



Australian Government
Land & Water Australia



LAND & WATER AUSTRALIA

Annual Report 2006–2007

Knowledge for managing Australian landscapes



Land & Water Australia Annual Report, 2006-07

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Top left: Windmill at Peak Crossing, Qld (Trish Jackson, Qld)

Middle left: Keep Your Boots Dry (Mark Coombe, Qld)

Bottom left: Winery on the Tamar River, Tasmania (Jacqueline Wills, Qld)

LAND & WATER AUSTRALIA
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15 October 2007

The Hon. Sussan Ley MP

Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry
Parliament House CANBERRA ACT 2600

Dear Parliamentary Secretary,

Re: Land & Water Australia Annual Report 2006–07

In accordance with section 28 of the *Primary Industries and Energy Research and Development Act 1989*, I have pleasure in presenting to you the Annual Report of Land & Water Australia for 2006–07.

The Report has been prepared in accordance with the *Primary Industries and Energy Research and Development Act 1989*, the *Commonwealth Authorities and Companies Act 1997* and the Commonwealth Authorities and Companies (Report of Operations) Orders 2005.

Yours faithfully,



Roberta Brazil

Chairman

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STRATEGIC REPORTING FRAMEWORK

This Annual Report is prepared by the Land & Water Australia Board of Directors to meet the requirements of Section 9 of the *Commonwealth Authorities and Companies Act 1997* in accordance with the Report of Operations Schedule of that Act for the 2006–07 financial year; and the requirements of Section 28 of the *Primary Industries and Energy Research and Development Act 1989*.

At the highest strategic level the report describes the performance of Land & Water Australia in achieving the Australian Government’s National Research Priorities. We have a particularly important role in

the first National Research Priority ‘An environmentally sustainable Australia’. At the next level we report against the Australian Government’s Rural Research and Development Priorities. These were announced before the National Research Priorities, and where there are areas of overlap we report against the combined priorities (see executive summary).

Land & Water Australia is also required to report against the four objects of the PIERD Act. Table 1 outlines the broad way in which Land & Water Australia responds to these four objects. More details are provided in later sections.

Table 1. Objects of the PIERD Act 1989

OBJECT (PIERD ACT SECTION 3)	CORRESPONDING LAND & WATER AUSTRALIA ACTIVITY
(a) Increasing the economic, environmental or social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries.	The Corporation works with primary industries (particularly through fellow Rural Research and Development Corporations) to increase the sustainable use of natural resources and the profitability of farming systems. We evaluate the return on our investments annually in economic, environmental and social terms.
(b) Achieving the sustainable use and sustainable management of natural resources.	This object encompasses the entire spectrum of the Corporation’s business, as evidenced by the Corporation’s mission: To invest in knowledge, partnerships, innovation and adoption to underpin sustainable natural resource management.

Table 1. Objects of the PIERD Act 1989 continued

OBJECT (PIERD ACT SECTION 3)	CORRESPONDING LAND & WATER AUSTRALIA ACTIVITY
(c) Making more effective use of the resources and skills of the community in general and the scientific community in particular.	The Corporation makes use of its extensive networks in the general and scientific communities to help in the design, development and implementation of its research programs and projects. The Corporation's Knowledge and Adoption Strategy has a specific objective to equip present and future land managers, policy makers, educators and others with the knowledge and tools to expand their capabilities in achieving sustainable natural resource management.
(d) Improving accountability for expenditure on research and development activities in relation to primary industries.	The Corporation's accountability activities are directed to meeting all statutory obligations and accountability requirements in a comprehensive, timely and transparent manner. Land & Water Australia has a number of ways of evaluating and reporting the impacts of its activities, including significant efforts on Return on Investment analysis. This type of analysis is now being conducted by all the Rural Research and Development Corporations, and the lessons learned through Land & Water Australia's experience have helped improve research management across many agricultural industries.

Our most detailed level of reporting is against our *2005–2010 Strategic R&D Plan*, with particular attention paid to describing achievements of planned outputs listed in the *Annual Operational Plan 2006–07*. The performance of all Land & Water Australia's research programs, corporate functions and the National Land & Water Resources Audit is presented in the Report of Operations.

