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***An Evaluation of Investment in
Landcare Support Projects***

Final Report

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*for Agriculture, Fisheries and Forestry -
Australia*

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EXECUTIVE SUMMARY

Introduction

The Report documents an evaluation of the benefits accruing from the investment in landcare support projects across Australia made by Agriculture, Fisheries and Forestry – Australia (AFFA) under the National Landcare Program (NLP), the National Rivercare Program (NRP) and the Murray-Darling 2001 Program (MD2001). The AFFA investment specific to this evaluation is that part comprising funding of employment for technical support positions with catchment/regional NRM groups (eg TCM/ICM groups), scientific officers and researchers in agencies and R&D providers, extension and technical officers in agencies and coordinators and facilitators.

Objectives

The scope of the evaluation required the consultant team to:

- Report on the appropriateness and effectiveness of the investment made in facilitators, coordinators and technical positions since 1996/97 under the National Landcare Program (NLP), National Rivercare Program (NRP) and Murray-Darling 2001 Program (MD2001).
- Provide information on the total level of investment in those contract jobs (Commonwealth, State and other).
- Quantify current (to 2000/01) and historic National Landcare Program, National Rivercare Program and Murray-Darling 2001 Program employment by number, geographical distribution, qualification, gender and other important criteria.
- Identify and classify the activities undertaken and the achievements of landcare facilitators and coordinators.
- Quantify the extent to which the positions contribute to the National Landcare Program, National Rivercare Program and Murray-Darling 2001 Program and Natural Heritage Trust objectives and the value of the investment made by the positions, particularly in a regional context.
- Recommend measures for the most appropriate targeting of this investment.

Conclusions

Our summary conclusion is that landcare support provided by AFFA is delivering significant outcomes and is valued highly by the 'NRM community'. The NRM support component of AFFA's programs has been particularly effective in two key areas:

- supporting the development of regional and local strategies, and
- in providing coordination, extension and facilitation support to local communities.

Collectively, these investments have enabled a major increase in the social capital available to deal with natural resource management. The outcomes from this large Commonwealth supported 'experiment' in community NRM development has created a much better and more sophisticated community-industry-government dynamic in rural Australia that is maturing to the point where it can address the major challenges in NRM.

This development should be used as the springboard for a move to a more strategic approach to the definition and design of feasible and cost-effective NRM outcomes across Australia.

The investment has been significant in stimulating investments from government and non-government agencies and individuals, but less so from corporate sponsors. The impact of the AFFA investment is regarded as being less effective in managing the research and development and monitoring and evaluation needs of the regions. Other problems relate to the inefficient delivery of worthwhile programs, competition for inputs that may not be allocated on a strategic basis and examples of poor policy and planning frameworks. The growing awareness and maturity by all those involved in NRM, agencies and community groups, of the complexity and enormity of the challenge is stimulating a healthy and vigorous debate about directs, priorities and policies.

We see continued need for commitment by all governments to regional groups and processes as a means of addressing NRM as an over-arching need. While many regions are well advanced in terms of developing NRM strategies, it is clear that the process of developing, certifying and resourcing regional strategies needs to be raised to a new level of professionalism and sophistication.

While useful at a community engagement level, existing strategies tend not to be at a level of detail which defines desired outcomes, and are, therefore, of limited use to communities and regions in the design of project inputs to deliver those outcomes, or as a means of prioritising scarce inputs. The regional strategies are also poorly linked with the more localised project work plans, and there is still a general deficit of information or assistance in translation of NRM desired outcomes to farm or even community level work on the ground. Further support is critical for this process. Development of regional NRM strategies must also link with social and economic needs in the region in a form that promotes ecologically sustainable development.

Recommendations

The over-arching recommendation is that the most appropriate and effective investment for the Commonwealth in landcare support is in the development and implementation of certified, powerful regional natural resource management strategies. Adoption of this recommendation will require a relative shift in Commonwealth investment towards two major components – strategy development and strategy implementation.

Strategy development

The requirement is for the development of certified regional strategies that are powerful, properly owned and honoured by government, community and industry and which present realistic scenarios for the natural resources in the region. Considerable work has been done in all jurisdictions in strategic planning for NRM at regional scale. Further planning needs to build on this work in taking it to a new level of rigour and sophistication. While the costs of strategy development to get them to the point of certification will be high, the alternative of weak strategic development that attracts little commitment from key stakeholders is not an effective approach to addressing NRM issues.

Recommended requirements are listed below.

- Resourcing strategy preparation. A significant proportion of the current landcare support from all sources needs to be diverted into a significant investment in strategy building.
- Building variability of process in strategy preparation and implementation.
- Equity in process is essential, although equity in outcomes is not guaranteed.
- Managing information in Australian systems. High quality, easily accessible and digestible information will be required to support strategy development.
- Shifting from a focus on managing and directing inputs, to defining desired outcomes to be delivered.
- Commonwealth, State and local governments need to agree on a basis for certification of regional NRM strategies. The certification criteria must be sufficiently specific to ensure that outcomes meet state and national NRM agendas, but also allow for flexibility of strategic approach and content. Certification will commit all stakeholders to the achievement of those outcomes in return for investment buy-in.
- Investment prospectuses. In line with the shift to outcome focus, the regional strategies should be seen as investment prospectuses for intending investors. As such they should specify the outcomes that investors can expect and include a commitment to regular and thorough reporting of performance.

Strategy implementation

The requirement is for the implementation of regional strategies that provide all stakeholders with a very clear understanding of what is going to be achieved and a range of options for how they may engage in the process. At the same time, the current investment in ‘works on the ground’ will need to be gradually blended into the regional agenda as it emerges in full.

Recommended requirements are listed below.

- Investors ‘buying’ outcomes – the principal investors in landcare support – Commonwealth, State and local governments move to renegotiate current partnership arrangements to allow a shift to an outcome focus with equitable involvement of all three tiers of government. Under this model, the whole manner of Commonwealth funding could shift from a project-bid to an outcome basis, where an outcome describes specific rather than general achievements.
- Regional ‘contractors’ delivering outputs – the array and diversity of service delivery be specifically encouraged to allow delivery to be better matched to regional requirements. Promotion of this devolved responsibility will support capacity building at local and regional levels.
- Cost-sharing arrangements. Implementation of the regional strategies will deliver public and private benefits, which requires detailed attention to the development

of robust cost-sharing mechanisms that deliver equitable results while encouraging the optimum collective outcome from the various investment sources.

- **Alignment with other investments.** The Commonwealth are significant investors in regional Australia through a range of portfolios. Ensuring these investments are broadly complementary and are able to generate synergies will be important.
- **Monitoring and evaluation.** In keeping with the investment prospectus analogy, investors can expect to receive regular high quality information on how their investment is performing in terms of developing outcomes. The Commonwealth can begin by requiring regions and jurisdictions to report outputs and outcomes in a form that meets Department of Finance and Commonwealth Auditor-General requirements. Investment in this area should complement the current focus on tracking inputs at Commonwealth level to meet political imperatives.

Transitional arrangements

Landcare programs have steadily moved towards a regional focus. In line with this trend, the landcare funding programs need to move gradually away from the old inputs funding focus to a focus on investment in regional outcomes, as the regions mature. A transitional, strategic approach to this shift is recommended. Some regions are more suited and ready for it than others. Some regions may still need to be brought along through an intensive, scattered input grants program until they have sufficient capacity to design and implement a more sound outcome based investment program. The investment outcomes model could be tested and refined in a few well advanced regions initially as the Commonwealth adjusts its programs and partnerships towards outcomes based investment.

1 Introduction

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1.1 Evaluation scope

The scope of the evaluation required the consultant team to:

- Report on the appropriateness and effectiveness of the investment made in facilitators, coordinators and technical positions since 1996/97 under the National Landcare Program (NLP), National Rivercare Program (NRP) and Murray-Darling 2001 Program (MD2001).
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- Quantify the extent to which the positions contribute to the National Landcare Program, National Rivercare Program and Murray-Darling 2001 Program and Natural Heritage Trust objectives and the value of the investment made by the positions, particularly in a regional context.
- Recommend measures for the most appropriate targeting of this investment.

The recommendations need to inform the policy development process for the provision of landcare support to the rural and regional community through AFFA funding programs by:

- reporting on the range of skills required and the approaches required to improve them;
- providing advice on improving the effectiveness of any future investment in employment through government grant programs, and
- identifying measures for better targeting of this investment considering priority issues nationally and in regions.

1.2 Background

The investment made by AFFA into landcare services has a limited timeframe and hence it needs to be viewed in the context of the long-term nature of many of the landcare issues. The investment needs to be effective within the project timeframe or, if not, there should be programs in place to support and add value to the investment once the AFFA funding ceases.

The current service component of the NLP, NRP and MD2001 has the following key functions at regional level.

- Developing regional and local objectives and strategies (planning and assessment).
- R&D to define and deliver best practice in the region (research and investigations).
- Delivery of best practice to farm level to improve technical and social skills and knowledge (extension, facilitation and training).
- Administration and coordination of funding programs (administration and management).
- Monitoring and evaluation of program service delivery (monitoring and evaluation).
- Developing and sustaining institutional partnerships at national, regional and local levels (coordination and networking).

These functions are carried out by specific groups under the following generic categories, although the specific titles used vary between jurisdictions:

- catchment/regional NRM groups (eg TCM/ICM groups);
- scientific officers and researchers in agencies and R&D providers;
- extension and technical officers in agencies, and
- coordinators and facilitators.

While much of the funding for landcare support has a community focus and is targeting on-ground activities eligible under Program guidelines, a significant proportion is also funding technical positions and support for R&D within State/Territory agencies and R&D institutions.

The technical positions fall into a number of broad categories, for example:

- positions supporting large State-wide assessment and planning projects working within a key State agency and linking with other key stakeholder State agencies (eg WA *Land Monitor* Project);
- positions supporting smaller regional assessment and planning projects working within key State agencies and linking across NHT program areas (eg regional salinity risk mapping);

- positions supporting R&D in R&D agencies (eg researchers and PhD students); or
- positions providing specific technical advice or training.

The evaluation had two major components. The first is a generalised, Australia wide compilation and statistical analysis of inputs to comprehensively describe the nature of the investment- numbers employed, levels of funding, types of positions, nature of the work carried out, gender, geographic distribution etc.

The second major component required a much more detailed evaluation of the effectiveness and appropriateness of the investment based on regions and on case studies within these regions. The regional basis is best suited to the nature of this evaluation and the applicability of the outcomes: they will be most relevant at regional level. The requirement was an evaluation of a range of support models and a quantification of the value of these investments. The range included; group facilitators, part-time coordinators, technical specialists, agency enhancements, catchment management staff, regional logistic support, local government, indigenous support, education officers and technical trainers. Inputs were assessed against needs and outputs against desired outcomes for local, regional and state/territory plans or strategies.

1.3 Critical questions

The evaluation assessed the appropriateness of the investment against the Program objectives by examining the following questions:

- *Is the Commonwealth (NHT) the most appropriate source of funds for this support?*
- *Does the investment complement the programs of the host agencies or are there issues of overlap which need to be addressed?*
- *Is the investment in support projects (personnel) an appropriate mechanism for achieving NHT Program objectives?*

The evaluation addressed issues of effectiveness by examining the following questions:

- *Are the right type of people employed and what are they achieving?*
- *How effective are these people through the funded projects or are there better models for managing and supporting the human resources needed for landcare?*

1.4 About this report

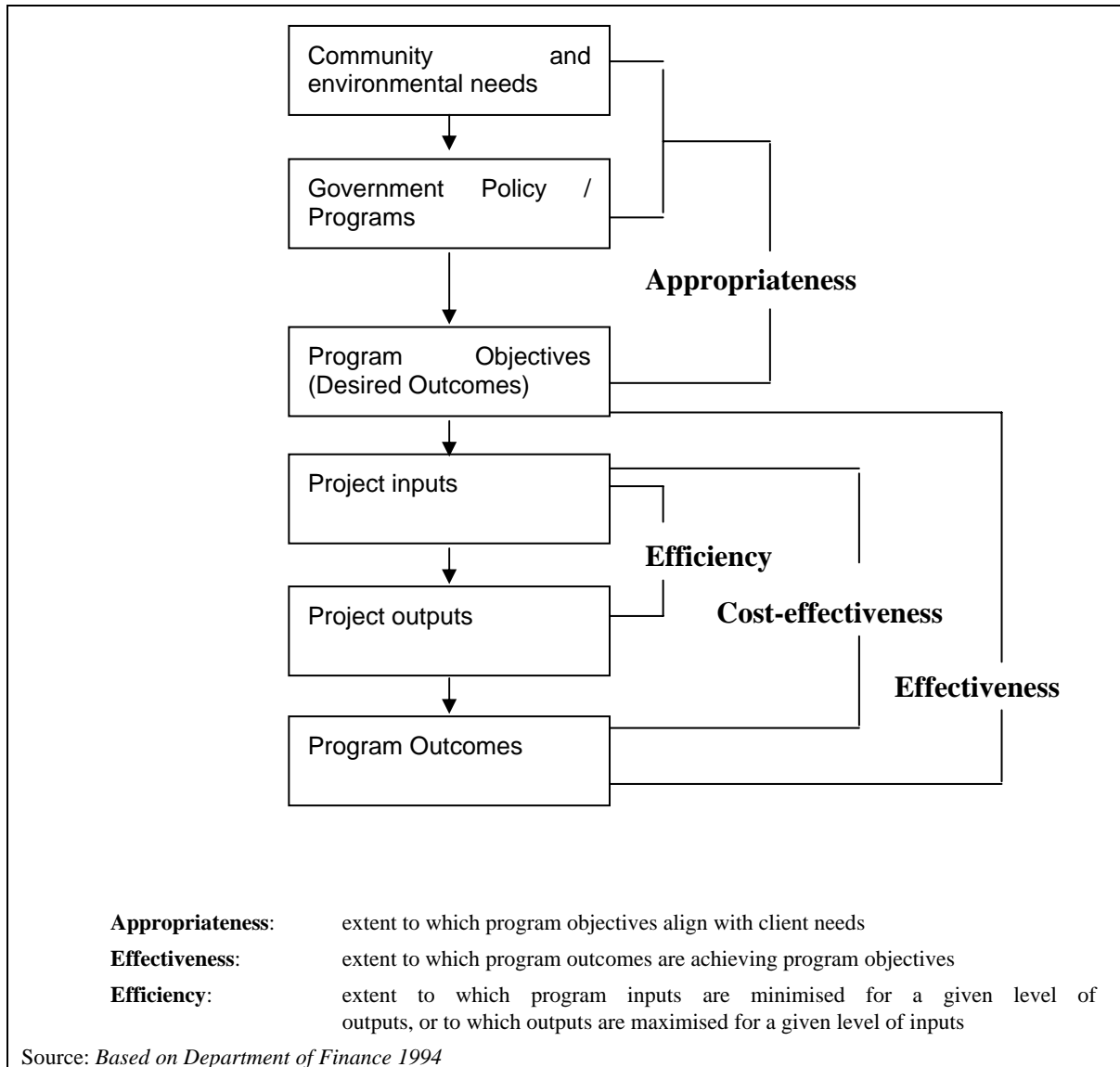
Section 1 provides the background to the study, the evaluation scope and the key questions addressed. **Section 2** documents the methodology used in respect of primary and secondary data sources and describes the six case study regions. **Section 3** commences by providing employment statistics and summary observations from each jurisdiction, before developing a national picture of the strengths and weaknesses of the current investment by AFFA into landcare services. **Section 4** draws conclusions from the evaluation before proposing a model for more effective delivery of landcare services to the regions. The annexes include details of the methodology and the reports from each of the six case studies.

2 Methodology

2.1 Principles

The evaluation focused on the key questions on effectiveness and appropriateness of the investment in employment to support landcare, as defined in Chart 1.

Chart 1: Principles of evaluation



Effectiveness

Suitable questions include:

- *What are the likely returns from the AFFA investment in quantitative and qualitative terms?*
- *Will the investment have a catalytic effect?*

- *Will the investment stimulate further investment and value adding?*
- *Has the NHT investment had an impact on State/regional/local program directions and objectives?*

Appropriateness

Suitable questions include:

- *Self sufficiency- are arrangements in place for ongoing support once NHT funding ceases?*
- *Is the position within the core objectives of the relevant NHT program(s)?*
- *Is it more appropriate that the position be funded at State/regional level?*
- *Has the AFFA investment had an impact on State/regional/local program directions and objectives?*

2.2 Regional NHT employment profiles

With assistance from AFFA and jurisdiction-based NHT secretariats, the consultant team compiled a 'jurisdiction and regional NHT employment profile' based on information extracted from the AFFA project data bases and from State/Territory and regional sources. These data listed investment in employment for all of the 'employment generating' Programs managed by AFFA. These are NLP, NRP, MD2001, the Fisheries Action Program (FAP) and the Farm Forestry Program (FFP). The profile included:

- number of positions funded by AFFA programs in key employment groups- 1996-2001;
- annual expenditure in the key employment groups- 1996-2001;
- for each employment category- any data on qualifications, gender balance etc which can describe the types of people being employed per category (is there a particular 'type');
- description of regional NHT employment models;
- Are some types of staff always employed by agencies- if so what types?;
- Are some types of staff always employed under contract- if so what types?;
- are there specific regional employment arrangements? – eg coordinators employed by a regional/local body; trained locally, and
- Are some types of staff always employed through grants - if so what types (e.g technical people such as fencing contractors).

Information extracted from the above process has been compiled into a series of tables and graphs in **Annex 2** with summary information presented in Section 3.1. Case study information was also used to value-add the quantitative data and identify any general trends or conclusions that can be drawn from the information in total, and to address gaps in the data.

2.3 Regional case studies

Six regional case studies were selected by the Project Steering Committee for the evaluation. The regions are:

- New South Wales – Macquarie;
- Northern Territory – Mary River Catchment;
- Queensland – South Region (Darling Downs);
- South Australia – Eyre Peninsula;
- Victoria – North Central Region, and
- Western Australia – Swan-Avon Region.

2.3.1 Regional employment analysis in each case study

Team members used the case study framework to investigate the types and outcomes of landcare support in the nominated areas or regions. Initial discussions with regional coordinators or NHT personnel identified key interviewees before visiting the region. In all cases (except Queensland) there was a major regional workshop, supplemented by one-on-one interviews with people unable to attend the workshop. The focus in all discussions was on understanding the achievements or lack of them, successful and less than successful approaches and the reasons for these.

