 1).

The interview process was based on the Evaluation Framework, in addition to exploring the issues identified from the High Level Evaluation stage of the project. Relevant strategies and documents were also reviewed, for example regional NRM strategies, regional investment plans and state government plans.

A draft report was presented to a meeting of the Steering Committee on 23rd November, where feedback was provided, and further written feedback was received from some committee members subsequent to that meeting. The draft report was finalised and submitted in February 2006.

The seven NRM regional bodies were provided with their individual case studies to confirm the factual accuracy of the reports. A number of the NRM regional bodies had participated in other evaluation projects during the year and despite this and their busy workloads were able to find time to assist with the process and contribute to the evaluation, which was appreciated. Equally the stakeholders involved in the interviews provided very useful contributions. They provided a more complete picture of the issues surrounding sustainable agriculture in the case study regions, and their time was also valued.
2 Key findings

2.1 Introduction

Improving agricultural sustainability requires engaging landholders, building their understanding of natural resource management issues (and building the understanding within NRM regional bodies about agriculture and regional socio-economics) and creating an environment that supports and influences them to make changes to the way they manage the natural resources. It also requires engaging with many other stakeholders in agriculture such as land use planning agencies, regional development groups, state agencies, farmer R&D groups, research and development organisations, scientists, other land users (e.g. plantation forestry) and agribusiness.

This evaluation has sought to determine how well sustainable agriculture outcomes are being delivered through NHT/NAP’s regional model. In considering the findings of this evaluation it is important to note that regional NRM bodies, most of which were established to support the regional delivery model, are at different stages of maturity and have different structures and ways of operating. The NRM regional bodies for the case studies were deliberately chosen to provide a range of contrasting situations - for example NRM North Tasmania completed its accredited regional strategy in May 2005 after forming only two years ago, while SCRIPT in WA has been operating effectively for 15 years under a number of guises. Its regional strategy has benefited from the experience of previous regional planning activities. The Central West CMA in NSW is currently undertaking significant consultation on its draft Catchment Action Plan.

For some NRM regional bodies therefore, this evaluation has come at a time when they have only just emerged (or are about to) from an intense period of planning and bedding down of their structures. On the other hand, other NRM regional bodies have been operating with their five year regional strategy in place for some time (for example, Wimmera, West Gippsland) and are in a more active management phase, either through their own people or via partners.

Appreciating that there is variation in maturity between NRM regional bodies is important because achieving sustainable agriculture outcomes requires effective partnerships with the agricultural sector, and developing these partnerships takes time and resources. Recognising that, it should be expected that outcomes relating to sustainable agriculture will increase with increasing experience and maturity of the NRM regional bodies and the regional delivery model itself.

The evaluation of sustainable agriculture and its delivery through the NHT and NAP regional delivery model was done by assessing how NRM regional bodies approached the following:

- identifying priority issues for sustainable agriculture specific to their region;
- identifying or developing strategies for addressing these priority issues;
- identifying the means by which change to more sustainable practices can be encouraged; and
- constructing an integrated and balanced package of measures to engage with landholders to help them deliver more sustainable agriculture and resource use.

Collectively, the case studies illustrated the strengths of the regional delivery model in delivering sustainable agriculture outcomes including:

- Demonstrating a very good understanding that production and conservation outcomes are inherently linked. The evaluation found NRM regional bodies were able to demonstrate the ability
to identify synergies between ‘sustainable’ agricultural production programs and natural resources management objectives.

- Regional bodies generally forming strong links with the agricultural community via a range of mechanisms, including the NRM NRM regional body structure itself which provides an appreciation of the challenges facing agricultural enterprises in the region.

- Developing a targeted approach to addressing issues involving agriculture, particularly offsite impacts such as water quality decline.

During the evaluation it became apparent that many NRM regional bodies have different expectations of what their role is in sustainable agriculture, in some cases these differences reflected the diverse range of stakeholders involved in regional NRM issues and the extent to which some stakeholders were engaged, such as producer groups, research and development corporations, and state government agencies. Some NRM regional bodies have taken a more active role in pursuing sustainable agriculture outcomes. This is likely a reflection of different factors such as composition of the NRM regional body management committee, skills/interest of staff within an NRM regional organisation, and the role of state agricultural agencies in a region. Those NRM regional bodies that have a greater level of maturity and whose board and staff have a strong understanding of agricultural production were better positioned to achieve sustainable agriculture outcomes through the regional delivery model.

In addition, NRM regional bodies appear to be more effective in addressing sustainable agriculture where they operate in regions having a high degree of common interest across the community or have effective sub-regional groups.

In developing the seven case studies the evaluation team noticed that the NAP regions were better equipped to address sustainable agriculture more effectively than non NAP regions. However, the sample of NAP (5) to non-NAP (2) regions in the case study regions did not provide sufficient information to adequately explore this issue. There may be merit in further investigating and comparing the types of projects being funded by NAP and non-NAP regions.

Having said that, the evaluations highlighted a number of areas that could be addressed, that would help NRM regional bodies better deal with sustainable agriculture in their planning and investment activities. These are discussed below.

### 2.2 Integrating conservation and production values in regional planning

The regional strategies have identified issues affecting the sustainability of agricultural industries from two perspectives:

- A production perspective with the issues being mainly on-farm, such as pest plants and animals, soil acidity, soil health, localised salinisation of land and waterlogging, and

- A conservation perspective, with the issues including on-farm and off-farm impacts such as soil erosion, surface water quality or riparian vegetation protection.

The balance between production and conservation, and the assumptions about what constitutes sustainable agriculture are generally well presented in the regional strategies, particularly in their overview of issues affecting catchment condition and was considered to be strength of the regional delivery approach.

For example, in the Wimmera region’s strategy, there is a clear statement about the sustainable use of agricultural land being dependent upon the continued health of the physical environment and how the future
well-being of agricultural land is intertwined with the health of the other assets in the strategy. In WA, SCRIPT’s definition of sustainable agriculture is about farming systems incorporating perennial herbaceous and woody species as major components. In the Fitzroy, the dominant Sustainable Landscapes Program is seen as an umbrella for the other asset based investment programs. There is an explicit link between the way land is managed and the outcomes for other assets. The Fitzroy NRM regional body recognises the fact that while over 90% of the land is used in agriculture (primarily extensive beef production), the region's wealth and wellbeing depends on other assets, especially the Great Barrier Reef. Reflecting this, the regional strategy is highly responsive to impacts of agriculture on the Reef (sediment and nutrient pollution).