These contribute to achieving our outcome:

'Knowledge, understanding and informed debate to inspire innovation and action in sustainable natural resource management.'

EXECUTIVE SUMMARY

CHAIRMAN'S REPORT

The management of Australia's land and water resource base continues to be the most important strategic challenge facing the nation today. The twin forces of ongoing drought and an increasing awareness of the impacts of climate change have captured the attention of governments and the general community alike.

Much of the landscape is now suffering severe water deficit. Many of our major water storages are holding less water this year than the corresponding period last year. Irrigation allocations are low or zero in many areas, and this will have substantial impacts on irrigated industries and their communities. Non-irrigated broadacre and pastoral industries are similarly affected, and as a landholder and partner in agricultural businesses I see the biophysical, economic and social effects of this situation on a daily basis.

The circumstances that now face Australian agriculture challenge accepted thinking and call for innovative solutions and integrated systems. We have the opportunity to learn more about how our complex biophysical and social systems operate, where the key connection and cross-over points are, and how our management responses might be different in the face of similar events. As an Australian Government agency focusing on



The Land & Water Australia Board pictured at the September 2007 Board meeting. From back left: Jack Speirs, Dianne Bentley, Michael Robinson, Ted Lefroy, Tim Fisher. Front, from left: John Childs, Bobbie Brazil (Chairman), Peter Cullen.

collaborative research investment in natural resource management and sustainable agriculture Land & Water Australia is well placed to contribute to building the knowledge foundation the country will need to negotiate the risks and opportunities that will be presented in years to come.

The Australian Government's announcement in January this year of the \$10 billion National Plan for Water Security highlighted just how critical an issue the management of our water resources has become. Effective water planning is a significant issue which has suffered from the inconsistency of approaches used by regulatory authorities. April 2007 saw Land & Water Australia

release a major new report from Dr Richard Evans, one of our Senior Research Fellows, which drew attention to the connections between groundwater systems and streams and rivers; links which had been previously denied or ignored by management systems. This leading piece of work, developed through an innovative funding model, suggests ways forward for managing surface and groundwater as a single resource. In a time of drought, where the demands on our water resources are great, it is critical for their sustainable use that we understand the complexities of our water systems.

While the future will surely present new challenges, it is also laden with opportunity. The Australian landscape may be complex, but it is also resilient, as are its people, industries and communities. An exciting new development for Land & Water Australia is the opportunity to lead the National Climate Change Research Strategy for Primary Industries on behalf of a consortium involving the Australian and State and Territory Governments, the Joint Rural Research and Development Corporations and the CSIRO. This strategy will guide the research investments of our primary industries to reduce the risks, maximise opportunities and make the most of limited research funding. We are looking forward to delivering the strategy in the first quarter of 2008.

During the 2006-07 year the Corporation's enabling legislation, the *Primary Industries and Energy Research and Development Act 1989*, was amended in response to the Review of the Corporate Governance of Statutory Authorities and Office Holders (the Uhrig Review). The major outcomes from the Review and legislative amendment were the creation of a new accountability and reporting requirement and the discontinuation of the position of Government Director on the Land & Water Australia Board. As outlined later in the report, in March 2007 we received the initial Statement of Expectations from the Australian Government, to which we responded with a Statement of Intent. I was pleased to note that the Corporation was already actively addressing many of the issues raised. With the discontinuation of the Government Director on the Land & Water Australia Board we said farewell and thank you to Charles Willcocks. Charles was a member of the Board from July 1997 and as Government Director always made a valuable contribution.

This year also saw a change in Executive Director following Andrew Campbell's decision to step down from the position. Andrew led Land & Water Australia from March 2000 and oversaw a transformation which saw the Corporation grow its collaborative efforts, budget, staffing and reputation. Our thanks go to Andrew for this significant contribution which firmly

established Land & Water Australia's position as a leading investor, broker and manager of natural resource management and sustainable agriculture research for the benefit of our agricultural industries, our communities and the nation as a whole.