Because of a high level of recent workshop activity in Queensland, Regional Landcare Coordinators of the Department of Natural Resources advised that they were disinclined to convene another workshop for the purposes of the current project. An alternative scheme was therefore implemented where the Case Study compiler (Neil Urwin) travelled to the region and held discussions with stakeholders individually. In all cases, the major points recommended for exploration in the workshop methodology were discussed and the case study report was compiled from discussion notes and information provided.

The remainder of this section addresses the processes used in these data gathering exercises.

B1 Regional NRM objectives

This part of the evaluation was based on the regional natural resource management (NRM) strategy/plan/objectives. These documents were reviewed separately and then referred to during the case study workshops. Where strategies are not already clearly articulated/documented, the regional objectives were teased out during the workshop. Key questions addressed by the workshop included:

- Briefly outline the regional framework for NRM in the region?
- What are the stated objectives?
- Is it consistent with NHT objectives?
- Does it link with State/Territory strategies? How?
- Does the regional strategy specify inputs required to achieve stated objectives?

- What proportion of total NHT funding is in employment? Is this appropriate? Is it consistent with the regional strategy? Why?
- Is there a process for assessing/monitoring appropriateness of inputs to achieve stated objectives?
- Are there any established or inferred cost share arrangements for employment?
- Have NHT inputs been evaluated in the region? What are the results? Have they influenced the way projects are developed? If not- should they?

B2 Effectiveness of Service Delivery

The regional workshops investigated the effectiveness of the key NHT delivery functions using an evaluation method called the H form. The H form method invites participants to place a score of effectiveness against a key question, and then to identify positive and negative reasons for the score. The method is outlined in **Annex 1**.

The participants rated and discussed the following questions, using the H form:

- How effective is NHT funded planning and assessment in the region?
- How effective is NHT funded R&D in the region?
- How effective is NHT funded extension, coordination and facilitation in the region?
- How effective is NHT funded monitoring and evaluation in the region?

Part C- Impact on NHT program objectives

This part of the evaluation examined the effectiveness of the NHT funded regional employment in achieving overarching NHT program objectives, using a plausible process (see **Annex 1**).

2.4 Data collection at Jurisdiction Workshops

The NLP, NRP and MD2001 investment is delivered to recipients through Partnership Agreements established between the Commonwealth and each jurisdiction. The mechanics of investment management in each jurisdiction include inter-agency agreements and the establishment of NHT Secretariats. These arrangements include people with responsibilities for the operation of the three programs in the jurisdictions. Key jurisdiction representatives for seven of the eight jurisdictions (ACT, NSW, NT, Qld, SA, Vic, WA) were consulted directly during a half-day focus discussion session. In Queensland, this focus group meeting of regional landcare coordinators was convened as a two hour teleconference. In the case of Tasmania, this consultation occurred by telephone. The discussion used a generic version of the questions used in the regional studies, with a broader focus and a greater emphasis on outcomes. Additional questions also focused on agency policy and operational aspects of landcare support funding.

The questions addressed at the workshop were:

- Has the NHT work stimulated other groups to invest in planning and assessment (and subsequent on ground activities)?
- Has the NHT work influenced State/Territory NRM program objectives?
- Is there a jurisdiction level NRM employment strategy to deliver NRM objectives?
- Are there any guidelines for applicants stemming from the jurisdiction NHT strategy?
- Do NHT guidelines constrain employment in favour of on ground works/capital expenditure?
- Has NHT investment caused agency funding to increase or decrease or change focus?
- What is the likely long term impact of NHT employment support on State/Territory objectives?
- Do you think the pattern of NHT employment has changed over the last few years? If so- how and why?
- Is it possible under NHT to employ the numbers and types of people required to achieve regional NRM objectives?
- Are there any lessons from other employment programs that would improve NHT?
- Other issues?

Most participants also gave a qualitative assessment of the effectiveness of the NHT funded regional employment in achieving overarching NHT program objectives, using the plausible process shown in **Annex 1**.

2.5 Other information

A number of Jurisdiction agencies and State Assessment Panels (SAPs) have reviewed arrangements for landcare support and made jurisdiction-specific recommendations. These reports were reviewed as sources of secondary information for the evaluation. Key documents include:

- *Landcare Support: Discussion Paper on the effectiveness of the network of landcare facilitators and coordinators.* Prepared by a working group of the Sustainable land and Water Resources Management Committee, August 1999.
- *Future Frameworks, Future Needs. Policy for community-based NRM support in Western Australia.* Published by Soil and Land Conservation Council, Agriculture Western Australia and the Government of WA, October 2000.
- *Alternative Approaches for the Delivery of NRM. A NHT Stakeholders Discussion paper.* October 1999.
- *A Review of the Efficiency of Landcare Facilitator Projects parts 1-4.* Jenny Rush and Chris Noble. Prepared for DPIE June 1992.
- *Mid Term Reviews.* NLP and NHT. October 1999.
- *Community Landcare, the National Landcare Program and the landcare movement: the social dimensions of landcare.* John Cary and Trevor Webb. BRS October 2000.

2.6 Information analysis and interpretation

The data obtained from the evaluation of the effectiveness and appropriateness of AFFA investment in technical positions, facilitators and coordinators was summarised for each case study and jurisdiction in matrix and narrative forms. These reports (shown in **Annex 3**) give a detailed account of the situation encountered in each case study and jurisdiction.

2.7 Developing conclusions and recommendations

At the completion of data gathering from employment statistics, regional case studies, jurisdiction workshops and the review of documentary information, all team members (Alexandra, Burnside, Duggan, Frost, Goldfinch, Howard, Irwin, Marston, Nurse) met in Canberra for a full-day workshop. The purpose of the workshop was to:

- compare and contrast employment models in each case study and jurisdiction;
- complete a SWOT analysis of current employment support through the three programs;
- develop conclusions about the efficiency and effectiveness from the current programs;
- use the conclusions in determining the role (if any) for the Commonwealth in employment support, and
- development of recommendations for future investment and an implementation plan.

3 Findings

3.1 National trends in landcare support

Data for this report have been obtained from the new and continuing NHT application from the AFFA database for the years 1999-2000 and 2000-2001 for the National Landcare Program (NLP), National Rivercare (NRP), Murray Darling 2001 Program (MD2001), Farm Forestry Program (FFP) and the Fisheries Action Program (FAP). Data from previous years was obtained from the AFFA employment database. The methodology employed in analysing the data and summary information are shown in **Annex 2**.

3.1.1 The quality of the data

Annex 2 describes in some detail a range of problems faced in analysing and interpreting the Commonwealth's database. Collectively these summarise to five points.

1. Some difficulty in relating Commonwealth data to the employment information from jurisdictions – some jurisdictions were not prepared to provide any information, while the information held by others was not consistent with the Commonwealth data. Some of these problems are the result of the issues discussed in Point 3 below.
2. Inflation of the AFFA contribution to employment in 1998-99 numbers because the data contain the proponents' employment commitments - as confirmed by jurisdictional representatives. These errors cannot be removed from the data without returning to the individual project applications.
3. Inconsistency in the presentation of employment information in projects (some include operating expenses and salaries and single items), in the location of those projects within regions, and in the assumed and actual starting dates for employment.
4. Inconsistency in the coding of employment categories between years.
5. Translation errors in compiling the database – multiple entries, illegible entries and missing budget sheets.

Given these errors, the database can only provide very general insights, as presented in the next section.

3.1.2 Employment statistics – suggested status and trends

Summary employment information from the data base is shown in Chart 2. The NHT programs managed by AFFA are significant investors in employment for landcare support. Although the commitment appears to have declined in the last two years, over the years investigated, an estimated \$90 million to \$125 million has been invested in employing between 1,500 and 2,000 people in any given year. However, as described above, the data are not sufficiently accurate at national scale to enable more than simple findings to be drawn about trends and categories in this investment.

After the dramatic increase due to the initiation of the Natural Heritage Trust, the records suggest that employment peaked in 1998-99. The reduced commitment to employment by AFFA following the 1998-99 period probably reflects a number of influences on demand and supply. Notwithstanding the errors in the data, the main accountable reason is suggested as a policy change by the Commonwealth in February 1999, reducing the employment period for coordinators/facilitators to a period of two years, whereas previously they were able to be employed for a period of three years. Advice received during the evaluation suggested that this change in policy deterred many applicants from applying for employment support.

Chart 2: Summary employment information

Jurisdiction	Estimated FTE numbers				
	96/97	97/98	98/99**	99/00	00/01***
ACT	4	9	8	7	5
NSW	223	550	742	497	468
NT	61	61	102	100	65
QLD	194	502	494	348	230
SA	147	260	285	231	185
TAS	67	86	130	111	108
VIC	194	400	529	387	279
WA	199	358	334	244	219
Total*	1,089	2,227	2,625	1,924	1,561

*totals may not be exact due to rounding

** number of employees is inflated by inclusion of applicant's contribution

*** some projects may be missing

The NLP is by far the greatest investor in employment support across all jurisdictions combined. The MD2001 is very significant in the four states that encompass the Murray-Darling Basin. Jurisdictions such as Western Australia that do not have access to the MD2001 program are fully utilising the other AFFA-managed Programs whereas jurisdictions such as Victoria are relying heavily on the former program for support. However, it appears that the overall outcome in terms of employment investment per jurisdiction is not skewed in an inequitable manner through the availability of this additional funding source.

Funding sought by proponents from sources other than NHT, such as State, Local or Group are not available from the new data set. While there are legitimate reasons for not capturing these data, due to the difficulty in determining exactly who are the other contributors and the real amount of their contribution, it prevents an overall understanding of the additional investment leveraged by NHT employment.

The data were analysed according to category of employment, as shown in Chart 3. These data show that the largest category in four of the five years is 'Other Professional' which does not provide sufficient information on the focus of these people's activities.

The sudden jump in consultant numbers in 1999-00 is difficult to explain, unless it is an artifact of a change in data-coding criteria in that year and in 2000-01.

Chart 3: Employment by category across all jurisdictions

Job type	Estimated FTE numbers				
	96/97	97/98	98/99	99/00	00/01
Facilitator	112	184	100	146	131
Coordinator	448	300	151	312	286
Consultant	0	0		321	152
Technical officer	300	356	271	347	253
Scientific officer	321	227	128	82	77
Education officer	147	95	32	47	52
Administration Officer	66	58	71	23	35
Extension Officer	142	146	93	35	27
Postgrad student	5	6	6	9	3
Other professional	0	792	588	545	480
Other unspecified	257**	0	1185****	58	64
Total*	1,089	2,166***	2,625	1,924	1,561

*totals may not be exact due to rounding

** includes 'Other professional'

*** excludes Northern Territory data

**** possibly includes jurisdiction contribution

Although overall numbers have varied between years, the facilitator and coordinator category has been relatively stable at about 400 people in each year. Again there are problems with these descriptions between jurisdictions – in some the definitions are very tight, whereas in others the nature of the project that employed them provided the categorisation. The data would suggest that the number of technical/scientific employees has declined by about 50 per cent over the years, although it depends on the (unspecified) roles being undertaken by those in the 'Other professional' category.

Further interpretation is given in **Annex 2**. Overall, the lack of definition of employment category in the original project applications and subsequent subjective interpretation when compiling the statistics means that there is little to be gained by a closer analysis of these data. In the next section, we suggest a shift from a focus on employment categories to a consideration of the skills and roles needed in a given situation.

3.1.3 The value of the employment data - conclusions

In conclusion, the information obtained by analysing NHT employment data is not particularly useful. The quality of data are poor in respect of:

- the number of people employed through NHT funded projects in proportion to the total funds allocated,

- the type of employment, and
- the leverage of additional employment investment.

It is our considered view that given the qualifications contained in **Annex 2** and summarised in 3.1.1 above, the historic database held by the Commonwealth is of very limited value in its ability to provide anything beyond a very general picture of AFFA's contribution to employment in landcare support. We strongly recommend that the historic database (to 2000-01) be no longer used to provide factual information.

Beyond these problems, there is an underlying issue that employment would be more appropriately treated like any other input to a successful NHT project – NHT is not an employment program *per se*. Monitoring and evaluation of NHT projects should move in general from a focus on inputs to outputs and outcomes. In this sense it is not very important in assessing outputs and outcomes whether the person doing the job is employed by a group or agency, is a contractor, a technician or a facilitator. However, in addition to recommending a move to accounting for outputs and outcomes, we recognise the separate need for the Commonwealth to be able to demonstrate its commitment to direct professional support for rural communities managing natural resources. The most immediate measure of this support is the number of people employed in the various roles undertaken by these people.

Given the continuing need for centralised records of this nature to inform AFFA and the Minister regarding expenditure on employment, we strongly recommend that a purpose built database be established. A data collection system should be put in place that collects a clearly specified set of parameters at the point of project approval (possibly through the State Assessment Panels). Many of the inaccuracies in the current data base arise because of the data are collected historically and without attention to consistency of definition. Any further attempts to centralise these data should at least ensure that the required information is collected at the approval stage.

Finally, there is a need to avoid the focus on employment type and shift to a consideration of the roles being played in a way that reflects the contribution being made by different skills and knowledge (e.g. supporting capacity building; or providing technical information) in achieving the outputs and outcomes.

3.2 Summary observations from the case studies

The regional case studies are included in **Annex 3**. These reports have been used to present summary snapshots of each in terms of the NRM activities and outcomes and the Commonwealth's contribution through landcare support.

3.2.1 New South Wales – Macquarie

The Macquarie River valley in central western NSW is typical of summer rainfall agricultural areas with dryland and irrigated cropping. There are significant degradation

issues associated with cotton chemical usage, soil structure and salinity, wetland conservation, erosion and woody weed invasion.

General observations

- The bio-physical nature of the resources is well understood and described at regional scale, and the focus is now shifting to the development of the local detail.
- Over 80 per cent of the people employed to support landcare in the region are funded (in salaries) through the Natural Heritage Trust.
- This high level of dependence on the Commonwealth as a source of support has created an expectation that this level of support will continue.
- There is strong community ownership of the employment of landcare professionals and the workshop stated that shifting the employment 'home' to the agencies is not acceptable.
- The agencies are looking to the Commonwealth to assist funding capacity building as a public benefit, with implementation to be cost-shared between private and public beneficiaries.
- Agencies are also of the view that in developing and implementing regional NRM plans, the Commonwealth should be investing in outputs, not monitoring inputs.

What is AFFA investment doing in the Macquarie Region?

There has been a salinity group facilitator operating across a range of Landcare Groups for some time as well as other projects providing technical support to the cotton industry. Landcare management support has been provided through an industry group called Macquarie Food and Fibre - a concept that has expanded to other regions in NSW and QLD. NLP has supported an education officer in the region. A new concept in the region is the Landcare Coordinating Self Sufficiency and Development Project in Wellington and Dubbo with specifically trained group coordinators.

Currently, the AFFA NHT programs are funding 13.7 FTE coordinators and facilitators; 12.5 FTE extension and technical officers and 2.5 FTE scientific officers and researchers.

The coordinators and facilitators are engaged in landcare coordination, land and water management planning, landcare facilitation and action planning. They are agency based and predominantly female. They tend to have tertiary qualifications in science or applied science, are employed on contracts of 12 months extendable to 3 years, and have achieved a well developed communication and organisational system for community based landcare support. They are highly valued, especially the coordinators. They provide administrative and community development support to landcare groups and are the driving and administrative force for the NHT grants program at community group level.

The extension and technical officers tend to have tertiary qualifications in science, applied science or education. They are involved in salinity investigations, NRM education, and in extension in conservation farming, native pastures and conservation grazing. They are agency based and supported. This is the largest expenditure group

(slightly higher than the coordinators and facilitators) accounting for a total of NHT\$2,402,488 since the 1996/97FY.

The technical and scientific officers are male, have tertiary qualifications in science or applied science and are involved in R&D in farm forestry and soil research.

Are the right skills being employed in the Macquarie Region?

- Generally, the coordinator positions are highly valued and are meeting (*albeit* perhaps a bit inefficiently) critical needs of landcare groups involved in NHT grants, but the facilitator positions are seen by farming communities to lack focus and possibly have limited local impact.
- Scientific and R&D inputs tend to be sought from NHT to meet specific needs with more and more of these being driven by community needs. This seems to be appropriate but there is concern that R&D has fallen off the agenda in the last decade because of unpopularity in the funding programs. People are concerned that the basic research to solve local problems and implement solutions is not being done.
- Planning and assessment is seen to be proceeding at a reasonable level, but could be improved with a more consistent approach and better translation of information to farm level operations.
- Monitoring and evaluation has very little profile.
- The region experiences the problems of high turnover and inexperience of coordinators reported under NHT nationwide. The Department of Land and Water Conservation has responded with the development and testing of an alternative model for coordination, which focuses on developing local capacity to carry on these roles. This model is worthy of further support and would probably be suited to a range of other regions.
- Depending on who one is talking to, there are diverse opinions about whether or not planning phases have been adequate. Much of this relates to a perception among landholders in particular that not much of the planning had direct relevance to the problems of on-ground implementation.
- Despite the varying views about planning and its value, it is clear that implementation of on ground works is constrained by a lack of technical advice which can translate the planning and technical knowledge to an operational farm (or even group of farms) situation.

What has been achieved by the AFFA investment in the region?

- NHT has generated a marked increase in demand for landcare support services. While the delivery of these is variable across the region, it is clear that little could have been achieved without employment of people to support capacity building, planning and implementation.
- The people employed in the various AFFA supported categories have collectively contributed to a significant increase in awareness and capacity within rural communities in relation to addressing NRM issues.

- Communities hold much more of the skills and knowledge than was previously the case.
- There is a stronger integration of conservation and production in the management of agricultural landscapes.
- New partnerships and relationships have developed to deliver better outcomes on the ground.

Impacts:

NHT funded landcare support in the Macquarie region specifically and more generally throughout NSW has had the following impacts:

- provided support for a range of local priorities in landcare;
- stimulated growth in the number of landcare groups and therefore, in the demand for landcare support;
- stimulated higher levels of investment in landcare by community groups, industry, sponsors and local government;
- generated much greater levels of involvement of community groups in landcare support – in identifying needs and in employing people to meet those needs;
- filled a gap left by a decade long decline in state agency funded extension, with a shift in focus from more traditional extension to group coordination, and
- there is a very high level of dependency on NHT for landcare support and, therefore, a high level of exposure to changes in NHT funding levels.

Other points

Lessons learned

The Macquarie region provides considerable insight into lessons learned from NHT because they have found innovative ways to deal with the less desirable features, as described below.