This capacity of regional bodies to reflect conservation and production values within regional planning would indicate that greater integration of these issues (as pursued through the NAP/NHT programs) within regional planning is occurring.

Having said that, a contrasting reality found amongst a number of those interviewed (within regional organisations, Landcare groups and government agencies) was a perception that biodiversity conservation outcomes were a higher priority under the NHT than sustainable agriculture. This is obviously despite the stated objectives of the programs which, under the NHT, clearly articulate an objective relating to the sustainable use and promotion of sustainable agriculture.

It is possible the funding guidelines of the NHT, which tend to focus NRM regional bodies on the assets in the region, i.e. the natural resources, may lead to a focus on conservation issues rather than on sustainable agriculture in its broader context. However there is unlikely to be only one reason. Some of the issues discussed below, especially public good/private benefit, may act to reinforce this perception.

The perception that the NHT is focussed on biodiversity outcomes has sometimes influenced the activities NRM regional bodies have sought funding for under their regional investment plans. As a number of NRM regional bodies indicated they use NLP as the main source of funds for sustainable agriculture projects, while NHT is used for biodiversity conservation projects.

**Recommendation:** Current arrangements for addressing sustainable agriculture be assessed to determine if more detailed guidance is required, including greater clarity on the role of NHT as both a conservation and production based focus for improving NRM. In addition clearer messages regarding the sustainable agriculture priorities of the NAP and NHT need to be communicated and promoted to NRM regional bodies and other key stakeholder groups.

### 2.3 Setting priorities and developing strategies to deliver sustainable agriculture outcomes

Through the regional delivery model, NRM regional bodies are expected to identify their sustainable agriculture priorities and develop strategies and management actions to address those priorities. The extent to which NRM regional bodies address their priorities ranges from high level strategies, such as the Sustainable Landscapes program in the Fitzroy Basin Association’s investment plan, through to formally structured sub-programs, as developed by SCRIPT (WA), to individual management actions for research, on-ground works or extension and capacity building activities at a local level.

The regional strategies reviewed for this evaluation varied in the comprehensiveness with which they addressed sustainable agriculture. In almost all cases there are still gaps in the knowledge base underpinning the strategies, and these gaps are recognised by the NRM regional bodies (see section 4.5).
Generally the regional NRM strategies are less comprehensive and explicit in their analysis and identification of priority issues for sustainable agriculture that involve or affect the region-scale profitability of farming enterprises, for example declining terms of trade, or the social factors within the agricultural community such as declining populations and labour shortages. However, the regional strategies do recognise the importance of farming systems being productive and profitable and that this is inextricably linked to how the natural resources are managed.

The regional NRM strategies also identify where inappropriate agricultural practices are a threat to the health of other assets, particularly water and vegetation. This analysis is usually found in the description of those assets, rather than in the agricultural section of the strategies. Again this reflects how the regions have defined their ‘assets’ which, when restricted to categories of resources eg water, land atmosphere etc can limit the ability to present a clear picture of the range of sustainable agriculture activities.

2.3.1 Developing strategies

The framework that guided the development of the regional strategies provides a strategic way of planning at an asset level and has helped NRM regional bodies develop clear and logical objectives and targets. However, often it does not provide an easy approach to tracking all sustainable agriculture activities within a region’s investment plan. Agricultural activities are connected to so many elements of different assets, and hence can considered in some way in most or all themes of a regional plan. For example, in the Central West strategy, sustainable agriculture is woven through the themes of:

- People and Community;
- Water;
- Salinity;
- Soils and Land Use; and
- Vegetation and Biodiversity.

Where sustainable agriculture activities have been woven through many themes, sustainable agriculture outcomes can get ‘lost’: the direction, targets and actions relating to sustainable agriculture are not readily identifiable. This presents a challenge from an evaluation perspective, but also makes it quite difficult for the NRM regional body (and therefore the funding bodies) to readily demonstrate the achievement of sustainable agriculture outcomes.

A number of regions have dealt with this by identifying sustainable agricultural as an ‘asset’ and have followed through to the development of supporting programs. For example, the South Coast program has the following elements:

- Soil and salinity mapping;
- Land condition and water quality monitoring;
- Profitable perennials;
- Sustainable production systems;
- Soil health initiative - Healthy hectares;
- Salinity risk containment strategies; and
- Integrated engineering solutions.

**Recommendation:** A greater strategic focus on setting sustainable agriculture goals and clarifying the outcomes being sought would significantly assist NRM regional bodies develop the right mix of activities to deliver results.
2.4 Consultation in regional planning

In developing their strategies NRM regional bodies have generally been very committed in their approach to consulting with a wide range of agricultural and industry stakeholders. Despite their best intentions, some NRM regional bodies have received criticism (from within the agricultural sector) about inadequate consultation processes with the agricultural sector.

Given the capacity of the NRM regional body (staffing, resource and time constraints) most NRM regional bodies have made a concerted effort at engaging with the agricultural sector. Despite these efforts in some regions, particularly where a regional strategy has been developed for the first time, many stakeholders have not invested their time until late in the consultation process.

Now that there is wider understanding of the importance of the regional NRM strategies (and their associated investment plans), a higher level of interest and participation by agricultural stakeholders (and other interested people) is expected in the future. Similarly, many NRM regional bodies have learnt from their experiences and are expected to build on that learning to better engage with stakeholders in future NRM planning processes.

The level of effort that has been invested into the strategy development process should not be underestimated. It has been a major undertaking by NRM regional bodies and partners and they have, in the main, delivered a product that has made enormous advances in the understanding and direction for natural resource management.

Regional bodies should be recognised for the effort and level of consultation they have achieved in developing regional plans. While there is scope for greater engagement of the agricultural sector, continued support for consultation and maturity in the process will assist in future engagement.