Late in 2006 Michael Robinson took the helm of Land & Water Australia as Executive Director. Michael comes to us from the Greenhouse Accounting Cooperative Research Centre and brings a strong understanding of natural resource management, climate science and research management. We welcome Michael and wish him well in what is undoubtedly a challenging and rewarding role.

The new financial year has already proven to be full of interest and opportunity. Land & Water Australia operates in a fast-paced, complex and ever-changing world, a small organisation with a wide-ranging mandate. It is a privilege to lead Land & Water Australia as we make progress toward a more sustainable future.



Roberta Brazil

Chairman



Launching the Tropical Rivers and Coastal Knowledge research program, which commenced in 2006, are (from left): Mr David Tollner MP, Member for Solomon; Bobbie Brazil, Chairman of Land & Water Australia; Michael Douglas, Associate Professor and the program's research director; and Professor Charles Webb, Deputy Vice Chancellor, Charles Darwin University (Ian Dixon, 2007)

LAND & WATER AUSTRALIA AT A GLANCE

Vision

Sustainable use and management of natural resources for the benefit of primary industries and the Australian Community.

Mission

To invest in knowledge, partnerships, innovation and adoption to underpin sustainable natural resource management.

Outcome

Knowledge, understanding and informed debate to inspire innovation and action in sustainable natural resource management.

Revenue

Revenue from Government: \$12.7 million
External contributions: \$21.5 million
Interest and other incomes: \$1.0 million
Total revenue: \$35.2 million

Expenditure

Strategy 1: \$22.2 million
Strategy 2: \$5.5 million
Strategy 3: \$3.0 million
Corporate Enabling Functions: \$2.9 million
Total expenditure: \$33.6 million

Current investments

Programs being managed at 30 June 2007: 19
New research projects contracted 2006-07: 138
Program-level collaborating organisations: 31
Total investment 1990-2007: \$669 million
Benefits accrued from investment 1990-2007: \$3 billion
Benefit cost ratio: 4.4:1
Internal rate of return: 23 percent

Staffing

Number of staff (full time equivalents): 57

Enabling Legislation

Primary Industries and Energy Research and Development Act 1989

Commonwealth Authorities and Companies Act 1997

REPORT AGAINST NATIONAL AND RURAL RESEARCH PRIORITIES

The Australian Government's National Research Priorities and Rural Research and Development Priorities provide a framework and focus for all of its research agencies. Land & Water Australia is well placed to address these priorities. Our research portfolio is clearly targeted at the sustainability priorities, and we also directly invest in frontier technologies, creating an innovative culture and safeguarding Australia. We have also identified spillover benefits which address priority areas that

do not receive direct funding investment. Tables 2 and 3 detail Land & Water Australia's analysis of investments against the National and Rural Research Priorities and associated goals. A full listing of the National Research Priorities and associated goals is included in Appendix 3 on page 151.

In May 2007 the Australian Government announced a new set of Rural Research and Development Priorities. Key areas for Land & Water Australia in the new priorities include natural resource management and climate change and climate variability. Action against the revised priorities will be reported in coming years.



In 2006 Land & Water Australia's photo competition, *People, Puddles and Paddocks - Water in the Landscape*, received hundreds of entries from across Australia. Top honours went to this photograph of Lake Grace in south western Western Australia, taken by Adrienne Yzerman. Other entries in the competition can be found throughout the report, and on the Land & Water Australia website at www.lwa.gov.au.