- Left to its own devices, the NHT funding system for landcare support leads to imbalances which do not necessarily reflect regional priorities. Some areas/issues need more but get less because of quirks/inconsistencies/unclear messages in the funding programs.
- Generic approaches to phasing of inputs such as planning, implementation, M&E etc. are inappropriate because different areas/regions are at varying stages in NRM and therefore require different types of support and service delivery.
- Forward planning is needed, which identifies regionally desired outcomes and their required inputs including the skills that need to be employed.
- Longer term strategies are needed to keep skilled people.
- Public/private investment plans need to be agreed at a regional level.
- There is a requirement for better planning at all levels - more consistent, more holistic and better integrated, with better handling and dissemination of the information and translation of the planning into actions through good links with extension.

- R&D is required to support the development of regional solutions but it must be linked to real issues and be linked with extension. The decline in R&D is hampering extension efforts.

Challenges

The capacity of many regions to deal with NRM has increased significantly under NHT and the Macquarie is no exception. The key challenges that remain include:

- finding a better and more efficient way to for governments to buy into regional NRM outcomes;
- in the interim, phase-out and rationalisation plans are needed to assist regions to cope with a reduction in current NHT style landcare support;
- continued investment in capacity building within regions is needed to provide greater self sufficiency for some landcare support roles – e.g. coordination;
- finding a way to provide greater regional autonomy and flexibility to enable more efficient delivery of certain landcare support services – e.g. accounting and administration, and
- finding ways to build on the existing skills base to support landcare.

3.2.2 Northern Territory – Mary River Catchment

The Mary River Catchment lies to the east of Darwin in the Northern Territory and is a medium sized catchment flowing into the Arafura Sea. Land uses in the region include some broadacre cattle and buffalo grazing on poor quality native pastures, grazing on cleared land and improved pastures, intensive tropical agriculture and horticulture, crocodile farming and nature-based tourism. The catchment adjoins the Kakadu National Park.

General observations

- The operating environment is sufficiently different from that in other jurisdictions, to justify a need for unique employment / coordination / administration / technical transfer models and partnerships in the NT.
- The concept of ‘regions’ is based on the NT institutional and biophysical boundaries that are the basis for resource allocation for NRM.
- NHT has stimulated distinct partnership arrangements between a range of stakeholders in the NT that are quite different to those in other jurisdictions.
- Greater employment opportunities are required. Government agency staff at central management level place a priority on technical positions, especially for young people with specialised training in the NRM field. Local agency staff and communities would prefer to have coordinators.
- There is poor information coordination at the community level of the outcomes of monitoring and evaluation, research and development and implementation activities.
- The NHT goals and objectives are not driving the NRM agenda in NT, which is very focused around fire management, and feral animal and weed control. These

are extensive long term problems for which small, one-off incentive grants will not provide in themselves the desired result. However, NHT funds are critical to groups involved in these activities – the prevailing view is that without these resources, the groups will die.

- There is poor local understanding of the NHT grant process – this could be overcome with better devolved, regionally based grant systems.

What is the AFFA investment doing in the Northern Territory?

The Mary River Landcare Group formed to address natural resource management issues and it has received support from the Territory Government and NHT. Formed in 1989 as the 'Lower Mary River' Landcare Group, it has since expanded to take in land managers and community members from the upper reaches of the catchment. Measures designed to address the environmental issues mentioned above include direct and biological *Mimosa pigra* control, the protection of rainforests with fencing, construction of banks for the management of salt water intrusion, and the development of the Mary River Water Watch Network and 'Working with the Wetlands' newsletter.

- Funding has been provided from NHT for Landcare (\$1,024,861, plus an estimated \$32,000 for part funded and/or part time agency positions) and Rivercare (\$148,775) programs/projects.
- Emphasis has been on employment of young, well-qualified people for large scale resource assessment activity and for setting up systems for monitoring. These positions, however, have been largely controlled by government agencies.
- Limited funding has been available to employ landcare/community members in coordination positions and for the implementation of on-ground works.
- There has been a decline in funding for positions in the last two years, which is a reflection of misunderstandings about the contract/funding periods available (NHT recently extended funding but it was too late to put up additional projects).
- A Territory level coordination position has been funded and is required to establish and maintain networks and the exchange of information between and within large regional groups.

Are the right skills being employed in the Northern Territory?

The skills provided do match the need, though there are critical problems with the amounts of funding available; fund administration and management; and in the delivery of information to members and partners. The Landcare Coordinator in particular, though funded for only a three year period, has been able to achieve a great deal in terms of information dissemination, coordination of activities and project administration. The monitoring and assessment support has also played a crucial role in developing an understanding of resource status and in the development of Best Management Practice. Limited on-ground works have been supported by NHT and in the NT context, with very large-scale problems, this has had limited impact.

What has been achieved by the AFFA investment in the Northern Territory?

- Funding for technical and coordination/facilitation positions has been provided, with Terms of Reference for these positions that are developed through stakeholder consultation and that account for the current local/regional needs.
- NHT has stimulated specific partnership arrangements between a range of stakeholders in the NT (NT government, Aboriginal agencies, and community organisations) to solve regional land degradation problems.
- NHT has provided an entry point (e.g. through *Mimosa pigra* control), to access and mobilise Aboriginal communities in dealing with severe land degradation issues affecting the land under their custodianship.
- NHT has stimulated a dialogue for pastoral/rangeland land management between government, Aboriginal custodians and pastoral land managers.
- The NT Government has increased funding to Natural Resources Division of the Department of Lands, Planning and Environment to support NHT projects. NHT is a means to accelerate activities of the NT government in NRM.

3.2.3 Queensland – South Region

This region is administered from Toowoomba. It comprises, with part of the Western Region, that part of Queensland within the Murray-Darling area. It is therefore not eligible for funding under the Rivercare program. Projects in the region are funded under the National Landcare Program.

The region includes the slopes and plains of the Darling Downs, which are drained by the Condamine and McIntyre Rivers. The fertile soils in the region are used for summer and winter cropping and livestock production. Considerable work has been done in developing sustainable farming systems for the region and in extending these to the farming community. The regional natural resource management objectives are those of the management strategy for the Queensland Murray-Darling Basin. They are described in the *Natural Resources Management Strategy for the Queensland Murray-Darling Basin* published by the Queensland Murray-Darling Basin Co-ordinating Committee in April 1998.

General observations

- The impression is that NRM in Queensland is a ‘captive’ of the NHT goals and objectives, in that the regional strategies exist only to suit NHT and attract NHT investment.
- NHT investment is leveraging better than \$1 : \$1, perhaps up to \$3 : \$1.
- Coordination and facilitator services are seen as being as important as ‘works on the ground’, although employment projects are seen to be less favoured by the Queensland State Assessment Panel and AFFA.
- A need is seen to reduce the focus on process and shift to outcomes, but there is some difficulty being experienced in defining Outcome Performance Indicators.
- It is difficult to get the right people into remote areas.

What is AFFA investment doing in the South Region and Qld generally?

It is estimated that, at the state level, 50 to 80 per cent of NHT funds in projects go to employment types listed in the staffing categories in the regional employment profile. This is considered by the jurisdiction to be an appropriate proportion because a major issue for NRM in the state remains the need for 'more information and better science'.

The 1999-2000 regional projects bid (which includes both continuing projects and new projects) describes an employment model for support., shown in Chart 4.

Chart 4: Employment model for NRM in Queensland

Coordinators/Facilitators/Project Officers – regional focus

Level	NRM Program Context	No. Employed
Regional	Regional NRM Strategy	5
Catchment	Catchment Strategy	6.5
Local	Sub-catchment Action Plans	13

Technical officers – catchment level focus

Level	NRM Program Context	No. Employed
Regional	Regional NRM Strategy	1
Catchment	Catchment Strategy	6
Local	Sub-catchment Action Plans	2

Regional officers interviewed noted a correlation between employment models and the project level. The more regional/strategic the project, the more often the key team members employed on the project (Coordinator/Project Officers) were agency employed. Similarly, Monitoring/Evaluation officers are usually employed either as agency staff or via consultancies. Research and Development is always undertaken in projects through partnerships between the community group and a research establishment such as CSIRO.

In the South Region, the trend has been away from agency based employment and towards community based employment. There is a perception in the region that funding of projects involving the employment of key technical people or extension services is more likely to succeed if a community-based applicant is seeking the NHT funds. Extension officers, coordinators and facilitators are more usually employed in projects where the community is the applicant and employer.

Employment in survey and data gathering projects accounts for up to 60 per cent of the project total funds. Catchment planning and action planning projects are also predominantly employment. Major on-ground issues of addressing salinity, acid sulphate soils, soil compaction and grazing pressure all give rise to projects with a large proportion of employment. Exceptions are erosion control projects which commonly comprise more

than 40 per cent on-ground works, and weed/pest eradication where funding of these employment types accounts for only 10 to 15 per cent of total project budgets.

Are the right skills being employed in the South Region?

Regional coordinators, Department of Natural Resources agency personnel and community facilitators and Project Officers agree that the right categories of employment are being identified in the project designs. This is due to a number of factors, chief among them the number of checks and balances which a project design is subject to before it is finalised and becomes part of the State Bid.

Stakeholders/landholders reported that community groups are adept at identifying the right employment types for a project. The high community representation at this level contributes to this success: Five hundred and nineteen farmers participated in sub-regional (Brigalow-Jimbour Floodplains Group) landcare activities in the last 12 months; and 140 farmers attended the last five workshops in the area (November – December).

There was also agreement that in project design, agencies were more prone to see issues in terms of a technical fix but that community groups would insist on the use of coordinators and facilitators to mobilise landholders towards that technical solution.

Difficulties encountered in employing the right people in positions include:

- limitations on funding;
- locational nature of employment (always specific; sometimes remote);
- lack of support mechanisms (often ‘on their own’), and
- length of employment (requirement to reapply for continuing project funding each year – reduces security of tenure).

What has been achieved by the AFFA investment in the region?

Respondents in the evaluation of the NHT project *Implementing Catchment Strategies to On-Ground Action – 972851*, comprising the 64 Landcare Action Planning Areas of the South Region, assessed the role of Project Officers/Coordinators/Facilitators in the realisation of project objectives. This project covers 38 per cent of the Queensland Murray-Darling Basin and almost 65 per cent of the South Region, and is considered by regional landcare coordinators (at DNR Toowoomba) to be representative of the region.

The strongest point to come out of the evaluation of this NHT project was that; ‘of all the funding issues, the most important is that of funding the Project Officer to support farmers and the community’ – this was judged as being more important than support for on-ground works. Some specific results were:

- 52 per cent of farmers rated the Project Officers/Coordinators/Facilitators as most useful;
- 38 per cent of farmers rated financial assistance as most useful, and

- 36 per cent of farmers rated meeting with other landholders to plan as most useful.

The reasons given for rating the effectiveness of the employment type Project Officers/Coordinators/Facilitators so highly were their effectiveness in:

- motivating and focusing action;
- focusing awareness;
- providing access to information/providing information;
- promoting involvement in Landcare and Action Planning groups;
- facilitating learning to effectively carry out NRM (particularly in ‘keeping up-to-date’);
- facilitating the building of social capital/female participation;
- providing support for group activities;
- coordination of groups and events, and
- promoting awareness of Landcare and NRM issues.

In the last annual Regional Assessment Panel review, three out of 28 projects in the region were determined to be either:

- not working;
- out of their planning timeframe, or
- not being managed properly (despite reviews and feedback).

As a general observation, it was reported that the more that project personnel were involved at the local level (the community employment model), the more effective they were in program delivery – since their activities at this level were compatible with and engendered community ownership of project objectives.

Other points

NHT investment complements, extends and facilitates Queensland’s natural resource management program. There are no areas of duplication of effort. Where coincidence of State and NRM priorities occurs, the state agencies adjust their programs to incorporate NHT objectives and funding. This is because the influence of the NHT program on State NRM programs is significant. In the areas of catchment management and landcare, the Department of Natural Resources’ yearly allocation amounts to an average of \$13 million. The matching NHT funding for this area is about \$7 million annually, providing an additional 55 per cent of input at the state level.

3.2.4 South Australia - Eyre Peninsula

Eyre Peninsula lies 200 kilometres due west of Adelaide and encompasses an area of approximately 54,000 square kilometres. The major land uses are cropping, grazing, Aboriginal living areas (two leases) and 36 National/Conservation reserves. Agriculture becomes increasingly marginal towards the north and west where rainfall drops off to

below 250 mm/yr. With the clearance of significant areas of native vegetation, dryland salinity has become a major issue in the region, particularly in the south.

General observations

- The Eyre Peninsula had a Regional Partnership Program (RPP) and has been receiving landcare funds for 14 years and RPP funds for 4 years. The latter have been invested in 'accelerated works' and technical staff. NLP funds were sought to augment this program for farm and NRM management outcomes.
- The RPP funds have allowed implementation of a regional strategy – the general view is that there has been a good mixture of RPP and NHT investment.
- Current Landcare coordinators and some new positions will continue with strategy development, but the technical support has stopped.
- After the last 4 years, the region has seen itself as becoming more coordinated and focused and ready to attract further major investment funds. Primary Industries and Resources, South Australia's (PIRSA) objective is that the region will 'buy outcomes' from PIRSA.
- TA need is seen for more local government involvement, with trained facilitators providing a link to the region and undertaking relevant regional monitoring and evaluation integral to the regional strategy.
- A career structure, training and improved job security is needed for landcare facilitator/coordinator positions.

What is AFFA investment doing in the Eyre Peninsula?

Government and community have attempted to address the environmental issues via the formation of five regional Soil Boards that plan and coordinate NRM activity. Property Management Planning (PMP) has wide adoption across Eyre Peninsula (51 per cent participation compared to 16 per cent statewide). Cost sharing is seen as important. NHT funded Landcare Officers facilitate and administer the NRM activities of groups and individuals but technical and management support is provided by PIRSA.

In the Eyre Peninsula, investment in employment positions has been variable. In the technical area, investment covered 5 positions for a period of 3 years before ceasing in 1999. These positions were managed through PIRSA and were aimed at increasing land manager knowledge and implementation of agronomic and natural resource management innovations under the Eyre Peninsula Regional Strategy. The positions were: 2 TOPCROP extension positions; 1 Property Management Planning officer; 2 extension officers for the Managing Soil Erosion project and one extension person for Farming to Land Capability.

More recently a position has been created for one Catchment Management Officer based in the Department for Water Resources looking at Sustainable Water Use for Eyre Peninsula. The position covers the following tasks:

- facilitating and promoting sustainable water use for the Eyre Peninsula;

- implementing waste water re-use project (local government in association with horticulture);
- establishing stormwater harvesting in the Eyre Peninsula small towns for amenity use to take the pressure off the Southern Basin, and
- developing water management plans with the Eyre Peninsula Catchment Water Management Board.

Two other positions under this category (catchment and regional NRM groups) were in the process of being filled at the time of the evaluation workshops. One position is to work with the Eyre Peninsula NRM group peak body towards an Integrated NRM strategy for the Eyre Peninsula. The other is a position designed to implement strategic salinity support for the region for the Eyre Peninsula peak regional NRM body in partnership with PIRSA.

Community based coordinators and facilitators cover conventional farming and NRM land uses and also aboriginal land management groups, with a regional coordinator supported by PIRSA.

Are the right skills being employed in the Eyre Peninsula?

All stakeholders consulted seemed to be satisfied with the situation regarding employment positions, with the exception that community groups were not happy with the turnover in people filling positions and the inefficiencies resulting from that. They were otherwise satisfied with the people and their performance and the roles they played. The current situation has been planned for and is filled with promise.

What has been achieved by the AFFA investment in the region?

- On-ground investment has accompanied the investment in employment on the Eyre Peninsula. Whilst investment in technical and extension positions was for a set period and has now ceased, funding for coordinators and facilitators and catchment or NRM positions continues. Local people hope that this investment will continue well into the future as these roles are considered to be the most effective method for ensuring effective delivery of on-ground works within communities. The best value for money was achieved at the local level when officers could put good effort into public liaison and promotion of on-ground works. Community adoption of best practice was seen to be evidence that the employment was very worthwhile.
- The running of concurrent and related programs in the region has been quite conducive to good outcomes by enabling regional economic imperatives to be addressed in conjunction with NRM aspects. NLP investment in association with Rural Adjustment Scheme funding have resulted in an increase in the current value added by agriculture to the regional economy of almost \$7 million per year due to farm productivity and management improvements initiated by the Eyre Peninsula Regional Strategy. This funding has enabled matching State funding in the region.
- There are plans and a basic structure being implemented now for integrated regional NRM that has evolved as a result of the funding of NLP projects in the

region. There is funding for two positions to work on this and region bodies are strongly supportive. There are plans to integrate economic and social components wherever possible under a regional alliance structure that is based on co-operation.

- Regional coordination is effective and has enabled increased involvement of individuals and groups.
- Injection of Commonwealth funds has leveraged investment by others with on-ground outcomes and additional unexpected and unaccounted for benefits including in-kind support from those otherwise unable to invest financially. Investment has accelerated change.

3.2.5 Victoria – North Central

The North Central region is dominated by an irrigation area producing 50 per cent of the region's gross value of agricultural produce. Irrigated agricultural activities include dairying, sheep and cattle grazing, grain production and horticulture. The dryland agricultural area is a mix of broadacre cropping and grazing industries. The wetlands systems associated with the Murray River are of international importance, whilst the Box-Ironbark forests are some of the last remaining stands of significance in Victoria. The North Central region is characterised by an extensive network of community groups actively involved in addressing NRM and agricultural productivity issues.

Major issues include: salinity, biodiversity conservation, and waterways and water resource health. A range of technical, planning, extension, education, coordination and facilitation staff operate in the area. Some of these are in association with agencies, industry local government or the Authority and provide a range of models to study within broadacre and intensive agriculture.

General observations

- Landcare services are either provided through the region's Catchment Management Authority, the Department of Natural Resources and Environment (DNRE), local government or with personnel employed directly by community groups. The model requires simplified, devolved grants to regions.
- The region is looking for specialist landcare group services such as accounting and administration to be provided by a central regional service to allow coordinators to focus on NRM activities.
- Problems are perceived with the short-term contracts resulting in a lack of continuity.
- The region is looking for increased local government involvement in employment and support for landcare services.
- The need to provide matching dollars has ensured continued agency investment into landcare.
- Monitoring and evaluation which is spread across projects is not seen as being effective.