2.5 Knowledge base underpinning regional planning

The regional NRM management strategies were generally developed through a combination of local knowledge and external advice. In all cases it appears the NRM regional bodies have sought the best advice that was available at the time the NRM strategy was developed. There was a tendency for information to be sought from agencies and bodies within the networks of the regional organisations, rather than actively going outside of their known networks. The accreditation process also involved input from a range of technical panels comprising state and Commonwealth government representatives, which provided a further level of expert opinion.

The most common areas needing more work in regional plans were soil condition and land use matched to capability (land capability). In reviewing regional strategies there was an identifiable information gap on soil health Resource Condition Targets (RCTs) and Management Action Targets (MATs). This is an area requiring support. Soil Condition is a Matter for Target that fits within the sustainable agriculture theme. NRM regional bodies require investment in developing and collating data on soil health to enable them to set meaningful RCTs and MATs. Increased support and opportunity to access the range of current scientific knowledge that lies outside of the regional organisation’s information networks would help this situation.

An increasing emphasis on land use capability within regional planning would also support regions in decision making when considering tradeoffs from conservation and production activities within the regions.


**Recommendation:** The Australian Government should consider how NRM regional bodies can be supported in better accessing current science and best practice to apply in regional planning. In particular NRM regional bodies should be supported in developing their knowledge base in the areas of soil health and land use capability.

### 2.5.1 Understanding social and economic drivers influencing the adoption of sustainable agriculture

The ability of NRM regional bodies and their partners to work effectively with landholders to achieve sustainable agriculture outcomes will be helped by understanding the social and economic drivers influencing decision making on farms (beyond attitudes towards the environment). Such information will be most relevant in regions where there is a low participation rate in natural resource management programs.

This evaluation found that for most regions, there was limited socio-economic information used to support the planning and decision-making process and thus influence the capacity to deliver sustainable agriculture outcomes. Specific socio-economic research at the regional scale would better inform NRM regional bodies of the social and economic factors driving land management practices and enable enhanced targeting of effort and investment to achieve sustainable agriculture outcomes.

The Wimmera region provides an example of the value of this research. It has recently completed a study to identify social drivers that would assist in targeting activities, and measure landholder attitudes towards, and adoption of, a set of 'current recommended practices'. This study has equipped the NRM regional body with knowledge about the social drivers for change, geographic differences, landholder concerns about the recommended practices, as well as provided information on a range of other issues. The Wimmera CMA plans to undertake another survey after five years to assess changes in the region, which will enable it to determine its progress towards the Resource Condition Target of “Increased community confidence in recommended NRM practices beyond 2002 levels”.

The Fitzroy Basin was one other region which has successfully used information on social drivers to assist in setting priorities and determining activities. The Fitzroy Basin took advantage of existing work, for example industry programs in Queensland, such as Queensland Farmers Federation and GrowCom, carry out state-wide surveys of landholder attitudes towards NRM and provide this information to NRM regional bodies on request.

Socio-economic information can be particularly useful where there is not strong representation of an industry through an industry body. A more thorough social profiling would enable a better understanding of the attitudes and behaviours of these sectors and assist in designing programs to engage growers.

A further benefit of socio-economic research is that it provides an opportunity for NRM regional bodies to articulate their preferred land management practices for the region. This requires input from a range of stakeholders and can be an effective way of developing partnerships with agricultural industry.

**Recommendation:** Support regions to access or undertake socio-economic research applicable to their region or resource industries, for example NRM regional bodies work in collaboration with research providers to undertake socio-economic research at the regional scale on a range of issues including landholder attitudes, drivers, and behaviour to provide them with an objective understanding of their community.

### 2.6 Building a well developed package of activities

The NRM regional bodies often use different approaches to target activities. For example SCRIPT (WA) provides direct support through its Sustainable Agriculture Program for change in strategic catchments where
there are important off-site water and biodiversity assets, and support for innovation sites elsewhere in the region. The Fitzroy Basin Association has adopted a priority catchments approach, which is a useful model for targeting limited funds in a large and complex region.

With NRM regional bodies adopting a more targeted investment approach under their accredited NRM strategies and investment plans, some have found there is concern from subregional and local groups that no longer receive the support they used to under previous funding arrangements. The Enviropund and National Landcare Program have had a role engaging with stakeholders that appear to have been disenfranchised under the regional delivery model as these programs provide funding for areas of work that are not necessarily seen as an immediate priority in the regional NRM strategies.

Regional bodies have provided support to landholders to improve sustainable agriculture through activities such as:

- Property management planning,
- Awareness, training and education,
- Targeted incentive programs,
- Research activities,
- Landcare group support,
- Networking with producer groups, and
- Market based instruments.

The use of market based instruments was only noted in a small number of regions, for example the Wimmera CMA which is piloting a scheme to introduce the use of market based instruments to promote ecosystem service outcomes within the region.

While NRM regional bodies seem to be aware that there is no single solution that will answer any one issue, this was not always reflected in the package of activities that were proposed under the investment plan.

In some regions a piecemeal approach to selecting investment activities (to support the region’s articulated priorities and strategies) was noted. A number of factors seemed to influence the comprehensiveness of the range of activities selected in the investment plan; and many of these issues have been canvassed in other sections of this evaluation. For example a greater strategic focus on setting sustainable agriculture goals and clarifying the outcomes being sought would assist some NRM regional bodies develop the right mix of activities to deliver results. The issue of some regions seeking funding for sustainable agriculture activities through the NLP will also bias any review of activities under investment plans.

Generally regions have placed a priority on those activities which provide ‘win-win’ changes, eg. where there are environmental and financial gains. In WA, SCRIPT is building on existing successes in introducing woody and herbaceous perennials into farming systems by providing support for practice change in strategic catchments, and support for applied research and development to farming groups in manage innovation sites – based partly on the models used in Sustainable Grazing Systems and the Sustainable Grazing on Saline Lands programs.

The Central West CMA (NSW) is seeking multiple benefits from its programs, especially those that involve sustainable agriculture, where better management of the resource base will produce higher long term profitability. This philosophy is an evolution from the concept of tradeoffs and recognises the interrelatedness of many of the sustainable agriculture issues. This integrated approach has engendered significant goodwill from landholders, who have recognised the link between good land management practices and profitability. Targeted incentive programs have assisted in this.