Total Investment – Composition of Government Research Priorities attributed to each research program (\$)

Table 2. 2006-07 Research expenditure estimates across National Research Priorities* (\$'000)

National Research Priorities	An environmentally sustainable Australia							Promoting and maintaining good health			
	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Industries	2493	940	4987		1423		2331				
Landscapes	2566				2244						
People	641			214	428		107				
Innovation	461	46	77	77	77		154				
Strategy 2	1284	1129	578	26	1681		181				
Strategy 3	799	227	605	34	628		297				
Total Expenditure	8244	2342	6247	351	6481		3070				

Table 3. 2006-07 Research expenditure estimates across Rural Research Priorities (\$'000)

Rural Research & Development Priorities	Sustainable natural resource management	Improving competitiveness through a whole of industry approach	Maintaining and improving confidence in the integrity of Australian agricultural, food, fish and forestry products	Improved trade and market access
	\$	\$	\$	\$
Industries	13659			
Landscapes	4810			
People	1607			
Innovation	892			
Strategy 2	4879			
Strategy 3	2772			
Total Expenditure	28619			

*A full list of the associated goals can be found in Appendix 3

Frontier technologies for building and transforming Australian industries					Safeguarding Australia					Total	
C1	C2	C3	C4	C5	D1	D2	D3	D4	D5		
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
				1968						14142	
							1676			6486	
				641			107			2138	
	415			230						1537	
	1103			52						6034	
	163			310			191			3254	
	1681			3201			1974			33591	

Use of frontier technologies	Creating an innovative culture	Protecting Australia from invasive diseases and pests	Other research	Total
\$	\$	\$	\$	\$
	483			14142
		1676		6486
	455	76		2138
415	230			1537
1103	52			6034
163	131	188		3254
1681	1351	1940		33591



Detention Falls, Tasmania (Sarah Louise Jackson)

National Research Priority:

An environmentally sustainable Australia – 2006–07 investment \$26.7m (80 percent)

Rural Research and Development Priority:

Sustainable natural resource management – 2006–07 investment \$28.6m (85 percent)

Land & Water Australia's core business is improving the sustainability of Australia's environment and natural resource management through targeted research investments coupled with a focus on managing research knowledge into practice.

The vast majority of the Corporation's investment is directed to addressing these priorities, and significant progress has been made towards reaching the Australian Government's goals and the Corporation's stated outcome.

Highlights

Integrated pest management

Integrated Pest Management continues to gain interest and momentum in natural resource management and sustainable agriculture as people look for approaches to **minimise off-farm impacts and potentially reduce input costs**. Integrated Pest Management is an approach where natural processes are harnessed in the control of pest insects. Research in Western Victoria

through Grain & Graze is demonstrating how predators, parasites and pathogens can be useful in pest management within cropping systems, and how the populations of beneficial insects can be encouraged and supported through the use of selective pesticides, baiting programs and seed dressings. The research has demonstrated a range of benefits from the integrated pest management program, including reduced spraying costs, higher crop yields, a greater biodiversity and improved balance of insect populations, and the reduced use of broad spectrum pesticides in the farm environment which can present risks to ecological and human health. The next stage of the research is examining what farm practices encourage beneficials and discourage crop and pasture pests.

Grazing cereals

There is a substantial and **untapped store of early winter grazing in paddocks of cereals** like wheat, barley and triticale sown for grain. A trial in Western Victoria showed that grazing Yerong barley at the vegetative growth stages improved yield, made for easier sowing in the following season and reduced the need to graze new or re-germinating legume pastures in early winter. Research scientists have developed a way of helping mixed farmers in Western Australia decide whether to graze a drought-affected cereal crop or let it go on to harvest and have started to adapt

their findings for other parts of Australia. The key message is that grain is the most profitable option in 50 to 80 percent of years but tactically grazing the crop in low yielding years can greatly improve average returns.

Riparian program concludes 13 years of research

The National Riparian Lands R&D Program concluded in February 2007 after a successful **national roadshow of riparian workshops**. These workshops were an important part of the process to transfer knowledge developed during the research and facilitate its adoption across Australia. Many of these were jointly hosted by Land & Water Australia, state natural resource management agencies and the regional natural resource management bodies. The roadshow series culminated in a final celebratory workshop in Melbourne, the content of which is available online. Community groups and other organisations who wish to run their own capacity building workshops can do so by accessing the content on the Legacy CD (described below), as well as a number of other synthesis publications including:

- a National Riparian Lands R&D Program Legacy CD which captures all the publications that have been produced throughout the life of the program
- the Principles for Riparian Lands Management: Synthesising science for natural resources management outcomes



Siwan Lovett, the face of the Riparian program, and Phil Price (second from left) explain riparian restoration techniques to participants at the Bendigo Riparian workshop



A new habitat linkage planted in July 2004 on "Nulands", Buntine-Marchagee Catchment, WA. This is a heath/shrub/mallee 'corridor' planting that links two important remnants supporting several focal bird species

- design guidelines for the reintroduction of wood into Australian streams
- a very popular guide for landholders to manage riparian areas titled *Stock and Waterways: A managers' guide*.