- Groups are not always good at defining personnel needs, and sometimes have too large expectations of what a coordinator needs to / is able to deliver. Coordinators are now having to provide technical information.
- The use of some grant funds is ineffective because there is not enough coordinator support to achieve required levels of adoption.
- There is a mismatch between the need for experienced and mature coordinators and the generally inadequate salaries on offer to attract the necessary skill level. There is a shift back from NHT funded employment to state-funded employment.
- The quality of group/coordinator is really important. Good groups with good coordinators continue to improve, whereas poor groups with poor coordinators deteriorate further.

What is the AFFA investment doing in North Central Region?

A regional planning process operates through the Catchment Management Authority (CMA) which coordinates projects with NHT support. This planning process focuses primarily on NRM issues and programs. It is part of wider statutory and strategic planning processes used in Victoria that involve many other agencies including local governments and the State-wide agencies like the Environmental Protection Authority.

The agency representatives were not able to commit resources to developing a detailed description of the investment in employment in the region since 1996/7. At the time of interview, there were 6 to 8 Full Time Equivalent (FTEs) funded through NLP and 20 FTEs supported by the MD2001. NLP funded staff are employed within three models.

- *Within the Catchment Management Authority (CMA) framework* with support and communication with the CMA. The CMAs themselves are generally responsible for providing staffing, with AFFA funds used for on-ground works.
- *Directly by Community Landcare groups.* There are 150 Landcare groups in the region with four FTEs coordinating these groups. It was suggested that it requires 10 FTEs to provide the necessary level of coordination effectively. This would then enable communication direct to the coordinators rather than attempting to communicate and inform the 150 groups. As a result of this inadequate support, about a quarter of the groups are not active.
- *Within local government offices* – this employment model is increasingly seen as being a good model for the housing and management support for NLP funded employees.

MD2001 funded staff are generally employed directly against projects within the Department of Natural Resources and Environment support structures. These positions include technical and extension roles.

Both programs display the following features in employment that limit the effectiveness of this investment.

- Most staff are employed under short term contracts, often on a year to year basis.

- There is a high staff turnover, many being employed part-time while still seeking full time employment.
- Coordinators/facilitators employed outside agency frameworks have difficulty developing their role and career path.
- The view was expressed that agencies are better positioned to mix and match funding to provide better security of position.

Are the right skills being employed in the North Central Region?

It is seen as essential to have the right balance of human resources and on-ground works. Without a contribution from coordinators and facilitators on-ground works won't happen. While agencies can successfully obtain and attract the required skills to the level of the funding available, current employment is biased mainly to young staff for positions who invariably need to train/learn on the job often with little support. There is a preference for having people with local knowledge and experience with rural backgrounds.

While current needs are being met, regional people are of the view that the type and required level of skills will need to be substantially enhanced to meet the major NRM objectives. In particular, there is a need (and expectation) for increased technical support – coordinators cannot be expected to have these skills as well as those required for coordination.

What has been achieved by the AFFA investment in the region?

The overall impact is positive, as suggested in these following examples.

- AFFA investment in landcare support has increased the recognition in the community of integrated catchment management.
- NHT is an appropriate source of funds for employment as well as on-ground works if the Commonwealth wants their NRM outcomes achieved.
- At the regional level, the objectives in the North Central CMA and other regional areas in Victoria are strongly based on their Regional Catchment Strategies. Victoria has driven well down the regional strategic and delivery model and it appears to align well with current Commonwealth thinking. The 10 Regional Strategies in Victoria have agreed community support and are endorsed by State government. They contain a set of agreed priorities for funding NRM works and programs. AFFA investment is providing strong support to on-ground implementation of regional strategies.
- NHT investment is leveraging increased involvement by local government and other agencies – e.g. landcare groups have also put pressures on Vic Roads to increase associated NRM work.
- It has also allowed agencies to develop flexibility in mixing and matching their funding with Commonwealth funds to achieve overall program objectives. In this way the Commonwealth input has helped stabilise state inputs.

Problems

Issues are seen to remain in the following areas.

- While it is good to have a national perspective/policy, there is a lack of clarity at regional level in terms of Commonwealth / State roles and responsibilities.
- There is a need to remove policies and objectives that are seen as contradictory between different levels of government and between agencies.
- Landcare is not linked well enough to other socio-economic objectives and Commonwealth and State programs.
- Because of the administrative load, staff often end up co-ordinating groups and not projects and resource management activities. Extra administrative and NHT application and management responsibilities are blamed.

Suggestions

- Guidelines for funding should recognise the integrated requirement for community education, capacity building, group coordination as well as the need for on-ground works. Guidelines should recognise that NRM outcomes are dependant on a mix of activities and this mix may differ between regions.
- A regionally coordinated funding and management model was suggested – by funding landcare group projects out of a regionally prioritised budget. Regional Landcare Centres can provide administrative and financial support, with coordinators located in local government offices. A landcare accountant, and other support staff can provide regional secretarial and administrative support to groups. This will relieve the coordinators of the role of group secretary and treasurer.
- At present a component of each project/activity is deemed for monitoring and evaluation. It is suggested that M&E outcomes would be better served if these amounts be combined to develop regional monitoring programs with dedicated resources and staff.

3.2.6 Western Australia – Swan-Avon

The Swan-Avon Catchment drains an area of approximately 130,000 square kilometres of south-west Western Australia. It includes the Swan River coastal plain and estuary as well as large areas of commercial agriculture. Intensive horticulture and viticulture occurs on the coastal plain, which is home to most of the State's people (1.25 million), and most of its commerce, secondary industry and government services.

General observations

Avon – broad acre agriculture

- It is apparent that stakeholders operating from different loci (e.g shire versus agency employment) and at different scales and levels in landcare support have very different understandings and expectations of the nature of that support and the intended outcomes.
- The quality of monitoring and evaluation is generally poor – reflecting its lack of focus in the NHT guidelines and hence in project design.

- The majority view amongst agencies and coordinators in the Avon region is that given the lack of readily ‘adoptable’ options to address many bio-physical issues, especially salinity, investment in community capacity building yields a higher benefit than on-ground investment.
- NHT investment in capacity is yielding important social benefits, but much fewer NRM benefits. On the other hand, the agency extension philosophy appears to be moving towards a greater reliance on the linear technical transfer model.
- One agency view is that there is a role for the District ‘General Practitioner’, able to provide a range of skills – interpreted by the consultant team as ‘coordinators, with wisdom and technical grunt’.

Swan – complex urban and peri-urban NRM

- There is a very large volunteer input that is increasing with time – this input needs recognition, training, and dedicated support (e.g. some paid staff and administrative support).

What is the AFFA investment doing in the Swan-Avon Region?

Government agencies and community groups have attempted to address land and water degradation through a variety of natural resource management programs. The core of this partnership is the *Swan-Avon Integrated Catchment Management Program*, inaugurated in 1994 and funded through the NHT-State partnership. Separate NRM strategies for the Avon and Swan parts of the catchment are now being developed by the Avon Working Group and the Swan Catchment Council, to improve the coverage and coordination of NRM activities across the region.

Agriculture is a significant industry in the Avon region and as such, Agriculture Western Australia (AGWEST) has a major role in the Avon’s natural resource management program. Also established within the Avon is the Avon Working Group (AWG). Formed in 1994, this community-agency regional decision-making body allocates state and federal funds for projects for improved land and water management. The AWG provides advice on the priorities and issues affecting communities within the Basin. The Group has developed a Natural Resource Management plan for the region. Now in final draft, it is envisaged that this plan will influence regional priorities and projects and therefore influence employment requirements and priorities.

The NHT employment profile in the Avon reflects the influence of agencies alone (mainly Agriculture Western Australia) and the Avon Working Group (AWG). In general, NHT funds have been used to employ individuals who either work for Agriculture Western Australia or local communities. These latter positions are usually known as Community Landcare Coordinators (CLCs). The goals and objectives for the projects employing the people reflects their origin in either agency or the community. In summary, NHT funds is used for the employment of:

- agency staff who work to organisational goals and program, some of which involve technical work and some of which are Coordinator/Facilitator roles (n = 4), and

- individuals who are managed by local community groups and whose job is guided by the stated goals and objectives of the local project (n = 29).

The CLCs in general, are not as well supported in terms of their human resource management needs as the AGWEST NHT employed staff. Despite this, most CLCs thoroughly enjoy their work and their relationship with the local community.

Local government and industry are in partnership with AFFA employment programs, as follows.

- Cost sharing arrangements have been made with a number of local governments in the Avon Basin. About 20 of the CLC positions are funded on a cost-sharing basis. The contribution from the local governments usually includes office space, vehicle and administrative support.
- AGWEST has a cost sharing agreement in providing administrative support to the Avon Working Group.
- Alcoa World Alumina provides corporate sponsorship, in partnership with NHT and AGWEST to six catchment groups as well as education and tourist facilities in the Avon.

The situation is very different in the Swan region, which is complex and covers the spectrum of activity and lifestyle from rural land systems to the pressures of metropolitan and urban environments. The region supports 1.25 million people (70 per cent of Western Australia's population) with this population growing by 1.2 per cent per annum. There is considerable pressure on the region's natural resources as a result of the urban population.

The complexity and diversity of this region has provided a context within which no particular government department dominates. Four key agencies each have initiatives and NRM programmes that focus on specific issues in line with their Departmental priorities and statutory responsibilities. Alongside the agency interests are about 250 community groups and non-government organisations who also work to address local NRM issues. It is within this complex environment that NHT funded positions within the Swan are sought and managed.

Like the Avon, some NHT positions are funded within the agencies (n = 5), other positions though are employed by the various community interest and action groups (n = 8). Typically, within the region, NHT funded employment is managed on a project basis rather than on an integrated regional NRM basis. While many of the principles of NHT employment in the Swan are similar to those in Avon, the Swan is a far more complex environment in many aspects and the varying roles of NHT funded positions and indeed the various job descriptions and job titles reflect this complexity.

Are the right skills being employed in the Swan-Avon Region?

In both the Swan and Avon, the general view is that the employment of people is vital for NRM. In the Avon this view occurs mainly because funding works on the ground is

currently seen as largely a waste of money as there are so few successful (profitable as well as environmentally responsible) land use options for the region. The view was that capacity building will be the best contribution to sustainable NRM in the Avon over the next 5 to 10 years. While the skills are being employed for capacity building, the lack of investment by government (including NHT) into research and development was criticised – particularly given the paucity of land use options that will address the most critical NRM issues.

In the Swan, paid employment is required to support the immense contribution made by volunteers, particularly in the area of projects design, administration and management.

What has been achieved by the AFFA investment in the region?

The communication and community support positions, in the opinions of those at the workshops are effective. Agency representatives at both the Swan and Avon catchments workshops rated the effectiveness of this position slightly lower than community representatives, coordinators and facilitators, arguing that support arrangements could be improved or that these particular roles had not stimulated substantial behavioural change.

Areas of concern in NRM are the level of commitment to R&D and M&E, which were seen as not well resourced in terms of employment. Managing higher order issues such as reviewing NRM outcomes and institutional arrangements at a regional scale were also not well supported in terms of paid positions.

There was concern that the regional objectives focus primarily on NRM and do not integrate properly with agricultural production and sustainable agricultural systems. It was argued that there is a requirement for the agencies (particularly AGWEST) to show greater leadership in this area.

Suggestions from the Swan-Avon Region

- That renewed attention is given to AFFA's role in R&D processes in NRM.
- That renewed attention is given to AFFA's role in M&E processes in NRM.
- That attention continues to be directed at improving institutional links and partnership agreements, particularly with local government authorities.
- That NHT considers investing in research that investigates the effectiveness of the full range of approaches in stimulating behavioural change, particularly market-based and fiscal measures.
- That NHT invests in regional support structures and so enable those working within the regional strategy (in both paid and unpaid positions) to ensure the region is effective in its impact on NRM.
- That training programmes are revised to ensure that those working in NRM support positions are cognisant of the new skills and knowledge required to work effectively at a regional scale, where measures of effectiveness are shifting to become outcome focused.

- That coordinator and facilitator positions maintain excellent local community links within the regional model and, where necessary, improve their partnership with the government and non-government agencies.

3.2.7 Other general observations from the case studies and jurisdiction workshops

There is a need for improved interaction between people working at different scales and levels in landcare support. In several cases, a need for longer term strategic planning of landcare support was suggested, including consideration of the long term career paths of landcare support professionals. The high attrition rate and turnover of landcare support personnel, particularly facilitators and coordinators, is seen by many at regional level as problematic and inefficient.

NHT has stimulated a significant increase in demand for landcare support and has provided the financial support to agencies and community groups to meet this demand. There is little or no evidence of contingency planning at any level of government to pave the way for a reduction in this level of support. Further, there is a widespread and strong belief that such a reduction would expose many highly dependent regions to a general collapse in landcare as it exists. This is seen as undesirable as the general view is that the job is not anywhere near done yet and that a lot of goodwill would be lost.

3.3 Strengths and weaknesses of current arrangements

The strengths and weaknesses of the existing investment in landcare support are presented in Chart 5, along with the opportunities and threats facing this form of investment. On balance, it appears that the key achievements of the Commonwealth investment have been in the area of developing knowledge, skills, and capability in community-based NRM and partnership development and management. Broadly speaking, this corresponds to outcomes in community development around NRM as a focus.

Chart 5: Strengths and weaknesses, opportunities and threats of existing arrangements

Strengths	Weaknesses
<ul style="list-style-type: none"> • Skills and knowledge now held by groups and committees in the regions • Raised awareness about NRM issues • Integrated conservation and environmental management in the agricultural landscape • New partnerships and relationships that have developed • Structural flexibility • Enhanced community capacity through professional presence • Community consultation and involvement in R&D and landcare support has increased 	<ul style="list-style-type: none"> • Demarcation problems – Commonwealth vv State vv regional – lack of trust • Different perspectives across operating levels and scales • Some investment is fiddling at the edges, not addressing fundamental issues • Some investment is deferring inevitable change, not promoting it • Addressing symptoms not causes • Input not outcome focus in investment management • Limited M&E capacity across operating scales • Lack of institutional support for employment • Capacity is still inadequate • Current roles of coordinators may be inefficient- although these positions are highly valued. Some functions might be more efficient if centralised within regions. • Current levels of support not sustainable without NHT
Opportunities	Threats
<ul style="list-style-type: none"> • There are now a lot of people who know something about NRM • Strategic thinking skills have improved • The leveraging of dollars from other sources, although exact amounts are hard to determine • Demand and expectations for quality services have been raised • Maturity (‘second generation’) in the landcare professional fraternity • More and better partnerships and partners now available 	<ul style="list-style-type: none"> • Lack of clearly defined responsibilities and roles in many situations • Facilitators lacking direction, management supervision, training and support • Different expectations of dollars and delivery between different stakeholders • Over-reliance on NHT dollars • Grantsmanship and not genuine needs being rewarded • Social priorities might change directing funds into other sectors (eg health, education)

3.4 Critical questions

This Section of the report uses the results presented in providing answers to the five critical questions posed in Section 1.3.

3.4.1 Appropriateness of the Commonwealth investment

Is the Commonwealth (NHT) the most appropriate source of funds for this support?

Government commitment to natural resource management recognises that the benefits from investment in improved condition of natural resources are spread widely across the community and far into the future. Some of the benefits can only be captured in the public domain – e.g. biodiversity conserved, water quality preserved, and air quality improved. Other benefits such as agricultural productivity can be captured privately. The effort that has been put into developing cost-sharing principles (e.g for the Murray-Darling Basin) recognises the need to attribute the responsibility for costs on the basis of the distribution of private and public benefits. Similarly the requirement for proponent contribution to NHT projects is a form of cost-sharing *albeit* rather arbitrarily defined.

Setting objectives for natural resource management at all scales ‘above’ individual landholdings is generally the work of government – in that it is impossible to share the resourcing needs for strategies on the basis of the ultimate outcomes, before those outcomes have been defined. Implementation will clearly yield a mixture of public and private benefits and cost sharing is appropriate. Thus the case for *government involvement* in landcare support as an element of natural resource management can be made easily. The question about the need for specific *Commonwealth involvement* is more complex and has a strategic and political dimension.

At the strategic level, the case for Commonwealth support rests on the ability for the Commonwealth to obtain greater NRM benefits from tied funding (i.e. through NHT) beyond those obtained through normal non-tied resourcing of the jurisdictions. Put simply, for the Commonwealth to be the most appropriate source of this support, the value of its direct involvement must exceed the value derived from those funds if they were distributed through non-tied Commonwealth-State financial arrangements.

At a political level, regardless of any formal assessment of the appropriateness of the Commonwealth inputs, it is clear that over 20 years of generally increasing support, there is a clear expectation in the community that the support will continue. The responses from the regional workshops are unambiguous in that Commonwealth support for landcare is generally regarded as a ‘given’ particularly by community groups and many people in State and Territory agencies. The consultants were told often by community members that ‘if the Commonwealth withdraws funding then activity will cease’. While there is a degree of hyperbole in these sentiments, it is clear that landcare activity is highly geared to Commonwealth funding. For these people, the question of how appropriate it is for the Commonwealth to be involved is a *non-sequitur* – the Commonwealth is involved now and it should be into the future. Withdrawal would be

politically risky, as it would be if the Commonwealth withdrew from other accepted areas of investment such as direct funding for schools and health.

The arguments for and against continued Commonwealth investment are suggested in the following points.

Arguments for continued Commonwealth investment in landcare support.

- The opportunity for the Commonwealth to continue to lead the NRM agenda.
- The likelihood that the Commonwealth can use its fiscal capability and strength in program design and support to ‘guarantee’ necessary long-term investment into NRM more readily than individual jurisdictions.
- The need for the Commonwealth to have leverage in tracking jurisdictional compliance with national and international commitments.
- The opportunity for the Commonwealth to ensure consistency in NRM outcomes between jurisdictions and regions.
- Matching Commonwealth support in other areas of economic and social development (e.g. health and education).
- The opportunity for a significant proportion of landcare support to come from a source less influenced by sectional and parochial issues at jurisdictional scale – the Commonwealth as an ‘honest broker’.
- The avoidance of political pain associated with any withdrawal of Commonwealth support.

Arguments against continued Commonwealth investment in landcare support.

- The fundamental constitutional limitations over the direction of the Commonwealth’s investment into land and water management at jurisdictional level.
- The difficulty in monitoring the impact of direct Commonwealth investment.
- The temptation for Commonwealth dollars to be used to support core jurisdiction functions (‘cost-shifting’).
- The temptation over time for the ‘problem’ to be shifted to Commonwealth responsibility.
- The development of dependency within agencies.