Where there are not win-win options NRM regional bodies have focused on investment in research and development to gain a greater understandings of the issue, increased the use of cost-sharing to achieve the change required (this option has limited applicability as, for some issues, it would take investment far in
excess of that currently available to regional organisations), or NRM regional bodies are still determining how to address the issue.

2.6.1 Public good versus private benefit issues affecting regional activities

Related to a perception that biodiversity outcomes have a stronger focus under the NHT was some uncertainty surrounding the eligibility of different projects to put forward in investment plans. The uncertainty seems to relate to the issue of public good outcomes versus private benefit with a number of stakeholders stating they were not confident about putting forward projects (related to sustainable agriculture activities) for funding because of the difficulty in determining the exact nature of the benefits and how they would be assessed by investors. One example highlighted in the case studies was funding provided to one NRM regional body to conduct social research relating to sustainable agriculture issues while another region had indicated it would like to do this but had the view it would be unable to access funding.

It was also noted that projects with any likely private benefit, for example, soil health/productivity activities, are generally more difficult to attract funding. The comments reflect the fact that there is no clear guidance on the issue of public and private benefits at either the national or state level. Providing more clarity on the eligibility of the type of sustainable agriculture projects that will be funded under the NHT/NAP is a key area the Australian Government can address which would have immediate outcomes for regional planning.

**Recommendation:** Greater clarification is required in NHT/NAP guidelines to assist NRM regional bodies better determine the merits of funding proposals (under investment plans). The Australian Government should provide clear guidelines on the investment considerations when public and private benefits accrues from proposed activities.

2.6.2 Structural adjustment

Structural adjustment occurring in regions tends not to be understood or acknowledged in the regional strategies despite its influence on natural resource management outcomes of the regional strategies. It reflects the complexity associated with this issue and also reflects the stage most NRM regional bodies are at, which is generally focused on those activities that deliver win-win outcomes (environmental and financial).

Regional strategies have rarely addressed opportunities for land use change where:

- options are unlikely to be developed to improve existing land management practices,
- changes in land management practices are needed to better support the land use capability, or
- the scale and resources of farm businesses is insufficient to allow adoption of improved land management practices.

This is an area where more investment in land use capability planning would assist in making trade offs or provide some framework within which this issue could be included in community consultation processes.

NRM regional bodies are in a position to have an influence on this issue however, they need to be aware of the structural change in the region and the implications for what that means to their sustainable agriculture targets particularly as it affects future demographics of the farming community (see next section). This will place them in a sound position to consider the NRM responses, and who they engage as partners in that response.
The box below illustrates some of the issues surrounding land use capability/structural adjustment that were identified through the case studies.

Box 1 Structural Issues in Agriculture

While regional strategies generally have little to say about structural issues, in conversation with those interviewed, it was raised as an issue with multiple facets.

Some properties within regions are sub-marginal in size, with limited capacity to address on-site and off-site impacts of agriculture. The size of a farming enterprise was often a good indicator whether sustainable agricultural practices were taken up or not. While market-driven structural adjustment is occurring, there are some areas where this is not happening fast enough. Where market-driven structural adjustment is occurring in terms of increasing farm size and economies of scale in farm businesses, such as in the drier parts of the region, there is concern about declining social sustainability. This is manifested in fire brigades that are struggling to survive, falling school populations and limited social activities between neighbours.

There are some land types that were cleared for agriculture, but which are inherently unsuited to this land use, and generate little productivity to the farm businesses, and can sometimes be sources of problems. These land types, which occur on many farms, could best be removed from farming and replaced with more suited to the land capability.

Finally, in areas where there are large numbers of small farms that are not stand-alone enterprises, but that provide a lifestyle for their owners who work off-farm in towns, important NRM issues such as nutrient leaching and excessive run-off are a problem. However, engaging with the large number of owners is difficult, as is identifying the ‘buttons’ that they will respond to.

**Recommendation:** Support NRM regional bodies to understand the implications of structural adjustment on sustainable agriculture outcomes and to determine how and if they might respond.

2.7 Partnerships for promoting sustainable agriculture

There is a growing awareness by the NRM regional bodies of the need to build partnerships and collaborate with players in the agricultural industry, such as producer groups, industry peak bodies, RDCs, Landcare groups, agribusiness advisers and industry driven best management practice (BMP) programs. This is expected to evolve as the NRM regional bodies become more established and recognised in their regions and as they develop and refine their approaches to achieve their targets.

NRM regional bodies are addressing this to various extents through a range of ways but there is considerable scope to do more, especially with private sector agribusiness.

Engaging with stakeholders brings benefits in two ways to NRM regional bodies. It helps raise awareness amongst stakeholders of the regional organisation’s objectives and also helps build the regional organisation’s understanding of the issues affecting agricultural industry. The consequence can be that both parties will be better informed and able to develop solutions that are more likely to be successful. Stakeholders such as agribusiness service providers, the food processing industry and banks strongly influence on-farm behaviour and should also be in the loop of regional organisations’ engagement strategies.

NRM regional bodies’ structures include representatives from various stakeholder groups, which is one of their great strengths. Most NRM regional bodies are developing these relationships through their advisory committees, which generally include members from the community, agencies and agribusiness. The NRM
Regional bodies also need to have staff capable of engaging with agricultural stakeholders and there are examples of excellent links with the agricultural sector in say, Central West NSW.

In some regions, such as SCRIPT (WA), NRM North (Tas) and the Fitzroy Basin (QLD), the NRM regional bodies have a decision-making, investment and coordination role and rely almost wholly on partners who are responsible for implementation. These partners can include sub-regional groups, state agencies, farmer groups and agribusiness.

Operating through partnerships is an essential requirement in regions where the NRM regional body staffing is small and the body is without statutory authority. For example, SCRIPT (WA) will have about 20 employees with responsibility for investment of about $40 million over three years. The SCRIPT staff will not be able to engage directly with landholders – instead they will invest in sub-regional groups and other stakeholders who will have responsibility for delivery of SCRIPT’s program in sustainable agriculture. Similarly, NRM North (Tas) will rely on its sub-regional groups linked to local government and other partners for much of its sustainable agriculture program delivery.