Focal species approach reviewed

Land & Water Australia recently commissioned and published a review of the focal species approach in Australia. The focal species approach involves the identification of a set of species for the management of key threatening processes such as habitat loss, landscape modification and fragmentation, predation, salinity,

resource depletion, and inappropriate fire regimes. One or more focal species are identified for each threat or threatening process. The review found that the focal species approach was a useful tool for the restoration of ecologically degraded landscapes, and that its real value lay in being able to inform and prioritise recovery efforts through the applications of scientific principles.

In recent times, this approach has been widely adopted in extensive agricultural zones in southern Australia, sometimes with a limited application of the science

behind the approach or without proper consideration of the strengths or weaknesses of the approach. The review will be particularly useful to regional natural resource management bodies or other groups developing vegetation management plans especially those based on multi-species recovery, or where the focal species approach has already been adopted to evaluate its performance or application.

This science is helping to ensure the significant government and community investment in native vegetation and biodiversity is efficiently and effectively targeted.

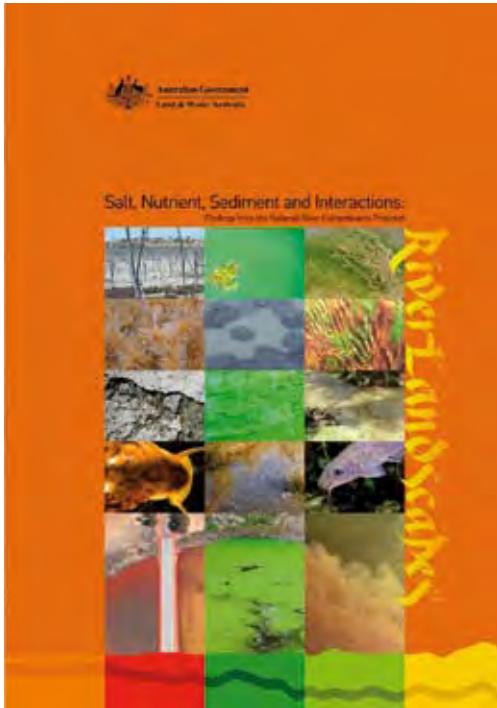
Integrating people and technical water research

Many challenges are associated with achieving sustainable water management in Australia. In recent years Land & Water Australia has played a critical role in ensuring the knowledge delivered by investment in research is connected with the practical implementation of water reform. In particular, the integration of biophysical research and social research is critical to successful water policy design and program implementation. An understanding of how the technical system and the human system interact is critical to achieving sustainable water management. To address this need, Land & Water Australia collaborated with the National Water Commission, the Australian National

University and Academy of Social Sciences in Australia to host a national conference in December 2006 *Delivering the National Water Initiative: Understanding the social and industry dimensions*. Approximately 200 delegates from across Australia attended to hear about the latest social and institutional research findings from universities, research agencies, indigenous associations, government agencies and private consultancies. Linkages between researchers, policy experts, and practitioners were made as a result of the conference and priority research areas were identified for future work in integrated, multi-disciplinary knowledge and analysis across the social sciences. This work has now been pulled together in a new book *Managing Water for Australia*, available through CSIRO Publishing.

Integrating sustainability across the organisation

Land & Water Australia is an organisation focused on improving sustainability of land and water resource management across Australia. Through our sustainability reporting we are aiming to extend this philosophy to also cover the Corporate operations and **focus on sustainability in all aspects of the organisation**. The 2006–07 financial year was our first year analysing data on the environmental performance of our office, and the results are reported on page 94. This financial year we improved our



Salt, Nutrient, Sediment and Interactions was published in 2007 to bring together the findings from the National River Contaminants Program

environmental performance by decreasing paper consumption and electricity use per person. Through the formalised sustainability reporting process Land & Water Australia is providing leadership to other public sector organisations on how small changes at individual and organisational levels can make a big difference.