On balance, the arguments for continued Commonwealth investment in landcare support are stronger than those against. However, the question cannot be easily answered and at best it should remain as an issue for continuing intellectual debate at the strategic level, with this information used to inform the political dimension. Assuming that it is accepted that the Commonwealth investment in landcare support should continue, the challenge is to clarify and tighten AFFA’s role through the determination of investment goals and indicators of success. The evidence from the case studies as presented in the conclusions suggests that while the Commonwealth contribution has been critical, current arrangements are not sufficiently outcome focused.

Does the investment complement the programs of the host agencies or are there issues of overlap which need to be addressed?

- The AFFA employment for landcare support has to varying degrees accelerated the programs of host agencies. Most have also reoriented programs to capture NHT funds. In some employment categories, AFFA support has picked up and helped to alleviate the longer term decline in agency employment – especially in extension – but this is accompanied by a change in the nature of these positions and the work carried out. In the case of extension, it is more group focused, less technical and more to do with community development. At least in some regions, the host agencies are very vulnerable to changes in Commonwealth funding for landcare support because a large proportion of the people working in the area are employed on Commonwealth-funded salaries. There is an expectation that the levels of funding will continue and there are no contingency plans evident to deal with any decline in current levels of support.
- There is evidence of emerging significance of corporate and other sponsorship of groups – but this is still small and sporadic.
- Local government is increasingly involved, but the State-Commonwealth Partnership Agreements do not yet have much relevance to local government.

Is the investment in support projects (personnel) an appropriate mechanism for achieving NHT Program objectives?

All of the regional case studies confirmed that the investment in human capacity is strongly valued and appreciated, and that Commonwealth investment in landcare support has directly resulted in very substantial achievements in building capacity to deal with NRM issues at regional, group and farm levels.

There is a general view that little could be achieved on the ground without the support of planners, coordinators and technical support people. There is ample evidence in the NHT mid-term reviews that where these are lacking, money is misspent (trees planted in the wrong place, symptoms treated rather than causes, investment favouring significant private benefits such as pasture improvement over work yielding large public benefits-e.g. introduction of farming systems based on deep rooted perennials).

Whether or not the mixture of investment in support projects and implementation on the ground is appropriate is a more difficult question to answer at a national scale. Regions currently vary dramatically in the capacity to deal with NRM, so the required mix of skills and on-ground work will differ from region to region. It seems clear that a certain level of capacity is required before successful on-ground implementation can take place. This capacity is not only technical in nature, but also includes the capacity to take on board and act on the difficult regional equity and restructuring issues in dealing with NRM. While many regions have achieved a very high level of technical capacity, the latter skills are not widely evident in rural Australia and need to be built up. Further, there is no doubt an ongoing need for capacity building to accommodate the scale of change required in rural landscapes as communities move more steadily towards sustainable systems.

It is evident to us, that despite widely held views to the contrary in rural Australia, NRM planning systems from regional to farm level are still inadequate to guide effective implementation in most regions. Further support for well focused strategic and farm level planning for on ground works is required to maximise returns from this type of investment.

The quality of monitoring and evaluation of outcomes at the project level is very uneven, with most community and Agency people recognising that this is an area that does not receive enough attention, either in project design, 'reflective learning' or in final reporting. An increase in the critical examination of past performance could be very useful in informing future investment in personnel and implementation, both at agency and community level

Beyond this, it is clear that there is an ongoing need for well focused R&D to provide innovative options for sustainable land use across the country. AFFA currently \$300 million in R&D across Australia, but more may be required, particularly where current land use systems are simply not able to deliver desired NRM outcomes. The trend observed, in some regions at least, towards greater involvement of the range of stakeholders from the Commonwealth to communities in the definition of R&D needs is a notable achievement of AFFA's investment in landcare support. This is further evidence for the increasing capacity within rural Australia fostered by the Commonwealth's programs. Conversely, other communities consulted during the case studies were unaware of AFFA's investment – as in the comment at the Avon workshop 'but NHT does not fund research'). Clearly, continued communication of AFFA's R&D agenda, objectives and activities is required.

3.4.2 Effectiveness of the Commonwealth investment

This section presents the evidence collected during the review regarding the effectiveness of the Commonwealth investment in landcare support. As an overall comment, we believe that this type of review is constrained by a general lack of monitoring and evaluation of landcare outcomes (see above section) that can be directly related to employment support inputs. A quantitative monitoring and review of inputs has limited value where these are not well linked to tracked outcomes. Therefore, our evaluation is largely based on the evidence available from sources within the regional and jurisdiction case studies, and from previous reviews of on-ground impacts (particularly the NHT mid term reviews). We acknowledge that there is considerable variation between regions and that some regions fare better under current funding program structures than others.

Are the right type of people employed and what are they achieving?

- NHT has generated a marked increase in demand for landcare support services. While the delivery of these is variable across the country, it is clear that little could have been achieved without employment of people with the skills and knowledge to support capacity building, planning and implementation.

- The people employed in the various AFFA supported categories have collectively contributed to a significant increase in awareness and capacity within rural communities in relation to addressing NRM issues.
- Communities hold much more of the skills and knowledge than was previously the case.
- There is a stronger integration of conservation and production in the management of agricultural landscapes.
- New partners, partnerships and relationships have developed to deliver better outcomes on the ground. New partners include Universities and CSIRO who have become involved in landholder group activities. Local Governments have increased their involvement in supporting professional staff part-funded by AFFA programs; and strategy development is providing a locus for improved relationships between Government Agencies.
- There are diverse opinions about whether or not planning phases have been adequate. Much of this relates to a perception among landholders in particular that not much of the planning had direct relevance to the problems of on-ground implementation. Further, some strategy development has occurred without adequate Government Agency involvement or commitment.
- Despite the varying views about planning and its value, it is clear that in most regions implementation of on-ground works is constrained by a lack of technical advice which translates the planning and technical knowledge to an operational farm (or even group of farms) situation.
- Technical support positions are still valued highest by agencies but there is a growing trend for communities to directly employ technical specialists for specific jobs.
- Coordinators are generally highly valued, despite some widely recognised inefficiencies in the delivery of these services.
- Facilitators are less highly valued by communities but are valued by agencies.
- R&D, M&E are seen as important and neglected but not as high in priority as the previous categories. They tend not to appear as significant groups in the employment statistics at State or regional levels.
- All employment groups are now more closely linked with communities than was previously the case - including PhD students and universities involved in R&D.
- Some investment is deferring inevitable change in certain regions.

How effective are these people through the funded projects or are there better models for managing and supporting the human resources needed for landcare?

- We believe that there are significant difficulties and inefficiencies in the Commonwealth funding of specific inputs of regional NRM strategies (see section 3.5 below).
- In this report we argue for a model which is based on investment in outcomes rather than funding of specific inputs.

- In our recommended model, there is a legitimate public interest in funding the development of sound regional investment prospectus in those regions which are ready for it.
- Under this model, there should be a shift from describing inputs in terms of employment types by job titles (e.g. facilitator, technical expert) to a specification of the roles required in delivering outcomes (e.g. economics, facilitation, agronomy).

3.5 Summary of findings

AFFA funding is supporting a range of service delivery positions in landcare including:

- landcare coordinators and facilitators (primarily involved in administration and community development work);
- technical officers (primarily involved in a range of planning, technical investigations and extension roles);
- contractors carrying out on-ground implementation, and
- R&D (very limited in number).

The coordinators and facilitators take the administrative load of the NHT grants program. Without them, the number of groups emerging and engaged in landcare investment themselves would fall significantly. The technical officers are carrying out a range of planning, investigations and extension roles. While possibly seen as areas of State/Territory jurisdiction responsibility, the Commonwealth investment has had the effect of accelerating, plugging and reorienting these programs to align more closely with Commonwealth overarching objectives for NRM. There are ongoing issues of engagement of farming communities in the technical investigation processes and outcomes.

AFFA funded landcare support in the period 1996 to 2001 has succeeded in achieving the key overarching NHT objectives of building capacity in regional Australia to better deal with NRM. While not yet self-sufficient in this regard, many regions are well advanced in capacity, particularly in technical areas of NRM, and are significantly better equipped now to achieve sustainability in NRM compared with 5 years ago. Capacity building along with the other service delivery components of landcare support (planning, R&D, coordination/facilitation, technical advice and monitoring and evaluation) are ongoing needs in most regions, and their continued support with the necessary skills will enhance the success and returns of investment in on-ground works.

Commonwealth investment in landcare support is needed and warranted if the current rate of improvement in natural resource management is to be maintained and current or better levels of public benefit are to be derived. Commonwealth investment in support projects enables better returns from investment in landcare generally. It is doubtful that any region could support at current levels without Commonwealth investment (through a program such as NHT). Commonwealth expenditure in landcare support has furthermore

accelerated and reoriented the NRM programmes of the jurisdictions so that these now more closely align with Commonwealth overarching objectives.

In engaging in Commonwealth funded landcare support, many regions are constrained by real and perceived limitations of the funding programs. There is a lack of underlying strategic investment planning in most regions, that articulates the desired outcomes and the inputs required to achieve them. This is a function of the current funding programs, in that they respond to inputs and not to outcomes.

While public investment in partnership with private investors in landcare is clearly warranted, the boundaries remain blurred between levels of government, between funding programs and between public and private investors. Again, we consider this to be an artefact of the current landcare funding programs that attempt to define these boundaries as specific inputs, rather than as desired outcomes. The focus on these latter boundary issues has sidetracked the landcare programs from their ultimate objectives and created an atmosphere of some distrust between partners.

The focus on inputs has also meant that monitoring and evaluation of outcomes is poorly defined and rarely conducted because the linkages between inputs and outcomes have never needed to be drawn and because monitoring of inputs per se is largely meaningless without these linkages. In effect, this means that opportunities to learn from the experience of programs such as NHT are largely missed and this experience is poorly documented.

We believe that the strengths of landcare support programs and many of the shortcomings can be overcome by re-focusing the funding programs into one general program that invests in outcomes, not in inputs. Partnerships between governments could then focus on investment to achieve the desired mix of public benefit outcomes, rather than on inputs defined as either 'Commonwealth' or 'State' responsibilities. The outcome driven program would need to be underpinned by sound strategic NRM investment planning at regional level, that is now sorely lacking in most regions. It could be subject to simple but effective indicator based monitoring and evaluation, to measure success and to inform future planning and investment decisions.

While a significant departure from current landcare funding mechanisms, we consider that there are several similar Commonwealth funding models from which to draw experience- in health and foreign aid programs for example. In these programs, the Commonwealth (commonly in partnership with other governments and investors) invests in outcomes through outcome based contracts, underpinned by approved plans and monitoring processes. As a result, Departments and Ministers are better informed and are more able to comment on the real concerns of the public- ie what is the investment buying?- not how many people vv trees are you funding?

4 Conclusions and recommendations

4.1 Conclusions

The conclusions were developed from a scrutiny of the jurisdictional reports (**Annex 3**), the information collected in the case studies and jurisdiction workshops (Section 3.2), the SWOT analysis (Section 3.3) and the responses to the critical questions (Section 3.4).

4.1.1 Appreciation of natural resource management at regional scale is growing

Natural resource management in Australia is maturing at all levels. There is a better policy sense developing in government, a better strategic sense at regional community level, a richer understanding of how landscapes work in economic, social and environmental terms and NRM is becoming more inclusive of those in the community. Our conclusion is that, on balance, the Commonwealth's investment in landcare support over the years has made a unique and valuable contribution to this maturation. This support, mainly in the form of direct provision of skills with a specific mandate to develop NRM 'thinking' in the community has been very successful.

This maturation is particularly evident at regional scales, with the evidence from the evaluation being that in most situations communities and regional governments are directing their thinking 'upwards and outwards' to the regional scale at which natural resources need to be managed. On the one hand, there are obvious benefits in this process in terms of

- sound, rational regional strategic planning;
- new alliances (economy, environment and community), and
- increased ability to attract investment.

On the other hand, this broader view is leading to some uncomfortable findings. Communities and governments are realising the enormity of the tasks facing them and are identifying some serious miss-matches between 'best practice' NRM and current legislative/institutional arrangements. As an example, the directions for agricultural development and environmental protection do not always coincide, even within the same region, or institution.

Despite these difficulties, it is clear that direct employment support for landcare has created an improved awareness of the range and depth of change required at regional scale for best practice NRM.

4.1.2 Capacity building is a sound investment

Our conclusion is that capacity building for NRM is providing the best short to medium term return for investments being made by AFFA. This conclusion reflects the information obtained from the case studies and jurisdictional workshops that generally

suggested that capacity building is a very worthwhile use of AFFA funds. The reasons vary between location but summarise to:

- a recognition that because the task is so large, a very large leap in community capacity to govern, plan and implement will be required to make real change happen, and
- a recognition that feasible land use/management options for improved natural resource outcomes simply don't exist for many areas in Australia – therefore continuing to invest small amounts of funds in peripheral changes to the landscape is not likely to be helpful, *unless they are linked to realistic regional strategies*.

An analogy used in one workshop defined social capital in NRM as 'the key in facilitating the design of a new shed, as opposed to facilitating programs that focus on choosing the colour of paint for the shed, despite the fact the shed may be falling down'.

Increased capacity is occurring in two domains. Firstly, the ability of regional groups and community-agency partnerships to manage the detail of investments in landcare support is improving as follows.

1. The grant process and funding allocations for NRM work is becoming increasingly rigorous and stringent.
2. The partnership agreements were maturing, particularly in the resource allocation and project development.
3. Community groups are not tolerant of wasting valuable resources. They have been instrumental in working to ensure there is little overlap of investments in their regions.

Secondly, AFFA's landcare support has generated increased capacity in terms of higher awareness, greater skills and knowledge, better networking, more stakeholders and additional investment to facilitate improved NRM at regional and community levels. In short, the capacity to manage inputs and generate outputs is increasing. This provides the opportunity for governments to review the nature of their investment so that it is more directly linked to desired outcomes rather than continuing to define inputs required on behalf of the recipients.

However, increased community capacity alone will not address NRM imperatives. It is increasingly evident that for significant number of landscapes in Australia where feasible options to achieve sustainable outcomes do not exist, additional targeted R&D investment is required. The Commonwealth is in a powerful position to use its existing landcare support to leverage increased investment by the traditional sources of new land use and management technologies – the agricultural R&D corporations and State government agencies.

4.1.3 Commonwealth inputs are leveraging substantial additional investment

The Commonwealth investment in landcare support is leveraging investment from other quarters – principally governments and private landholders. The leverage factor varies greatly across regions from less than 1:1 to upwards of 3:1. This range illustrates in part the difficulty in producing realistic estimates. In some of the areas with lower estimates of the degree of leveraging, it is hard to escape the conclusion that the Commonwealth investment is letting state and local governments off lightly. However, this is balanced to a degree by the leverage that has occurred in non-monetary terms, through the requirements for state and local governments to enlarge their policy and intellectual input to NRM. Evidence includes the development of NRM frameworks in the states, increased investment in training, NRM strategic planning at regional scale and increased local government involvement in broking NRM activities.

A paradox in this area is that the leveraged investment in NRM is acting as a stimulus for further demand from communities as the benefits are realised – those consulted in the community saw continued and indeed increased Commonwealth investment as critical – as a long-term ‘given’. Contemplation of strategic withdrawal by the Commonwealth as others increase their commitment is likely to be politically very hazardous and environmentally very damaging.

An area of weakness in leverage in NRM investment is in corporate investment, where it is apparent that activity is occurring but is generally minimal. NRM is still overwhelmingly ‘business of government’ and ‘community-government partnerships’.

4.1.4 Significant new networks and partnerships are emerging

As reported in numerous studies, it is clear that the Commonwealth’s investment has enabled a whole array of new relationships and networks around the NRM arena. Although the rate and degree of engagement varies between regions and jurisdictions, local governments are becoming involved in supporting landcare activities in a range of ways – most notably in their contribution to employment costs and management needs. This an area worthy of development and support.

In general, the Natural Heritage Trust is seen as broker of new relationships with examples being presented where landcare support had facilitated the lowering of barriers between different groups in the community (eg. variously between conservation groups, farmers, Aboriginal people and bureaucrats). It has also facilitated the entry of new players into the arena - such as Alcoa World Alumina in WA, and Aboriginal groups in Central Australia.

A cautionary note was expressed by people concerned about the durability of these ‘new’ socio-political arrangements in the face of any changes in investment policies and legislative /institutional environments. This is a justification for continued Commonwealth commitment as a long-term source of resources. If involved, private sector involvement may also be more durable – Alcoa World Alumina has maintained a commitment for 12 years.

4.1.5 Regional management is currently focused on meeting AFFA Program guidelines

While the conclusion that AFFA investment is being effective in driving the regional NRM agenda, it is clear that a significant element in the Jurisdiction response is the development of a dependency on AFFA support. This arises in part from the pragmatic requirement for agencies and community groups to align their own strategies and program to the detailed input management imposed through the funding guidelines. Thus there is evidence from the case studies that some regional strategies are being moulded to attract Commonwealth investment as an end in itself, as well as being developed to define the best way forward for NRM in the region. This is not surprising given the focus of the Commonwealth's current investment strategy on close control of inputs. The agencies and community groups are responding perfectly by designing projects/programs to fit those input guidelines.

This situation is also allowing the jurisdictions and community groups to escape from developing some jurisdictional / regional structures of their own for long term landcare support. For instance, current models of landcare support available are not always suited to regional needs, a point made in several regions. However, there are only limited moves to establish regional employment models. Secondly, there is concern about the durability of the arrangements that are in place if the Commonwealth withdraws its support in any way.

In short, the appearance is one of mutual coercion, not fair exchange and transactions between partners. Jurisdictions and regions are coercing the Commonwealth into providing a larger share of the NRM inputs in return for the Commonwealth coercing the jurisdictions into a regional agenda. This is not a healthy basis for a long-term relationship. The alternative, where the Commonwealth buys outcomes to be delivered by strong regional strategies is explored in the recommendations.

4.1.6 Consistency between scales in perceived outcomes and priorities is poor

Given the pace at which the NRM agenda and Commonwealth involvement has grown over the last 25 years, it is not surprising that there are growing pains. These are clearly evident in inconsistencies and contradictions between organisations, between levels in NRM (farm scale – local scale – region – State – Commonwealth), between disciplines (agronomy vv economics vv sociology) and between agencies within jurisdictions. While the debate is earnest and healthy, these inconsistencies often mean that people are coming to the questions and situations from very different perspectives. Several examples are offered.