There are numerous examples of producer groups becoming important vehicles for the NRM regional bodies to collaborate with to help achieve strategy targets. For example, NRM North is seeking to work with a number of industry driven property planning programs so that it can complement those programs with its own messages. This is seen as an efficient way for a regional body to work towards its targets in concert with industry. SCRIPT is delivering programs through well-resourced and managed subregional production/NRM groups, such as the Fitzgerald Biosphere Group. As well as receiving NAP and NHT funds, this group obtains support from Grains Research and Development Corporation, Meat & Livestock Australia, Australian Wool Innovation and agribusiness.

NRM regional bodies are developing mechanisms for co-investment with industry partners in sustainable agriculture activities that occurs at an industry level such as a Research and Development Corporation or with state and regional agencies such as agricultural and natural resource agencies and water authorities, or with local producer groups. This is where the regional delivery model provides particular advantages. Because of its strong community representation and regional profile, it is able to leverage support from a wide range of stakeholders not normally accessible by state or federal governments.

The agricultural RDCs are important players in sustainable agriculture and there is tremendous scope for more engagement with regional organisations. Initiatives such as Grain and Graze are a good example of collaboration to achieve sustainable agriculture outcomes where there is a clear focus on lifting profitability and environmental health of mixed farming enterprises.

**Box 2 Challenges to partnerships between industry groups and regional organisations**

- Many industry groups are statewide or national and find it challenging to work at regional level.
- Institutional structures of industry groups are not always conducive to working with regional organisations.
- The regional organisations are at various levels of development and they are following different operational models. Industry groups find it difficult to engage across the groups.
- Some regional organisations are experiencing high rates of staff turnover. Industry groups cite frustrations with this.
- Some industry groups find the rules of the NHT and NAP funding programs confusing (“the goal posts are always changing”) and this acts as an impediment to engagement.
- Some industry groups find the level of progress and the pace of implementation of NRM regional organisation programs frustrating.
- There is a need for strong institutional mechanisms through which the regional organisations can feed into processes, such as MOUs between industry groups and State governments.
Some NRM regional bodies feel that having recently completed their general consultation process in developing their strategy, they have limited capacity to engage with specific stakeholders. One challenge is that some are just trying to cope with delivering on the considerable funding they have now and they are unlikely to have the time to invest in developing partnerships unless that helps them deliver on their existing commitments.

While engagement is an ongoing role of the regional organisations, the time taken to build up a critical mass is probably underestimated in the NAP/NHT funding model. The risk if engagement is insufficient is that the funding could result in the suite of ad hoc, small, simple projects as per NHT1, albeit perhaps better targeted.

NRM regional bodies also cited the short-term nature of funding as a barrier that makes it difficult to develop and maintain relationships with industry. This was noted where NRM regional body staff tend to have a relatively narrow and constrained project output focus that limits their ability to establish relationships that require an on-going input of time and effort.

As one NRM regional body representative said "We know where they are and that they are important to us, it's just that we haven't got around to catching up with them because we always seem to have so many other more immediate things to do".

Nevertheless, as NRM regional bodies mature, it is expected that this is an area that will strengthen considerably. Further support for it could occur, however, through longer term funding arrangements.

**Box 3 Partnerships with the dairy industry in Queensland**

The Queensland Dairy Farmers organisation works with regional groups in several Queensland NRM regions (Far North Queensland, Burdekin, Burnett Mary, SEQ regions and the Condamine).

Partnerships include representation on the Board of Burnett Mary and co-financing of projects in the Burdekin. The projects involve implementation of best practice, with the NRM regional body supporting outcomes through incentives etc. and the industry groups providing technical advice on best practice and training.

**Recommendation:** Research and development bodies and NRM regional bodies should be encouraged to develop partnerships to develop and deliver sustainable agriculture programs in order to achieve complementary outcomes. It may be beneficial to request NRM regional bodies to provide case study examples of their activities and achievements in engaging partners that influence sustainable agriculture outcomes.

### 2.8 Best management practices and farming systems

Developing best management practices and systems is an area with numerous players such as the research and development corporations, producer groups, farmer membership organisations. It is in industries’ interests to develop standards or codes of practice to demonstrate their ‘environmental qualifications’ and meet regulatory standards.

The NRM regional bodies and their partners need to effectively link with these industry groups to leverage outcomes in the industry best practice models. NRM regional bodies have an opportunity to use their funding ‘clout’ to leverage desired investment by industry. Some NRM regional bodies have been participants in co-investment activities with industry and are seeking to complement the industry programs.
There are some examples where the NRM regional bodies have been the driver of best management practice activities but generally with sustainable agriculture, the NRM regional bodies see their role as one of support, coordination and strategic co-investment.

Once again, this is an area that is evolving as NRM regional bodies develop, but the message is that NRM regional bodies should not duplicate the effort of industry, but instead seek opportunities for influencing their activities in NRM through targeted investment in collaborative projects.

While some industries have indicated that it can be difficult to define best practice, eg. broadacre mixed farming, there is value in challenging the NRM regional bodies and industry to think about it because it will stimulate a dialogue on what is sustainable agriculture and what needs to be done to work towards it. This is important, particularly because what is regarded as sustainable now may change in future years. Additionally NRM regional bodies view about what constitutes ‘sustainable agriculture’ is often not universally shared. This can become a problem where divergence of views limits the ‘buy in’ to sustainable agriculture activities under the regional planning process. Discussion about sustainable agriculture can help address this issue.

Recommendation: NRM regional bodies work with industry sectors to define best practice standards that can then be applied and promoted within the regional planning process and management activities.

2.9 Support for tackling intractable sustainable agriculture issues

The extent of degradation from past land management policies and practices is severe in many parts of Australia. With agriculture still continuing in many of those areas, albeit utilising different practices from old, there is concern that to achieve the scale of change that is required to effect planning targets, NRM regional bodies will need to deal more with people other than the ‘converted’ and develop alternative land use solutions.

NRM regional bodies will face this challenge in the coming years and it is expected this will require significant investment in innovative approaches and cost sharing arrangements above and beyond current levels of investment. It will also require some boldness in dealing with structural issues in agriculture that are currently (and realistically) seen as being too politically (small ‘p’) risky for NRM regional bodies to address.