Improving water planning

Effective water planning continues to be a critical issue for our natural resource managers and industries. Land & Water Australia is taking a leadership role in this field and aims to be innovative in its approaches to water management. In April 2007, one of our senior research fellows, Dr Richard Evans, released a highly publicised report on *The impact of groundwater use on Australia's rivers*. This report highlighted the importance of treating surface and groundwater as linked resources in water accounting and management. The report also suggested ways forward for managing surface and groundwater allocations. In a time of drought, where the demand on our water resources is great, it is critical for their sustainable use that we understand the complexities of our water systems.

Improving river health through better management of interactions from salt, nutrients and sediments.

Contaminants in our waterways are a serious threat to water quality and environmental health, especially to receiving waters such as estuaries, coasts, wetlands and reservoirs. Land & Water Australia has pulled together the **findings from five years of research** in the National River Contaminants program to produce a seminal synthesis report *Salt, Nutrient, Sediment and Interactions: Findings from the National River Contaminants*

Program. River contaminants fall into two broad categories: substances that occur naturally, but which cause problems in the environment when they are present in larger than normal quantities, including salt, nutrients and sediments; and those that do not occur naturally and which may contaminate the environment even if present in small amounts, such as agricultural chemicals and heavy metals. Highlights from the program include the capture of new knowledge on how salinity affects animals in rivers and guidance for water managers on setting targets and environmental flows; improved management by the fertiliser industry in advice it provides to the dairy industry and sheep and beef producers; and the development of practical advice for managers on the role of riparian zones in influencing the passage and transformation of nitrogen in streams.

National Research Priority:

**Promoting and maintaining good health
– 2006–07 direct investment \$Nil**

Rural Research and Development Priority:

**Maintaining and improving confidence in the integrity of Australian agricultural, food, fish and forestry products
– 2006–07 direct investment \$Nil**

Rural Research and Development Priority:

Improving competitiveness through a whole of industry approach – 2006–07 direct investment \$Nil

Rural Research and Development Priority:

**Improved trade and market access
– 2006–07 direct investment \$Nil**

A review of investment against the National and Rural Research and Development Priorities in preparation for the *Annual Operational Plan 2007–08* determined that Land & Water Australia does not invest directly against any of these priorities. However there are important and substantial spillover benefits from much of our research which do impact on these areas and demonstrate the integrated nature of our investments. Within natural resource management and sustainable agriculture these spillover benefits can be difficult to identify and quantify as they often relate to intangibles such as individual and community health and wellbeing.

Highlights

A ‘sense of place’

Land, Water & Wool is the wool industry’s nation-wide program to develop better ways of managing for more profit and a healthier environment. Woolgrowers have been partners in steering the program’s research,

contributing knowledge and interpreting its findings. This has enabled Land, Water & Wool to tap into the strong connection that woolgrowers have with their land, their keen interest in the environment and their 'sense of place'. This was a highlight to emerge from the program. The work highlighted the importance of understanding, and building on, the pride that woolgrowers feel for their land. These feelings are strong motivators for many woolgrowers and can be harnessed to help Australia retain sustainable agricultural industries like wool production as a core component of future landscapes.

A Victorian study identified five key personal drivers that influenced how native vegetation is managed by woolgrowers:

- family succession
- enjoyment of farming
- overcoming isolation
- learning about farming
- education of children.

Resource management programs aligned to these personal drivers are more likely to be effective. Spiritual, cultural, social, financial and aesthetic factors are all important in shaping the decisions land managers make, and it is important this is recognised in developing information and tools for agricultural industries.