- Some regional strategies are poorly understood – even by the people with ‘grass-roots’ responsibility for delivering on them. Where there are multiple NRM strategies (either agency, issue or geographically-based) many people are confused about the relationship between them and the hierarchy of authority.
- A common question in the community - ‘Is NHT about raising community capacity and shifting values to improve stewardship of our resources or is it about

direct NRM (bio-physical) outcomes?’ – there is a scale issue here that is not always recognised.

- Much of the debate at local and regional levels is about how to manage inputs better, encouraged by the Commonwealth and State focus on this level – people may need assistance to shift to an outcome focus.
- An example given was a locally employed coordinator who is not delivering NRM – there are no technical solutions – and instead the person focuses on capacity-building. Alongside this person is an agency employed coordinator who is trying hard to address intractable NRM issues.
- The local coordinator may be working on the question ‘How can people farm this land better?’, while at another level a policy maker is working on the deeper level question ‘Should people be farming all this land?’
- Local communities are saying they need coordinators, whereas agencies are offering them technical support only.

It is difficult to achieve vertical and lateral cohesion and integration while these inconsistencies exist. The conclusion is that these will only be overcome through the development of very powerful regional strategies that focus on agreed outcomes.

4.1.7 ‘Input management’ leads to poor collaboration and low levels of trust

Despite the consistent use of words such as ‘partnership’ and ‘collaboration’ and ‘strategic alliance’, the evaluation revealed continued concerns about micro-management of inputs, distrust between stakeholders and across scales, and inflexibility in administrative arrangements. One interpretation is that this issue arises because of the AFFA Programs’ focus on the tracking and management of inputs instead of outcomes. This is justified through the need to manage investment risk on behalf of the Commonwealth Government, and because of the current difficulty in tracking outputs and outcomes. One of the consequences is a focus on the employment types and levels in landcare support, which is simply another input, not an output or outcome. Some of the other symptoms of these concerns include:

- problems with changes to employment arrangements through AFFA Programs leading to loss of job succession and difficulty in attracting staff;
- ‘grantsmanship’ – skill in meeting Commonwealth guidelines being rewarded instead of genuine need;
- ‘silo management’ between agencies in the exercise of accountability and in the command and control of funding,
- difficulties in monitoring and evaluation of NRM at higher scales, and
- inefficiencies in administration.

These effects are debilitating for agencies and communities and given the focus on inputs are inhibiting moves to a more holistic look at the outcomes that need to be achieved.

4.1.8 Monitoring and evaluation is still a problem area

Despite frequent references in an array of State and Commonwealth policy papers to the need for quality monitoring and evaluation in NRM, the feedback from jurisdictional workshops and regional case studies was almost universal in highlighting this area as one of continued weakness and deficiency. At the input level, this deficiency extends to the Commonwealth's own data, where an apparent focus on input management during the project approval and implementation process is not matched by an ability to record those inputs in a way that is able to guide strategy and policy. Our analysis of AFFA's employment data base has revealed sufficient problems to limit its effectiveness as a means of either reporting history or tracking trends. However, we recognise that employment data are important politically and recommendations have been made for increasing the quality of the M&E in this area (see Section 3.1).

There is a more fundamental difficulty for the Commonwealth in evaluating performance against outcomes, in that these have only been defined nationally for the Natural Heritage Trust as general goals, with only a few attempts made to develop realistic outcomes down to regional level. While the National Land and Water Resources Audit will track trends in bio-physical and socio-economic indicators, the process will not allow the contribution made by AFFA's investment to be partialled out and attributed. Conversely, agencies and communities spending Commonwealth dollars are not normally able to account for the resources in terms of these outcomes. Thus the Commonwealth has a limited ability to determine the impact of its investment in landcare support on the condition of natural resources at realistic scales.

However, improvements are occurring, particularly where the political and resourcing imperatives require evidence of impact and change resulting from AFFA investments. Based on this observation, only increased insistence by the investor for outcome results to justify further investment will yield results.

4.1.9 R&D is not matching demand

Despite the fact that AFFA contributes substantially to the R&D effort in sustainable agriculture, there is a perception at jurisdiction and particularly regional levels that R&D is not a favoured investment for NHT. Some of these views may reflect a difficulty for community members to identify where R&D is having results. If this is the case, it suggests a communication failure. In other places, communities are well wired into the R&D effort and establishing partnerships with deliverers such as CSIRO and Universities. These alliances are being fostered and supported by AFFA investments in community-based professionals.

Overall however, the conclusion is that R&D into more sustainable farming systems has lagged as other areas of landcare support have grown. While there are many practices that can be adopted to improve sustainability at enterprise and regional scale, some significant issues remain, particularly in the incompatibility between annual crop and pasture farming systems and hydrological trends in southern Australia. Many practitioners comment that current R&D is not meeting the demand for innovations and technological support for new perennial farming systems that will address this major

issue. Where suitable land use systems are not available to deliver nationally agreed NRM outcomes increasing R&D investment needs to be made by Government direct and from the matching public funds provided to the rural R&D Corporations.

4.1.10 Summary

Our summary conclusion is that landcare support provided by AFFA is delivering significant outcomes and is valued highly by the ‘NRM community’. The NRM support component of AFFA’s programs has been particularly effective in two key areas: supporting the development of regional and local strategies and in providing coordination, extension and facilitation support to local communities. Collectively, these investments have enabled a major increase in the social capital available to deal with natural resource management. The outcomes from this large Commonwealth supported ‘experiment’ in community NRM development has created a much better and more sophisticated community-industry-government dynamic in rural Australia that is maturing to the point where it can address the major challenges in NRM. This development should be used as the springboard for a move to a more strategic approach to the definition and design of feasible and cost-effective NRM outcomes across Australia.

The investment has been significant in stimulating investments from government and non-government agencies and individuals, but less so from corporate sponsors (Alcoa in WA being a notable exception). The impact of the AFFA investment is regarded as being less effective in managing the research and development and monitoring and evaluation needs of the regions. Other problems relate to the inefficient delivery of worthwhile programs, competition for inputs that may not be allocated on a strategic basis and examples of poor policy and planning frameworks. While important, these problems can be dealt with through a change in operational management as discussed in later sections

The growing awareness and maturity by all those involved in NRM, agencies and community groups, of the complexity and enormity of the challenge is stimulating a healthy and vigorous debate that is oscillating between a number of poles – as shown in Chart 6.

Chart 6: Examples of polarity in the NRM debate

How to better manage the current farming system?	Or	Do we have the right farming system?
Focus on inputs		Focus on outcomes
Regional outcomes		Local outputs
Capacity building		Technical solutions

Regionally employed people		Agency employed people
Investment to change values		Investment to change landscapes

We see continued need for commitment by all governments to regional groups and processes as a means of addressing NRM as an over-arching need. While many regions are well advanced in terms of developing NRM strategies, it is clear that the process of developing, certifying and resourcing regional strategies needs to be raised to a new level of professionalism and sophistication.

While useful at a community engagement level, existing strategies tend not to be at a level of detail which defines desired outcomes, and are, therefore, of limited use to communities and regions in the design of project inputs to deliver those outcomes, or as a means of prioritising scarce inputs. The regional strategies are also poorly linked with the more localised project work plans, and there is still a general deficit of information or assistance in translation of NRM desired outcomes to farm or even community level work on the ground. Further support is critical for this process. Development of regional NRM strategies must also link with social and economic needs in the region in a form that promotes ecologically sustainable development. The following sections address these points.

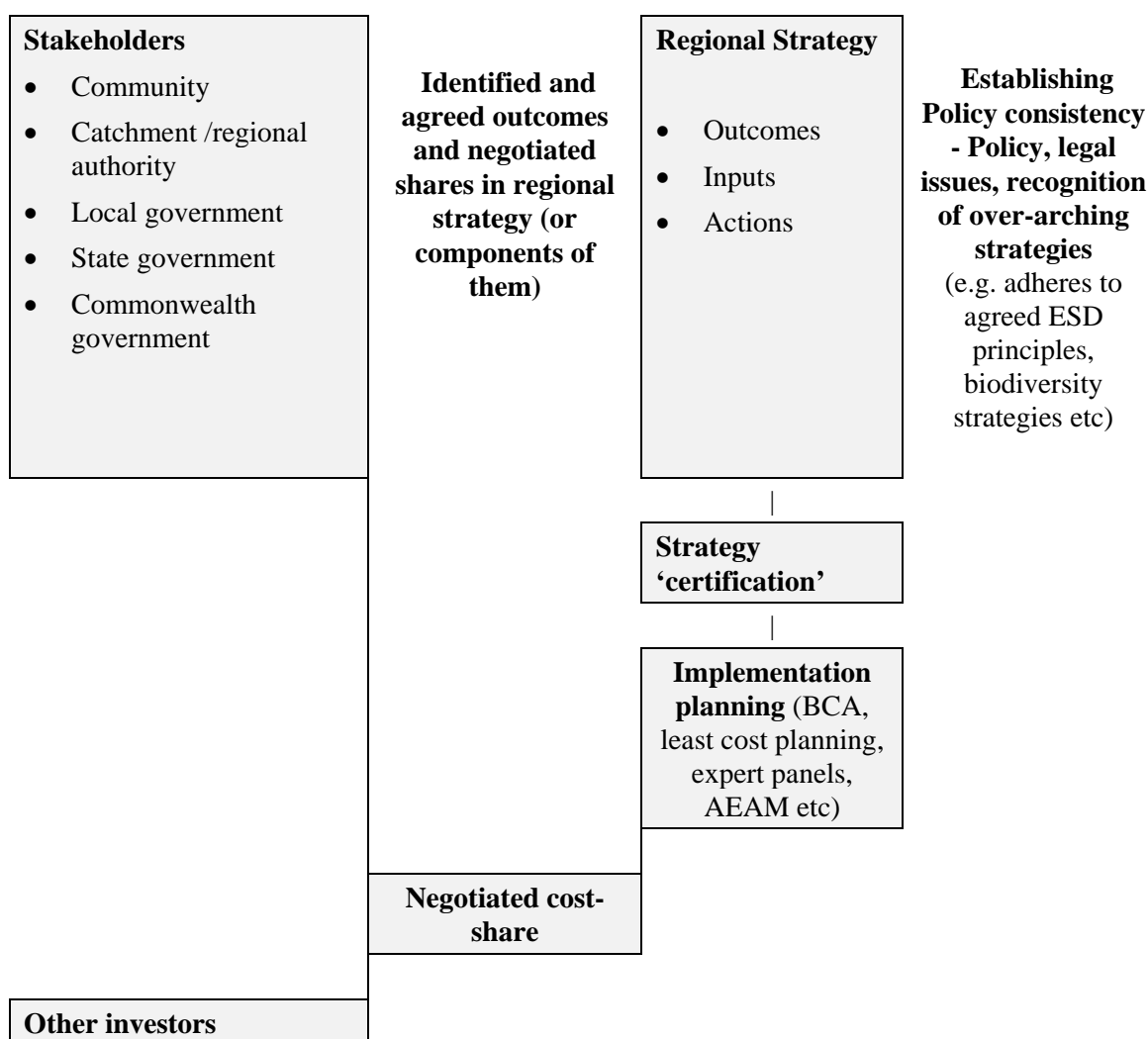
4.2 A model for regional landcare support

There is general agreement that natural resources need to be managed at regional scale for sound bio-physical reasons. This is acknowledged in the development of the Biogeographical Regionalisation in Australia (Thackway and Cresswell 1995) and in regional analyses of the state of the nation’s resources being undertaken through the National Land and Water Resources Audit. The push to regionalisation is seen in policy, institutional and administrative instruments at Commonwealth level such as the formation of the Murray-Darling Basin Commission, in the Rural Partnerships Program and in recommendations in the policy paper *Natural Resources in Rural Australia for a Sustainable Future* (AFFA 2000), and in the *National Framework for the Management and Monitoring of Australia’s Native Vegetation* (ANZECC 2000).

This recognition of region as the preferred locus for NRM strategy and action is also evident in all jurisdictions which are involved in regional strategic planning and development of NRM regional frameworks, although, as noted above this is being done in part to attract Commonwealth investment under current arrangements rather than being used to build coherent regional planning strategies with a focus on achievable outcomes.

Our conclusion is that the regional locus is sound and should be progressed and strengthened. A suggested model is shown in Chart 7.

Chart 7: The regional model



The regional model introduces the following features and developments to the regional strategic planning that is already occurring.

1. The array of stakeholders in regional strategic planning is expanded to give the Commonwealth a direct role. In particular, the Commonwealth is able to specify and negotiate *ex ante* those outcomes it may 'buy' with its future investment. These outcomes are likely to focus on those that are consistent with national policy agendas in NRM (eg. biodiversity conservation etc).
2. Development of regional NRM strategic plans is the responsibility of the public purse. The distribution of costs and benefits cannot be specified at this stage and it is not appropriate to try to do so. Therefore investment in strategic planning at regional scale is core business for government dollars.
3. The strategies will focus on feasible outcomes and the most cost-effective ways of achieving them, drawing on a full range of policy instruments. They will need to adopt a least-cost planning framework, whereby a range of instruments and options are married and costed.

4. The strategies will be ‘certified’ by a process developed through State-Commonwealth agreement. Certification will commit the regional bodies and their partners (including the Commonwealth) to the ‘certified outcomes’. Certification also implies that the stakeholders have been through the tough process of trading-off benefits and costs in developing realistic, achievable scenarios and that they are not relying on dollar inputs for works when the goals could be met by other instruments such as statutory planning or market forces.
5. The certified regional strategy is presented as an ‘investment prospectus’ to attract capital from a range of sources – government, industry, landholder. This shifts the focus from the current situation of a central definition of very general goals, but very tight inputs in the NHT guidelines; to regionally defined tight outcomes with a central focus on attracting the widest range of potential investment inputs available.
6. We suggest that the move to ‘regional NRM prospectuses’ will lead to a fundamental shift in the manner of Commonwealth ‘control’ of its investment to a focus on ‘buying’ those outcomes that it needs to, based on its own policy and legislative imperatives. While the manner in which the investment is delivered will be of much less importance, there remains a recognised political need for the Commonwealth to be able to demonstrate its contribution to human resources at regional and local scales.
7. Whereas strategic planning is core business for government, implementation will be shared between private and public beneficiaries according to region-specific benefit cost analyses and cost-sharing agreements.

The following sections discuss the implications of this model in terms of the specific nature of the assumptions and support required.

4.2.1 Assumptions in the regional model

The consultant team identified a number of fundamental assumptions that underlie current investment in landcare services. These assumptions were assumed to be valid and were not tested during the evaluation. The list forms an important checklist for investors when changes to the investment framework are being made.

- Generally speaking, what is in place now has weaknesses and faces threats to its operation – in summary it is inefficient in terms of resource use and ineffective in achieving outcomes.
- Implementation of the regional model will lead to better decisions, leading to more efficient use of resources and better outcomes.
- The regional model will be better able to manage complexity across spatial and temporal scales.
- The regional model will be sufficiently flexible over time to incorporate new policy, strategic and market imperatives as these emerge, and also new land use systems as these are developed.
- The regional model assumes that people can reach agreement with current and emerging technologies.

- It is accepted that trade-offs will be part of the model, particularly in developing robust regional strategies.
- Communities have the capability (including the knowledge, attitudes, skills and aspirations) to contribute to development of regional strategies.
- Communities can be supported to contribute to the regional model.
- The Commonwealth will apply an investment-risk approach to the resourcing of the regional model.

4.2.2 Skills needed for the regional model

Adoption of the regional model will expand the array of skills required, as shown in following sections. In particular, the development of regional strategies will require cohesive teams of people with specialist skills working closely with stakeholders over a lengthy period of time. Some of these skills (trade-off negotiation, resource economics, knowledge broking) may have had limited involvement until now. This specification of 'skills' required is a clearer way of dealing with employment needs that specifying 'types' of people.

Strategy development process

Core business for government investment. Skills required:

- Strategic planning;
- Scenario development and assessment;
- Trade-off negotiation;
- Publicist skills;
- Technical expertise – bio-physical, social, institutional;
- Economics, particularly resource economics;
- Knowledge broking, and
- Community based championing and promotion.

Implementation

Negotiate cost-sharing to generate public and private benefits and attract investment. Skills required:

- Community coordination and facilitation;
- Knowledge broking;
- Technical expertise;
- Monitoring and evaluation expertise, and
- Administrative/financial expertise.

4.2.3 SWOT of the regional model

Chart 8: The proposed model - SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> • More comprehensive and integrated regional packages. • Regions are a better scale to assess natural resource management risks and issues. • Regional differences will be thrown into relief and recognised. • Building on community understanding of NRM issues. • Allows investors to ‘buy’ outcomes from regions. • Shifts risks and responsibilities to the regional ‘contractor’ – specialised project managers with accountability at regional level. • Strong regional strategies force highly visible priorities. • Provides planning certainty/scope for options. 	<ul style="list-style-type: none"> • The difficulty of doing ‘bottom-up’ strategic planning sufficiently well. • The difficulty of defining ‘boundaries’ for strategic plans and managing expectations • ‘Formalised strategies’ tend to end up having less flexibility in preparation and implementation. • Inadequate capacity at all levels to cope with strategy development and implementation. • The dependence on establishing more clearly defined institutional arrangements at the state and regional level.
Opportunities	Threats
<ul style="list-style-type: none"> • Raising the standards for NRM strategies • Building up the outcome focus. • Increasing the capacity to manage for outcomes in the face of irreducible uncertainty. • Building a quality assurance (QA) system for certifiable strategies. • Matching dollar investments closer to expected returns. • Improve the targeting of research and development investment. • Ensuring consistent policy and program support for regional strategies (where this occurs already, it is a strength). • Distributed delivery network will be well-connected and have clear roles. • Building better adaptive management and monitoring and evaluation. • Better definition of priorities across spatial, temporal and feasibility scales. 	<ul style="list-style-type: none"> • Community and government impatience with more strategic planning. • Lack of readiness/preparedness to tackle hard issues and difficult trade-offs. • The possibility that strategy development will result in more ‘box ticking’. • Lack of a precautionary principles being applied. • The risk of a move to more reductionist science in information acquisition. • Negotiation and transaction costs may reach unacceptable levels. • Resistance to quality assurance (QA) measures. • Inability to understand and measure the link between interventions and outcomes. • Confusing institutional arrangements. • Poor management of the transition from the current to new arrangements.