The NRM regional bodies struggle with trade-off issues where there is no win-win outcome. It is expected that they will build their skills in this area as they mature but will need support in doing so. Nevertheless, expectations about the responsibility of NRM regional bodies to resolve these issues needs to be realistic.

Recommendation: NRM regional bodies should be given specific support to explore innovative solutions to intractable agricultural issues, in particular to encourage change that may have short-term difficulties but long-term benefits. These innovations may involve land use changes, structural adjustment, and capacity building for landholders facing significant changes.

2.10 Engaging Indigenous Communities in Sustainable Agriculture

The case study of the Alinytjara Wilurara region highlighted Indigenous communities that have needs for improvements in health, education, employment access to traditional lands, and a real voice in NRM, which impact on their capacity to contribute to sustainable agriculture and natural resource management programs. If communities do not have good access to services and employment, and are not afforded real mandates in NRM including in their traditional lands, they are unable to engage effectively with these programs.
Through the land acquisition program managed by the Indigenous Land Corporation (ILC), and earlier programs, Indigenous people are now owners and managers of several agricultural enterprises across northern and central Australia. As with all regions, the managers of these enterprises have particular needs in developing sustainable agriculture. Linkages between programs being managed by the ILC and DAFF/DEH at a national level is essential, as are linkages between state agencies and NRM regional bodies at a regional level.

The use of market based instruments, in particular the concept of stewardship payments is currently receiving significant interest for its potential in delivering cost effective solutions to resource management problems. It would be worthwhile extending this consideration to assess whether the use of market based instruments offer any innovative solutions to issues being faced by Indigenous communities in managing natural resources.

**Recommendation:** The Australian Government needs to identify and support synergies in programs in Indigenous land management being managed by the Australian Government including the Indigenous Land Corporation, DAFF and DEH and ensure that cohesive delivery occurs at regional scale. The use of market based instruments should be investigated to assess whether it offers any innovative solutions to issues faced by Indigenous communities in managing natural resources.

### 2.11 Aligning Australian Government programs and the regional delivery model

Some NRM regional bodies expressed a view that there did not seem to be an advantage of having funding relating to NRM not being part of the regional investment process. In particular, this applied to NLP and to a lesser extent, Envirofund. It was felt that these programs should be dealt with, like NAP and NHT, by the NRM regional body through the regional delivery model. It was suggested that the advantages of this option is that NRM regional bodies have a leading (and clear) responsibility in the allocation of the direct Australian Government (and State matching) funds which will better ensure targeted investments, higher standards of assessment, better accountability for outputs and outcomes, and reduced confusion and frustration in the relationships between NRM regional body and partners.

The issue is not necessarily whether or not all NRM funding should be directed through NRM regional bodies but rather what is the most efficient and effective means to achieve the sustainable agriculture outcomes being sought by the Australian Government. While the regional delivery model has a number of advantages there will be sustainable agriculture outcomes that are more efficiently and effectively pursued outside the regional delivery model especially those that have a national focus. For instance the Australian Government is working with a number of peak industry groups to improve land management practices across the sector including Cotton Australia, CaneGrowers and Horticulture Australia Limited. Where possible national programs and projects should seek to engage with relevant NRM regional bodies and ensure consistency with regional strategies.

Therefore it is important in future program delivery that there is a clear understanding of why programs will or will not be administered through the regional process, which will require communication between the programs, states and regions.

**Recommendation:** Consideration should be given to strengthening the alignment of programs that have complementary objectives, such as NLP and Envirofund, with the regional investment process.
2.12 Governance and Accountability of Regional Organisations

Throughout the evaluation, interviewees from a range of organisations, in addition to the NRM regional bodies, raised their concerns about issues relating to administration, reporting and funding. These concerns were raised in the context of how they impact on the effectiveness and efficiency of sustainable agriculture investment. Commonly cited concerns were:

- Longer term funding commitments are needed to enable the planning, delivery and evaluation of sustainable agriculture programs. Mechanisms for more sustainable agriculture such as converting from an annual pasture to a perennial pasture in a farming system to reduce recharge and lift dry matter yield and livestock production are not achievable across a meaningful landscape scale within three years.

- The annual regional investment process appears to be a significant burden on NRM regional bodies and would benefit from a more streamlined approach. There are significant administrative (such as accreditation, reporting and accounting) demands on NRM regional bodies through NHT and NAP, which people believe could be reduced to enable more resources allocated to achieving resource conditions targets. Finding the appropriate level of accountability seems to be the key issue here. NRM regional bodies are concerned about the level of 'micro-management' from state and Australian government investors, which they translate as lack of trust in NRM regional bodies to be accountable for making sound decisions despite producing accredited regional strategies and investment strategies and having comprehensive community engagement processes in place for the development and monitoring of these strategies.

- Overall, the processes for managing investments are somewhat stressed. While NRM regional bodies are ramping up their capacity, the processes in several regions are struggling. There is potential for a breakdown in the relationship between NRM regional bodies and some important working partners. While these can be considered as ‘growing pains’, the need to give the NRM regional bodies breathing space to develop their processes and relationships needs to be recognised by investors.

Recommendation: Consideration could be given to allowing greater autonomy to regional organisations, subject to their demonstrated capability, skills, and knowledge, maturity and record of delivery, to improve the effectiveness of sustainable agriculture investments.
Appendix 1  Contributors to the Case Studies

The following people have contributed to the evaluation through the consultation process.

[the names in this section of the document have been removed for privacy reasons]
[the names in this section of the document have been removed for privacy reasons]
Appendix 2  Evaluation Framework

The Evaluation Framework was developed to understand how regions developed their strategies, the content of the strategies with respect to working towards sustainable agriculture outcomes and identifying lessons or learnings.

1. Development of the Regional Strategy

1.1 Data

What information sources were used to identify the key issues and the strategies to address them and was adequate information, particularly baseline data and other science, available?

What use was made of professional expertise outside the regional structure, for example, government agencies, universities, cooperative research centres and consultants, in developing plans and investment strategies?

1.2 Consultation

What consultation process was undertaken in the development of the (i) regional plan and (ii) sustainable agriculture strategy?

What was the level and nature of consultation with the community, for example, NRM managers, agricultural industries, industry peak bodies, Landcare Groups, conservation bodies etc. examples?