National Research Priority:

Frontier technologies for building and transforming Australian industries - 2006-07 investment \$4.9m (15 percent)

Rural Research and Development Priority:

Use of frontier technologies - 2006-07 investment \$1.7m (5 percent)

Rural Research and Development Priority:

Creating an innovative culture - 2006-07 investment \$1.4m (4 percent)

Innovation and investment in frontier technologies occur at multiple levels in our research portfolio, from the investigation of new ideas and thinking through the Innovation program, to the development of specific tools and technologies for direct application in our collaborative industries work.

Highlights

Work through the Managing Climate Variability program is investigating the **innovative use of weather derivatives in wheat marketing**. The adoption of this approach in the grains industry is likely to yield many benefits including improving the market positioning of Australian products and increasing industry profitability. It will also improve the use of forecasting tools to reduce the impacts of seasonal climate

variability, as well as enhance the skill levels of growers to increase the use of products from the Bureau of Meteorology within agriculture.

Innovation at the frontier – making drinking water from in-situ desalination of groundwater

Providing **potable water in remote locations** (such as pastoral properties and indigenous communities) with access to saline groundwater currently requires costly surface infrastructure and involves surface disposal of salts.

Dr Chris Barber, in a commercial spin-off from the University of Western Australia, was supported through the Innovation Call to develop and trial In Situ Desalination.

Designed to fit entirely within a borehole, and using reverse osmosis technology (prior patent), it extracts high quality fresh water and leaves behind the iron- and salt-rich water. The trials have provided safe drinking water from saline and anoxic iron-rich groundwater for a full cost (including infrastructure and energy) of \$1.50 KL – comparable to urban water process and considerably less than typical costs of remote supplies.

This innovation has delivered a desalination option with lower set-up and operation costs than rivals, a smaller environmental footprint, no surface disposal needs and improved energy efficiency. As a result, this innovation is now at a commercialisation

threshold being assisted through AusIndustry for Australian and overseas applications, particularly in India, Israel and the United Kingdom.

National Research Priority:

Safeguarding Australia – 2006–07 investment \$2.0m (6 percent)

Rural Research and Development Priority:

Protecting Australia from invasive diseases and pests – 2006–07 investment \$1.9m (6 percent)

Land & Water Australia addresses these priorities primarily as the research coordination agency for the Australian Government's Defeating the Weed Menace program, and through the National River Contaminants program which concluded in early 2007.

Highlights

Defeating the Weed Menace research

Weed control costs Australian farmers about \$1.5 billion a year, with lost agricultural production estimated at more than \$2 billion per year. Land & Water Australia has been contracted to manage and implement the research component of the Australian Government's Defeating the Weed Menace program. Three priority themes have been identified to guide funding of research to improve the eradication and control of weeds of national significance.

These overarching priority themes are:

- reducing the rate of emergence of new weed problems
- reducing the impact of existing weed problems of national priority
- supporting national frameworks and capacity for sustainable weed management.

Fourteen research projects have been commissioned to address the priority areas and the sub themes. The projects include developing best practice detection and eradication of potential weed species; assessing pathways of weed ingress; identifying biocontrol agents for priority weed species; and understanding land use change impacts on weed incursion. Results from the projects are due to be delivered by mid 2008. The outcomes of the research will be extended through targeted knowledge and adoption activities.

RESEARCH OUTCOMES IN CONTEXT – A CASE STUDY OF LAND, WATER & WOOL

Land & Water Australia's investment portfolio has been steadily building during the past 17 years, providing it with an important foundation on which to base further investment. It is very rare that a single piece of research leads directly to an identifiable change in technology, behaviour or practice. Rather, it is the



Land, Water & Wool is generating productivity gains for woolgrowers as well as environmental improvements to their land.

experience and knowledge built through previous research that will inform current programs and ensure they are addressing the issues that have been identified. The adoption of research also builds on what has come before and relies on an array of environmental, operational, social and institutional factors, many of which are outside the control of individual researchers or research agencies.