4.2.4 The Commonwealth role in the transition to the regional model

- Develop the NRM strategy guidelines and criteria.
- Define skills and competencies required for strategic planning.

- Train Commonwealth / State managers responsible for strategic planning process.
- Invest in a training needs analysis at regional scale.
- Invest in a publicity / communication plan.
- Ensure Commonwealth programs are coordinated to allow investment through regional strategies in line with ESD principles.

4.2.5 A picture of the process and outcome

The process and outcome would involve a number of linked stages, and needs to recognise that regions will be at very different levels of capacity in entering the process.

1. Commonwealth negotiates the principles of a program on outcomes investment in landcare with other stakeholders.
2. Regions apply for assistance to prepare certified NRM investment plans.
3. Successful regions receive support and guidelines for certification.
4. Certified regions submit investment proposals to government and other investors.
5. Stakeholders in the investment proposals negotiate investment arrangements (Commonwealth, State/Territory, local governments, private investors etc).
6. Investment contracts signed, together with an agreed M&E framework.
7. M&E evaluates outcomes and returns on investment.

4.3 Recommendations

The over-arching recommendation is that the most appropriate and effective investment for the Commonwealth in landcare support is in the development and implementation of certified, powerful regional natural resource management strategies.

Adoption of this recommendation will require a relative shift in Commonwealth investment towards two major components – strategy development and strategy implementation. These are treated separately in specific recommendations below. Transitional arrangements are addressed in subsequent recommendations.

4.3.1 Regional strategy development

The requirement is for the development of certified regional strategies that are powerful, properly owned and honoured by government, community and industry and which present realistic scenarios for the natural resources in the region. Considerable work has been done in all jurisdictions in strategic planning for NRM at regional scale. Further planning needs to build on this work in taking it to a new level of rigour and sophistication. While the costs of strategy development to get them to the point of certification will be high, the alternative of weak strategic development that attracts little commitment from key stakeholders is not an effective approach to addressing NRM issues.

Recommended requirements are listed below.

- **Resourcing strategy preparation.** Strategy development of the type and intensity suggested cannot be done ‘on the cheap’. A significant proportion of the current landcare support from all sources needs to be diverted into a significant investment in strategy building. Support is needed to interpret the process to communities, who may be somewhat jaded by the need for further planning, to provide for community capacity building so that they can deal with difficult scenarios, choices and options and to undertake the ‘off-line’ technical, economic and socio-political analyses required to achieve a realistic result.
- **Building variability of process in strategy preparation and implementation.** Natural resource managers and investors at all levels must be prepared to cope with variability between regions in strategy preparation and implementation. The focus needs to shift from what a strategy needs to contain, to what outcomes it will achieve – with these items being certified and resourced. This need for variation in how a strategy is put together and implemented recognises the differences between the Australian landscapes, their land use and the nature of NRM governance.
- **Equity considerations.** Equity problems have bedevilled NRM for some years, with a result that resources have been spread too wide and thin. Equity in process is essential, although equity in outcomes is not guaranteed. Indeed, a mixture of market-based and incentive mechanisms will be required to address issues of inequity arising from the planning process.
- **Managing information in Australian systems.** Some of the strategic plans prepared for NRM have suffered from inadequate information about the status and prospects for natural resources, and the options to address problems. High quality, easily accessible and digestible information will be required to support strategy development. The last decade of NRM research work undertaken by Commonwealth agencies such as CSIRO, Bureau of Rural Sciences, the Land and Water Resources Research and Development Corporation should be enable interested parties to obtain a depth of knowledge about ecological processes, economic implications and social change. The National Land and Water Resources Audit will also be an important source of status and trend information.
- **Shifting to outcome focus.** This is a critical shift that must be made by all stakeholders – from a focus on managing and directing inputs, to determining that outcomes are delivered.
- **Certification.** Commonwealth, State and local governments need to agree on a basis for certification of regional NRM strategies. The certification criteria must be sufficiently specific to ensure that outcomes meet state and national NRM agendas, but also allow for flexibility of strategic approach and content. Certification will commit all stakeholders to the achievement of those outcomes in return for investment buy-in.
- **Investment prospectuses.** In line with the shift to outcome focus, the regional strategies should be seen as investment prospectuses for intending investors. As such they should specify the outcomes that investors can expect and include a commitment to regular and thorough reporting of performance.

4.3.2 Strategy implementation

The requirement is for the implementation of regional strategies that provide all stakeholders with a very clear understanding of what is going to be achieved and a range of options for how they may engage in the process. At the same time, the current investment in ‘works on the ground’ will need to be gradually blended into the regional agenda as it emerges in full.

Recommended requirements are listed below.

- **Investors ‘buying’ outcomes.** It is strongly recommended that the principal investors in landcare support – Commonwealth, State and local governments move to renegotiate current partnership arrangements to allow a shift to an outcome focus with equitable involvement of all three tiers of government. Under this model, the whole manner of Commonwealth funding could shift from a project-bid to an outcome basis, where an outcome describes specific rather than general achievements.
- **Regional ‘contractors’ delivering outputs – partnering.** It is recommended that the array and diversity of service delivery be specifically encouraged to allow delivery to be better matched to regional requirements. Promotion of this devolved responsibility will support capacity building at local and regional levels.
- **Cost-sharing arrangements.** Implementation of the regional strategies will deliver public and private benefits, which requires detailed attention to the development of robust cost-sharing mechanisms that deliver equitable results while encouraging the optimum collective outcome from the various investment sources.
- **Alignment with other investments.** The Commonwealth are significant investors in regional Australia through a range of portfolios. Ensuring these investments are broadly complementary and are able to generate synergies will be important. One action for the Commonwealth will be to scrutinise its own investments across portfolios to ensure this consistency. A decision-making capability will be needed to address any revealed inconsistencies.
- **Monitoring and evaluation.** In keeping with the investment prospectus analogy, investors can expect to receive regular high quality information on how their investment is performing in terms of developing outcomes. This will require the development of new skills in regionally based monitoring and evaluation, but it will be able to draw on the work done *inter alia* by the Standing Committee for Agriculture and Resource Management (SCARM) and the National Land and Water Resources Audit (NLWRA). The Commonwealth can begin by requiring regions and jurisdictions to report outputs and outcomes in a form that meets Department of Finance and Commonwealth Auditor-General requirements. Investment in this area should complement the current focus on tracking inputs at Commonwealth level to meet political imperatives.

4.3.3 Transitional arrangements

Landcare programs have steadily moved towards a regional focus. In line with this trend, the landcare funding programs need to move gradually away from the old inputs funding focus to a focus on investment in regional outcomes, as the regions mature. A transitional, strategic approach to this shift is recommended. Some regions are more suited and ready for it than others. Some regions may still need to be brought along through an intensive, scattered input grants program until they have sufficient capacity to design and implement a more sound outcome based investment program. The investment outcomes model could be tested and refined in a few well advanced regions initially as the Commonwealth adjusts its programs and partnerships towards outcomes based investment.

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- Community members for their attendance at workshops and for the information and insights they provided as key stakeholders in Commonwealth's Programs in landcare support.

Annex 1

Methodology for Regional Case Studies

Part A- Regional NHT employment profiles

Key service delivery functions

The service component of NHT programs has the following key functions at regional level:

- Developing regional and local objectives and strategies (planning and assessment)
- R&D to define and deliver best practice in the region (research and investigations)
- Delivery of best practice to farm level to improve technical and social skills and knowledge (extension, facilitation and training)
- Administration and coordination of funding programs (administration and management)
- Monitoring and evaluation of program service delivery (monitoring and evaluation)
- Developing and sustaining institutional partnerships at national, regional and local levels (coordination and networking)

Key NHT employment groups

These functions tend to be carried out by specific groups:

- Catchment/regional NRM groups (eg TCM/ICM groups)
- Scientific officers and researchers in agencies and R&D providers
- Extension and technical officers in agencies
- Coordinators and facilitators

Before and during the regional workshops, the team will compile a 'regional NHT employment profile' based on information extracted from the AFFA employment data bases and from State/Territory and regional sources. The profile will include:

1. Number of positions funded by HNT in the key employment groups- 1996-2001
2. Annual NHT expenditure in the key employment groups- 1996-2001
3. For each employment category- any data on qualifications, gender balance etc which can describe the types of people being employed per category (is there a particular "type")
4. Description of regional NHT employment models:
 - Are some types of staff always employed by agencies- if so what types?
 - Are some types of staff always employed under contract- if so what types?
 - Are there specific regional employment arrangements – eg coordinators employed by a regional/local body; trained locally

- Are some types of staff always employed through grants- if so what types (eg technical people such as fencing contractors)

Part B Regional NHT employment analysis

B1 Regional NRM objectives

This part of the evaluation is based on the regional NRM strategy/plan/objectives. These may need to be teased out during the workshop if they aren't already clearly articulated/documented. Key questions to be addressed by the workshop include:

- Briefly outline the regional framework for NRM in the region:
 - What are the stated objectives?
 - Is it consistent with NHT objectives?
 - Does it link with State/Territory strategies? How?
 - Does the regional strategy specify inputs required to achieve stated objectives?
 - What proportion of total NHT funding is in employment? Is this appropriate? Is it consistent with the regional strategy? Why?
 - Is there a process for assessing/monitoring appropriateness of inputs to achieve stated objectives?
 - Are there any established or inferred cost share arrangements for employment?
 - Have NHT inputs been evaluated in the region? What are the results? Have they influenced the way projects are developed? If not- should they?

B2 Effectiveness of Service Delivery

The regional workshops will investigate the effectiveness of the key NHT delivery functions using an evaluation method called the H form. The H form method invites participants to place a score of effectiveness against a key question, and then to identify positive and negative reasons for the score. The method is outlined in Figure 1.

The participants will be asked to score the following questions on the H form:

- How effective is NHT funded planning and assessment in the region?
- How effective is NHT funded R&D in the region?
- How effective is NHT funded extension, coordination and facilitation in the region?
- How effective is NHT funded monitoring and evaluation in the region?

Q1. How effective is NHT funded R&D in the region?

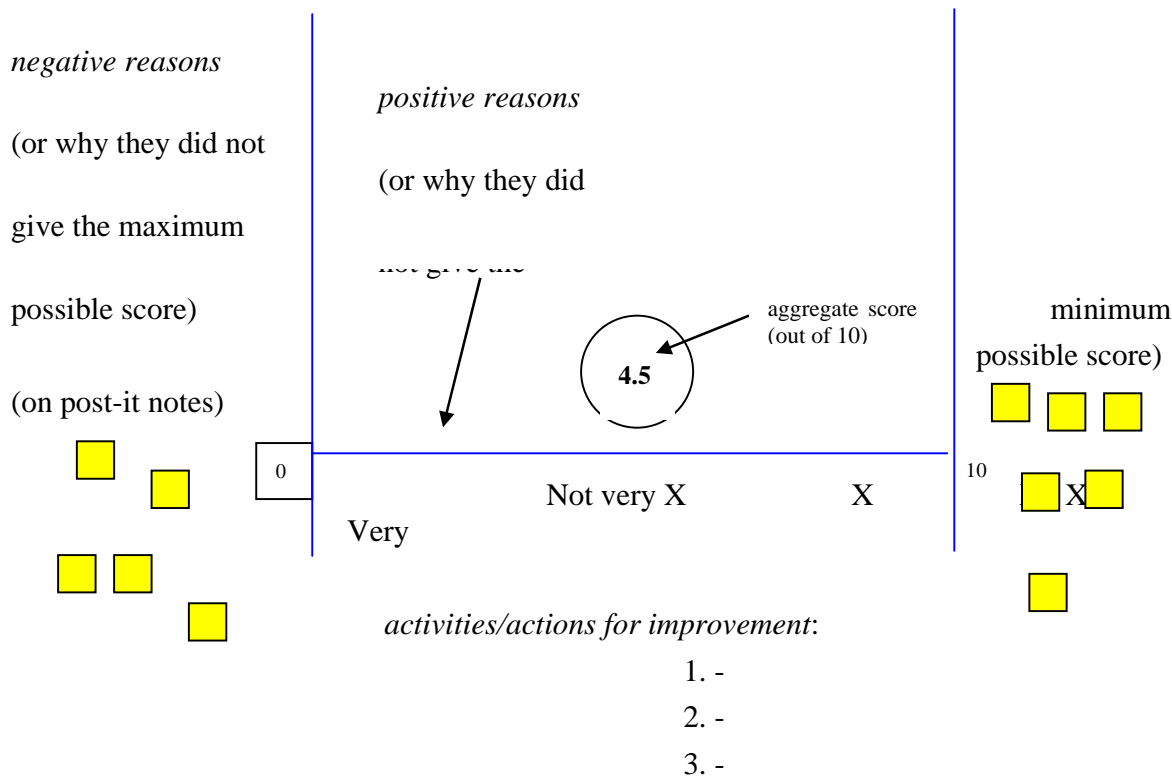


Figure 1: H Form for regional NHT employment analysis

B3 Analysis of the score

For each of these employment groups, the participants will be asked to nominate reasons for allocating their score- both positive and negative reasons. A number of prompts will be used to generate this discussion:

- Are the returns on investment in this employment group positive or negative? Why?
- Has the NHT work stimulated other groups to invest in planning and assessment (and subsequent on ground activities)?
- Has the NHT work influenced State/Territory/regional/local NRM program objectives?
- Is there a regional NRM employment strategy to deliver regional NRM objectives?
- Are there any guidelines for applicants stemming from the regional NHT strategy
- Do NHT guidelines constrain employment in favour of on ground works/capital expenditure?
- Has NHT investment caused agency funding to increase or decrease or change focus?

- What is the likely long term impact on regional objectives?
- Other strengths?
- Other weaknesses?

Some additional questions to round off this component:

- Do you think the pattern of NHT employment has changed over the last few years? If so- how and why?
- Is it possible under NHT to employ the numbers and types of people required to achieve regional NRM objectives?
- Are there any lessons from other employment programs that would improve NHT?
- What are the RAP and SAP attitudes to employment versus other funding categories?

B4 Opportunities

The analysis of the positive and negative features should lead the participants into a discussion of how to improve the effectiveness of NHT employment in the region. The participants will be asked to translate these responses into actions/activities:

Actions/activities

1. Problem/Action/Outcome (benefits)
2. ...

Part C- Impact on NHT program objectives

This part of the evaluation will examine the effectiveness of the NHT funded regional employment in achieving overarching NHT program objectives, using plausible process (table to be provided).

NHT Goals	Plausible process indicators	Comments on Progress
<i>Key Result Area: INTEGRATION AND INSTITUTIONAL CHANGE¹</i>		
<i>Outcomes:</i> Institutional arrangements that support and promote integrated natural resource management and a culture of sustainable resource use, particularly at the catchment/regional level	Stakeholders identified and their support needs agreed and documented	
	Coordination mechanisms developed and functioning in the long term with appropriate staff resources	
	Coincidence and complimentarity between personnel funding priorities and major NRM issues on a regional basis	
	Mechanisms for program service delivery developed and functioning with adequately trained staff	
Regional strategies in place which deliver integrated nature conservation, natural resource management, and sustainable agriculture outcomes	Development of regional strategies and/or catchment plans involving all relevant stakeholders and supported by competent staff	
	Plans collectively reflect priority needs in the region and based on adequate resource extent and condition data	

¹ Emphasis on regional and S/T level institutional factors- and the linkages between them

NHT Goals	Plausible process indicators	Comments on Progress
	Implementation according to plans	
	Monitoring and evaluation systems in place and functioning with adequate staff resources	
	High level of community commitment and ownership of regional plans and other actions to address NRM issues as a consequence of appropriate personnel support for all tasks within the planning process	
<i>Key Result Area: ENVIRONMENTAL</i> ²		
<p><i>Outcomes:</i></p> <p>Enhanced adoption of sustainable natural resource management practices for conservation and enhancement of biodiversity values through better application of research and development results</p>	<p>Research staff appropriate to address the NRM needs developed through appropriate consultation with all relevant stakeholders</p>	
	<p>Technical information is being delivered through competent personnel in a way that end users can understand and utilise</p>	
<p>Improved condition of natural ecosystems that are influenced by primary production</p>	<p>Adoption of best management practices (BMPs) and property management planning (PMP) that deliver environmental outcomes by landholders as a result of technical training support</p>	
<i>Key Result Area: SUSTAINABLE PRODUCTION</i> ³		
<p><i>Outcomes:</i></p> <p>Enhanced adoption of sustainable natural resource</p>	<p>Research staff appropriate to address the NRM</p>	

² emphasis on technology to maintain and improve conservation status

³ emphasis on technology for sustainable primary production

NHT Goals	Plausible process indicators	Comments on Progress
management practices for primary production through better application of research and development results	needs developed through appropriate consultation with all relevant stakeholders	
	Technical information is being delivered through competent personnel in a way that end users can understand and utilise	
Measurable improvements in the condition of on and off farm natural resource areas targeted by NLP, Rivercare and MD 2001	Adoption of best management practices (BMPs) and property management planning (PMP) for sustainable production by landholders as a result of technical training support	
<i>Key Result Area: PEOPLE⁴</i>		
<i>Outcomes:</i> Communities and individual resource managers with the understanding, skill, self-reliance and commitment necessary for sustainable management of land, water and related vegetation	Appropriately skilled and resourced contract support staff in place and effective as the result of funding, training and a personnel management strategy	
	Resource managers trained in the knowledge and skills to solve complex local issues with equity and self reliance	
	Resource managers able to access and apply technical information for effective planning, implementation and monitoring of on-ground works	

⁴ emphasis on project level institutional factors

Annex 2

Employment data from the Commonwealth Data Base

Methodology

Full Time Equivalent (FTE) values were calculated from average weekly employee earnings, with an FTE of 1.0 being calculated as Average Weekly earnings of \$725.90 provided by the Australian Bureau of Statistics. FTE values were calculated for Consultants/Contractors, although the dollar values of their contacts have been recorded.

Employment types

Employment categories are based on Environment Australia Employment Statistics Guidelines as follows:

- Facilitator (F)
- Coordinator (Cr)
- Consultant (Cs)
- Technical Officer (T)
- Scientific Officer (S)
- Education Officer (E)
- Administration Officer (A)
- Extension Officer (Ex)
- Postgraduate Student (P)
- Other Professional (O/P)
- Other Labour (O/L)
- Other Unspecified (O/U)

Agencies were recorded according to the category nominated by Environment Australia Employment Statistics Guidelines:

- 1 State Agency
- 2 Local Government
- 3 Local Community group
- 4 Other Catchment / Regional Group
- 5 Non-government Organisation
- 6 Joint Project
- 7 Commonwealth Agency
- 8 Murray Darling Basin Commission
- 9 Educational Institution

Employment in landcare support

Limitations with the Data Set

Several limitations to the data set have been identified with the current and previous year's data.