How did the consultation process influence the strategy, its priorities and its actions with respect to sustainable agriculture? How influential was the consultation?

How well is the strategy understood and agreed to by agriculture stakeholders in the region? Do the key stakeholders understand the implications of meeting the sustainable agriculture targets of the plan?

What was the role of and contribution of NRM facilitators (for example, Australian Government facilitators, regional facilitators, local government facilitators, Indigenous land management facilitators)

1.3 Target setting/ Prioritisation process

What process was used for establishing sustainable agriculture priorities and MATs?

Policy – is there alignment or relationship between the state government agriculture policy and the regional plan? Similarly with industry plans, for example Cotton Industry BMP.

1.4 Regional Structure

How does the regional structure lend itself to the development and implementation of the sustainable agriculture elements of the regional strategy, for example, who was involved in the regional structure (membership of regional bodies, staff of regional bodies)? What kind of expertise in sustainable agriculture did they have?

To what extent are regional plans coordinated to ensure that the activities in one region complement or do not undermine the activities of another?
2. Content of the Regional Strategy and Regional Investment Plan

2.1 Priority Issues

Is there a clear statement of the priority issues and objectives for sustainable agriculture?

Is there appropriate prioritisation of sustainable agriculture issues according to the identified consequence of these issues (risk assessment)?

Does the plan have realistic and measurable targets with monitoring and evaluation to measure sustainable agriculture outcomes? How well have the sustainable agriculture objectives been integrated into the regional strategy?

2.4 Integrated package of measures

Does the Regional Plan and investment strategy include a comprehensive strategy for achieving sustainable agriculture?

What range of measures for achieving change are involved (for example, information provision and training, grants, market based instruments, EMS and planning)

2.3 Support to landholders

Has the strategy established a baseline of the attitudes of landholders to sustainable agriculture? And are there actions to measure change in attitude over time?

What support is provided to landholders, for example, support for volunteers, incentive payments, field days, education, publications and access to information.

Are there management actions to provide for capacity building of landholders? Does this capacity building include support for sustainable management of Indigenous land in regions where this is a significant issue?

2.5 Regional Investment Plan

Is there sufficient investment to meet priority agriculture objectives? Is there adequate investment in capacity building (including to address issues such as changing attitudes and practices relating to sustainable use/agriculture outcomes)

To what extent have regions coordinated with industries and landholders to facilitate effective industry engagement in catchment investment (leveraged funding)? Conversely, does the CMA support industry driven programs for best practice / sustainable agriculture?

What is the level of investment from NAP, NHT to sustainable agriculture compared to other sources of funding? How important is NAP and NHT in the region at influencing sustainable agriculture outcomes?

3. Implementation and Outcomes

If implemented, to what extent will the Management action targets contribute to achieving sustainable agriculture objectives? Do they have the right stepping stones in place to develop sustainable agriculture outcomes, for example building capacity and establishing partnerships with industry.

Will the sustainable agriculture actions also benefit sustainable NRM management?

4. Conclusions and Learnings

What lessons have been learnt to inform future regional processes and investment in sustainable agriculture?
The NAP and NHT2 funding to the case study regions for the previous three years is presented below.

Table 1. NHT2 Funding (source: AG NRM Team – November 2005)

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This query response has the following conditions:

- Only projects which are from the NHT2 Regional program are included.
- Commercial in Confidence projects are NOT shown.
- Unless otherwise stated, only approved projects and funds are shown.
- Projects which have been Terminated, Withdrawn or Denied after being approved are not included.
- Only projects approved from 2002/2003 onwards are included.
- Projects with the NHT2 Region shown as their tab name are included.

Projects are split into Regional projects and Regional Competitive Component (RCC) projects.
### Table 4.2 NAP Funding (source: AG NRM Team - November 2005)

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This query response has the following conditions:

- Only projects which are from the NAP program are included.
- Commercial in Confidence projects are NOT shown.
- Unless otherwise stated, only approved projects and funds are shown.
- Projects which have been Terminated, Withdrawn or Denied after being approved are not included.
- Only projects approved from 2000/01 onwards are included.
- Projects with the NAP Region shown as their tab name are included.

**Multi region projects have not been included.**

### Table 4.3 NHT and NAP Regions and intersect area (source: AG NRM Team - November 2005)
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Appendix 4  Policy Context

This section briefly describes the planning context in which regional NRM bodies developed their regional plans. It shows that sustainable agriculture is a key objective of the Trust and NAP, however it also illustrates the relationship between agriculture and the other objectives of the programs.

The sustainable use of natural resources by agriculture (sustainable agriculture) is a key objective of the Trust, as stated:

"the sustainable use and management of Australia's land, water and marine resources to maintain and improve the productivity and profitability of resource based industries".

Sustainable agriculture is also embedded within the other two objectives of the Trust:

"Community Capacity Building and Institutional Change - support for individuals, landholders, industry and communities with skills, knowledge, information and institutional frameworks to promote biodiversity conservation and sustainable resource use and management.

Biodiversity Conservation - the conservation of Australia's biodiversity through the protection and restoration of terrestrial, freshwater, estuarine and marine ecosystems and habitat for native plants and animals."

Sustainable agriculture also has a role to play within the objective of the NAP:

‘to motivate and enable regional communities to use coordinated and targeted action to:

- Prevent, stabilise and reverse trends in dryland salinity affecting the sustainability of production, the conservation of biological diversity and the viability of our infrastructure.

- Improve water quality and secure reliable allocations for human uses, industry and the environment.’

In addressing sustainable agriculture in the development of regional plans and investment strategies, regional NRM bodies have been guided by the objectives of the Trust and NAP, as well as the following suite of national policies and strategies:

- the definition of sustainable agriculture in the Natural Heritage Trust Act 1997;

- the relevant national natural resource condition outcomes and targets of the National Standards and Targets Framework; and

- the Natural Resource Management Outcomes to be pursued in Integrated NRM Plans and Investment Strategies.

The Natural Heritage Trust Act defines sustainable agriculture as ‘the use of agricultural practices and systems that maintain or improve the following:

- the economic viability of agricultural production;

- the social viability and well-being of rural communities;

- the ecologically sustainable use of Australia's biodiversity;

- the natural resource base; and

- ecosystems that are influenced by agricultural activities.’