- Late arrival of project funds to applicants. Therefore projects have been put back and don't require funding for new year so employment does not actually occur in that year.
- Difficulties in relating Commonwealth and jurisdiction data sources – some jurisdictions were not prepared to provide any information, while the information held by others was not consistent with the Commonwealth data. The presentation of the data in this section relies on Commonwealth data only.
- Employment numbers in 1998-99 are inflated due to a suspected inclusion of applicant's employment commitments into the data set. The gross errors have been confirmed by Jurisdictional representatives.
- Some projects have included travel, accommodation, communication and recruitment costs into employment costs. These figures have been disregarded for 1999-00 and 2000-01 data sets.
- Regional locations of projects are not accurate as each state has a different project numbering system. NSW and VIC have indicated regional locations however other jurisdictions have failed to do so with a few exceptions in various years.
- Project addresses for continuing projects are not accurate for regional locations as many have given the Department address in a major city as project office regardless of location of actual project location.
- Figures in the applications may not be what have finally been approved as the analysis has been based on the original applications. No indication of approved funding or alterations of funding has been provided or used in the database.
- A policy change in February 1999 meant that facilitators could only be employed for a period of two years, deterring many applicants for projects taking three or more years to complete.
- Final figures are not equal to 100 per cent of the funding figures as there have been:
 - Multiple entries;
 - Illegible entries, and
 - Missing Budget sheets.
- Employment categories are too broad to determine precise employment data. Therefore employment data is a broad approximation with considerable judgement applied in allocating project to categories.
- Data for the 2000-01 series is not completed as the FFP and FAP projects for QLD have yet to be approved.

The findings presented in the following section must be interpreted very carefully in the light of the errors in the data set.

Main findings

Full time equivalents and dollar values for landcare support in State, Program, Year and Employment Categories are given in Table A1 and in Figures A1 to A7.

Table A1: Total employment statistics – all jurisdictions

Jurisdiction	Estimated FTE numbers				
	96/97	97/98**	98/99**	99/00	00/01***
ACT	4	9	8	7	5
NSW	223	550	742	497	468
NT	61	61	102	100	65
QLD	194	502	494	348	230
SA	147	260	285	231	185
TAS	67	86	130	111	108
VIC	194	400	529	387	279
WA	199	358	334	244	219
Total*	1,089	2,227	2,625	1,924	1,561

*totals may not be exact due to rounding

** number of employees is inflated by inclusion of applicant's contribution

*** some projects may be missing

Because of the suggested errors in the data set, the best interpretation that can be made from the figures in Table A1 is that the number of employees supported by AFFA investment has varied between about 1,500 and 2,000 with some decline over recent years.

Table A1 and Figure A1 show that 1998-99 had the highest numbers of FTEs for all jurisdictions except the Northern Territory, which has had little variation in employment numbers over all years. After peaking in 1998-99, numbers in all other jurisdictions dropped off slightly in the following years with the exception of Queensland. The number in Queensland shows a peak in 1999-00. However, these numbers may not be accurate as the applications for 2000-01 for FAP and FFP were not approved at the time of analysis. This is also the case with the Victorian statistics.

The presentation in Figure A2 shows that the NLP is by far the highest employment generator amongst these programs, followed by MD2001. The Fisheries Action Program (FAP) and the Farm Forestry Program (FFP) are very small generators of employment and overall most the evaluation paid little attention to these programs unless they were encountered during the Regional Case Studies. All programs are reflecting the total trend shown in Table A1, with an expenditure peak in 1998-99 followed by a reduction in investment in employment in the last two years.

Figure A1: Total FTE by state and year – all programs

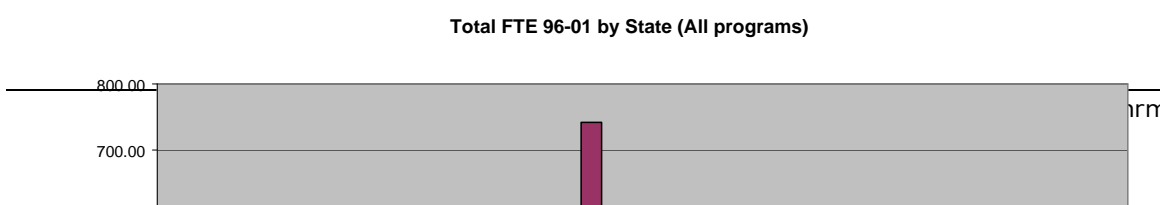
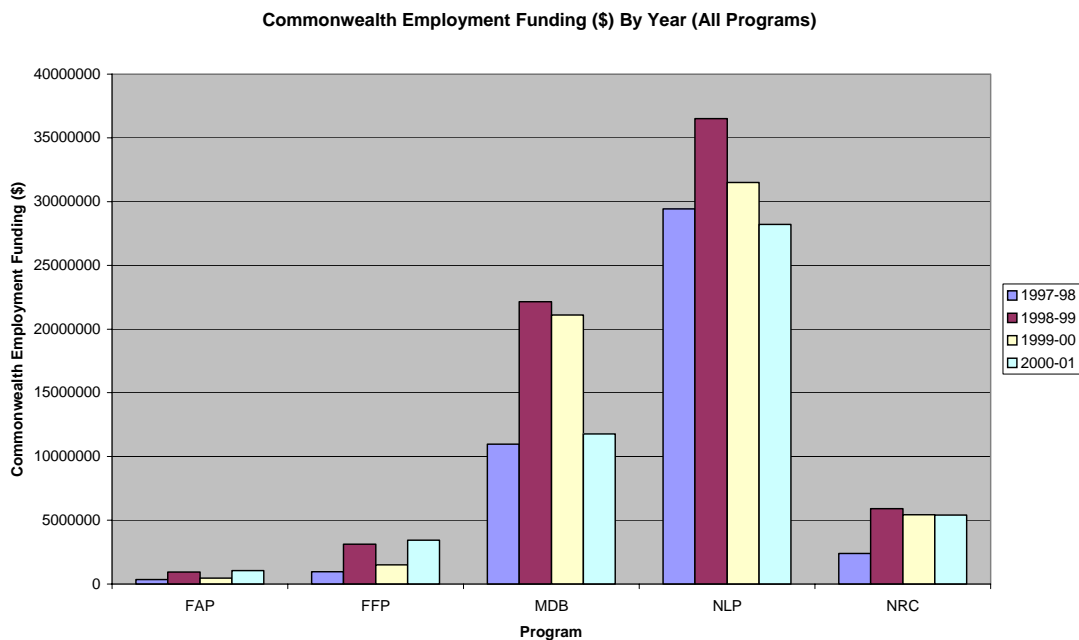


Figure A2: Funding for employment by Program – all jurisdictions and years



In Figure A3, the total program numbers (shown in Figure A2) are broken down into the estimate of numbers in each jurisdiction across all years. Chart 5 shows that NSW attracted the largest number of FTEs generated through NLP, NRC and MD2001, while WA generated the highest employment in the two very minor programs - Fisheries Action Program (FAP) and Farm Forestry Program (FFP).

As expected, MD2001 is a major employer in NSW, VIC, QLD and SA, with this source of employment investment increasing in relative importance over the period of analysis. their FTE values compared to other non MDB Jurisdictions such as WA (see Figures 4, 5 and 6). Figure A4 shows the percentage of funding for employment through each program for all jurisdictions. Figure 5 breaks the funding down to Jurisdiction level for all programs, with the same data presented in Figure 6 but without the contribution made by MD2001.

Figure A3: Funding for employment by program and jurisdiction – all years

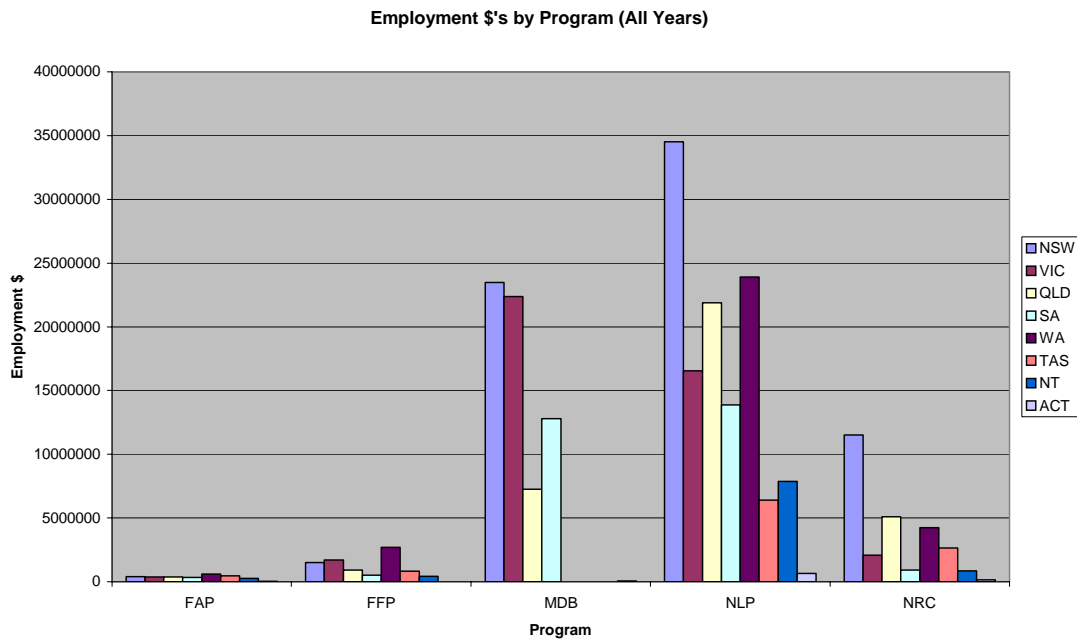
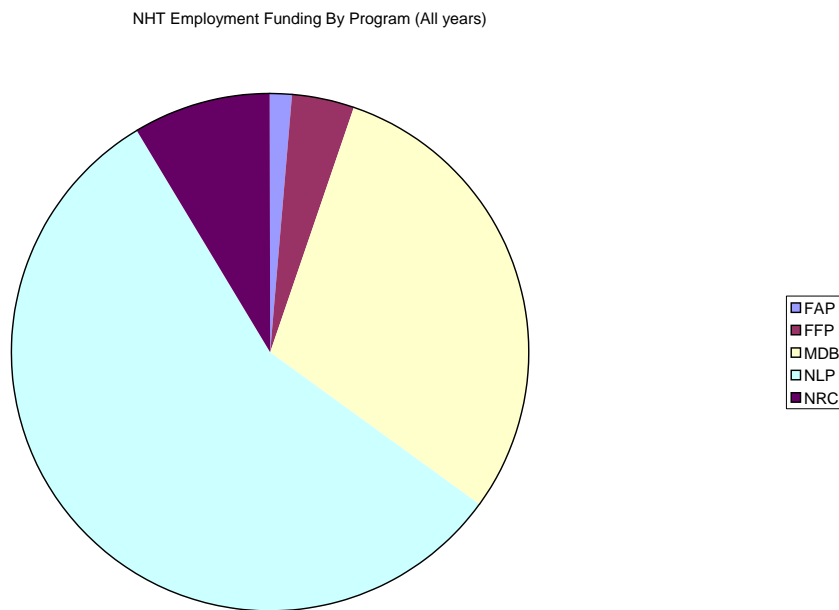


Figure A4: Percentage of funding for employment in each program



NLP and MD2001 are by far the biggest investors in employment resulting in an larger number of FTEs for those jurisdictions that contain sections of the Murray-Darling Basin.

Figure A5: Employment investment by all programs

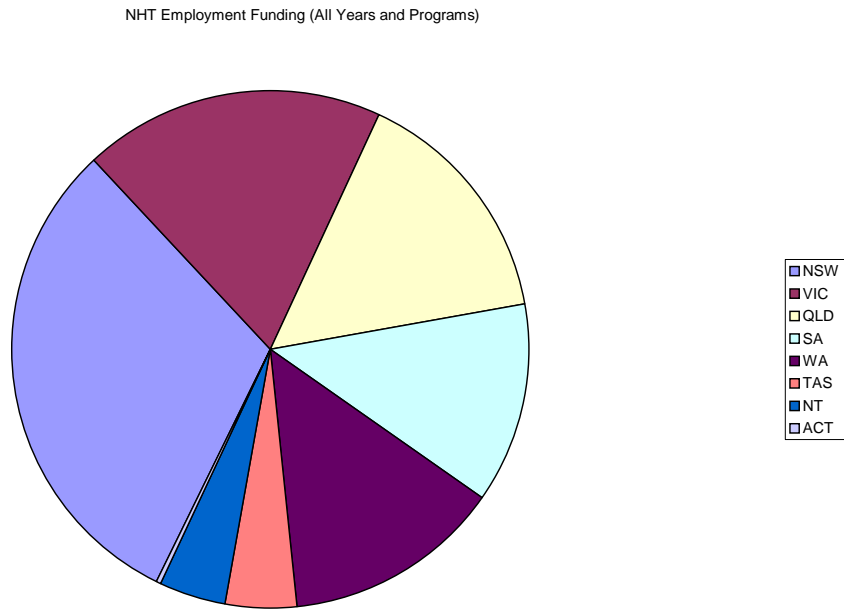
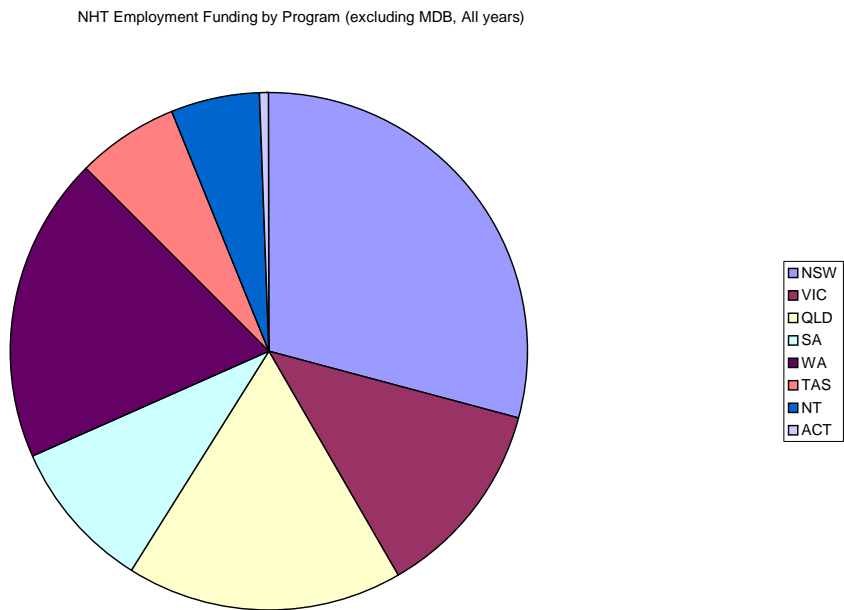
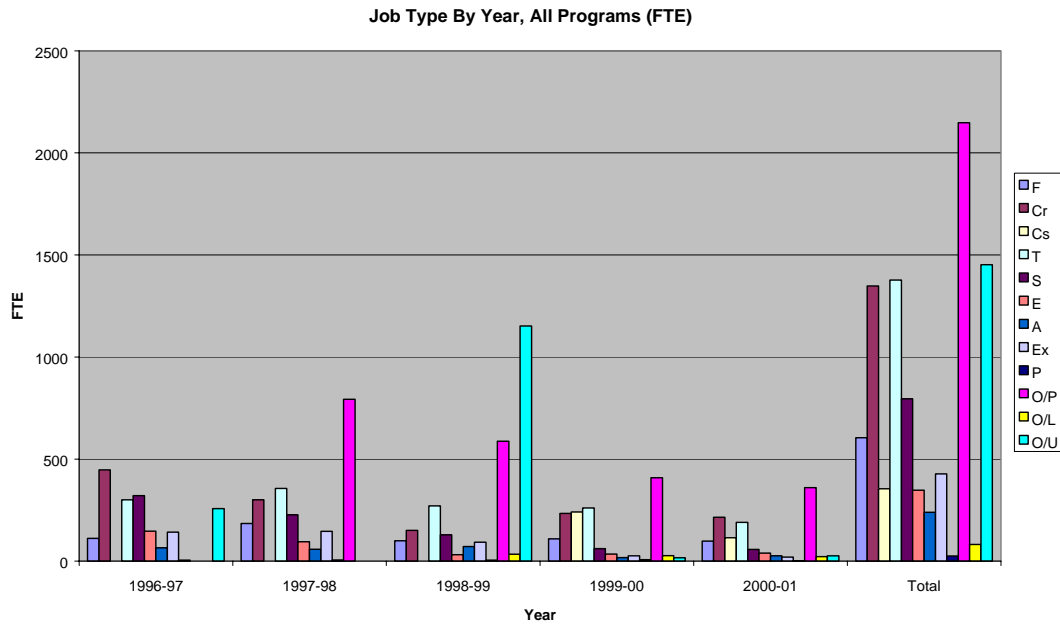


Figure A6: Employment investment for all programs, except for MD2001



The employment categories given in the preceding section are shown in Figure A7.

Figure A7: Employment category for all programs in all jurisdictions



When the employment generated through the use of NHT Funds managed by AFFA programs is broken down into specific job types it is clear that jobs generated within the ‘other professional’ category are the most common, suggesting a lack of discrimination in the categorisation. The only exception is in 1998-99 where the ‘other unspecified’ category is almost three times as great as the others. However, this is not consistent with the other years indicating a source of error within the data set. This source of error is likely to be the result of the discretion placed on the data by the person analysing the data set, or the inclusion of jurisdictional data, and/or a poor explanation of employment details given in the application. The missing 1996-97 data from the data set for ‘other professional’ and ‘other labour’ categories is the result of the last three job type categories being considered as one for that year thus increasing the value of ‘other unspecified’. Postgraduate students have not featured highly through the programs with all other job types falling off after 1997-98.

Annex 3

Jurisdiction Reports and Case Study Findings

Australian Capital Territory

New South Wales – Macquarie Region

Northern Territory – Mary River Catchment

Queensland – South Region

South Australia – Eyre Peninsula

Victoria – Central North Region

Western Australia – Swan-Avon Region