The National Standards and Targets Framework established the ten resource condition matters for which regional bodies must set regional targets. The ‘matters for targets’ were:

- Land salinity

- Soil condition
- Native vegetation integrity
- Inland aquatic ecosystem integrity
- Estuarine, coastal and marine habitats integrity
- Nutrients in aquatic environments
- Turbidity/suspended particulate matter in aquatic environments
- Surface water salinity in freshwater aquatic environments
- Significant species and ecological communities
- Ecologically significant invasive species

The Natural Resource Management Outcomes to be pursued in Integrated NRM Plans and Investment Strategies (‘the Checklist’) was written to provide regions with a practical guide to the kinds of investments or activities that the Australian Government would support through regional NRM plans and investment strategies.

The Checklist has six overarching national objectives and outcomes. As can be seen, there is a linkage between most, if not all of the objectives and outcomes and the use and management of land for agriculture:

- Promote sustainable resource use, particularly sustainable agriculture.
- Protect and improve the condition of land, water (including groundwater) and vegetation resources that provide the ecosystem services that support sustainable resource use industries.
- Improve water quality and environmental condition in surface and ground water systems including wetlands and estuaries while maintaining the economic and social values derived from water use.
- Protect our coastal catchments, ecosystems and the marine environment.
- Reverse the decline in the extent and quality of native vegetation and maintain and restore habitat for flora and fauna.
- Protect and manage places and values of national environmental significance, including threatened species and communities, listed migratory species, Ramsar wetlands of international importance, world heritage areas and national heritage places.
EVALUATION OF THE SUSTAINABLE AGRICULTURE OUTCOMES OF REGIONAL INVESTMENT

PURPOSE OF THE EVALUATION

The sustainable use of natural resources by agriculture (sustainable agriculture) is a key objective of the Natural Heritage Trust (the Trust). This objective is also incorporated in the objective of the National Action Plan for Salinity and Water Quality. (NAP).

The purpose of this evaluation is to assess the effectiveness of regional planning and investment in working towards the sustainable use and sustainable agriculture outcomes of the Trust and the NAP. It should also examine ways to improve the Trust and the NAP to support improved sustainable agriculture outcomes at the regional level.

Around 60% of the Australian landscape is devoted to agriculture of some form. In many regions primary producers are the principal owners and managers of natural resources. Many of the identified national and regional natural resource management issues are directly linked to agricultural land, water and vegetation management practices.

Improving the sustainability of agriculture through the development and adoption of better management practices, including changing land use, will maintain the resource base and related ecosystems both on and off the farm. This requires the engagement of landholders, building their understanding of natural resource management issues and creating an environment that supports and influences them to make changes to the way in which they manage their natural resources.

The role of government at all levels is to develop and support a strategic framework for action on sustainable agriculture issues that includes research and development, information exchange, the capacity to adopt practices (including where appropriate financial support) and the engagement of landholders in an on-going process of change.

This evaluation is one of five evaluations which are currently being undertaken into elements of regional planning. The others are evaluating biodiversity, invasive species (weeds) and salinity outcomes and the governance arrangements of regional bodies.

OBJECTIVES OF THE EVALUATION

The objectives of the evaluation are to identify:

- the extent to which sustainable use and sustainable agriculture objectives are being integrated effectively into all elements of the regional delivery model and the likely effectiveness of these investments;
- the extent to which sustainable agriculture is integrated across the NAP and Trust including the extent to which sustainable agriculture is being utilised as a tool to deliver upon resource and environmental condition targets; and the extent to which activities aimed at delivering resource and environmental condition targets are impacting upon the sustainability of agriculture;
- the lessons learned that might assist regional planning processes and their associated investment strategies; and
- the lessons learned that might shape future sustainable use investments under the regional delivery model.

SCOPE OF THE EVALUATION

Addressing sustainable use and sustainable agriculture objectives, outcomes and targets

S 15 of the Natural Heritage Trust Act 1997 defines ‘sustainable agriculture’ as:

‘the use of agricultural practices and systems that maintain or improve the following:

(a) the economic viability of agricultural production;
(b) the social viability and well-being of rural communities;
(c) the ecologically sustainable use of Australia's biodiversity;
(d) the natural resource base;
(e) ecosystems that are influenced by agricultural activities.

Sustainable use objectives encompass the definition of sustainable agriculture in the Natural Heritage Trust Act, the sustainable use objectives of the Trust and the NAP, the relevant national natural resource condition outcomes and targets of the National Standards and Targets Framework and other NRM and sustainable use policies and programs.

The key task for this evaluation is to assess how effectively the regions have developed a strategy for improving the sustainability of agriculture including:

- identifying priority issues for sustainable agriculture specific to their region;
- identifying or developing strategies for addressing these priority issues;
- identifying the means by which change to more sustainable practices can be encouraged; and
- constructing an integrated and balanced package of measures to engage with landholders to help them deliver more sustainable agriculture and resource use.

As part of evaluating regional sustainable agriculture strategies the evaluation will need to examine the extent to which elements of the regional delivery model have addressed the following issues:

- changing attitudes and practices in relation to sustainable agriculture, as well as any measures of such changes;
- support for integration of sustainable agriculture objectives and practices with other Trust and NAP objectives;
- support for landholders, through initiatives and activities such as support for volunteers, incentive payments, field days, education, publications, access to information;
- leveraging of financial and non-financial support, including contributions from States the community and landholders;
- support for regions to engage with key stakeholders (for example, NRM managers, agricultural industries, industry peak bodies, Landcare groups, conservation organisations) to inform, guide and work towards sustainable agriculture objectives, including recognition of industries’ importance in investing in and delivering outcomes.
- support for the adoption of best management practices and systems for sustainable agriculture (for example, Environmental Management Systems, Environmental Best Practice Management Systems, Industry/Environmental codes of practice) by landholders;
- promotion of linkages/synergies between national and Australian Government policies relating to sustainable agriculture (for example, the National Action Plan for Salinity and Water Quality, climate variability, environment management systems (EMS), forestry for salinity activities, Market Based Instruments investment, conservation incentives);
- promotion of elements of Australian Government policy relevant to sustainable agriculture (for example, research and development investments through RDCs, National Landcare Program investments).