This year saw the culmination of a flagship research program, Land, Water & Wool, a collaboration between Land & Water Australia and Australian Wool Innovation Limited. This ambitious program built on Land & Water Australia's extensive background in investing, managing and brokering research for sustainable agriculture and natural resource management, and focused squarely on the needs and issues facing Australia's



Land, Water & Wool produced promotional dog collars as a practical item for woolgrowers involved in the program. Pictured is Victorian woolgrower Debbie Shea with her dogs.

commercial wool producers. The outcomes achieved were only possible because of the quality of the long-term research investment which preceded the program.

The program was directed at increasing woolgrowers' awareness of, and motivation and capacity to tackle natural resource management issues. It also aimed to position the wool industry to reduce its environmental impact and to provide it with an opportunity to use environmental performance as a strategic marketing asset.

Program evaluations have shown that Land, Water & Wool has been highly successful in addressing its objectives and realising its outcomes.

The investment in Land, Water & Wool has resulted in a benefit-to-cost ratio estimated at 3.9 to 1. The projected benefits are \$87.3 million from an investment of almost \$25 million over five and a half years. Half of the benefits to date relate to productivity gains and half to environmental improvements. The program is generating productivity gains through changes in grazing and pasture management strategies and the ready involvement of woolgrowers has resulted in prompt adoption. It has already influenced some natural resource management policies and will no doubt continue to do so in the future.

Land, Water & Wool saw the wool industry's research investment become a recognised player in the identification and implementation of more sustainable farming practices not only for woolgrowers but for other extensive agricultural industries.

Land, Water & Wool research produced seven key insights that will continue to underpin the development of natural resource management strategies in the wool industry:

1. Sheep can assist in the sustainable management of Australian landscapes.
2. The community expects woolgrowers to protect the natural resources on their farms.

3. The community benefits significantly from the work growers undertake on their properties.
4. Industry-funded research into natural resource management helps woolgrowers influence the agenda in relation to policy decisions.
5. Sociological factors are critically important to woolgrowers in assessing practice change.
6. Participatory research involving woolgrowers increases the relevance of research and the likely level of adoption.
7. Woolgrowers are well placed to assist natural resource management bodies implement their strategies.

The program directly involved more than 4220 woolgrowers.

KEY EVALUATION RESULTS - RETURN ON INVESTMENT

Land & Water Australia has a number of ways of evaluating and reporting its impact. Return on Investment analysis has helped the organisation to learn through being explicit about what research projects deliver, the adoption of funded research by land managers and measuring the outcomes relative to the costs. This has driven efficiencies and innovations in program management making each research dollar more valuable.

The Return on Investment analysis and evaluation case studies have been powerful sources of information in meeting Land & Water Australia's accountability needs and communicating outcomes. Evaluating the impact of research is a high priority of the Australian Government, and the robust, transparent and conservative methods applied here have dramatically increased the credibility of evaluation. The lessons captured and documented in the case studies have helped improve research management and build corporate knowledge. The positive results continue to drive organisational pride and morale.

The Return on Investment results demonstrate that Land & Water Australia has invested purposefully and successfully. Investment criteria, calculated for 33 case studies associated with 630 projects (more than 25 percent of Land & Water Australia's investment from 1990-91 to 2006-07), demonstrated an almost \$3 billion return from a \$669 million expenditure by Land & Water Australia and its partners. Put another way, this is a 4.4 to 1 benefit to cost ratio and an internal rate of return of 23 percent.

The Return on Investment analysis is now being used by all Rural Research and Development Corporations. With more than five years of development with Land & Water Australia, sharing this analytical approach with other Research and Development



One of the permanent waterholes at Mungerannie Station, SA - about halfway along the Birdsville Track (Lisa Evans)

Corporations has really put research impact reporting in Australian agriculture on a strong foundation.

Water use efficiency in irrigation

Investment in water use efficiency research by Land & Water Australia commenced within the National Program for Irrigation Research and Development in 1993. In the period to 2001–02, the program funded an estimated 43 projects focusing on water use efficiency, with investments in field application technologies; storage, distribution, conjunctive use and recharge; and frameworks, reviews, definitions and models. Many of the research projects involved irrigators in a participatory manner and the various studies carried out encouraged a higher level of awareness and

more fruitful communication and effective benchmarking among irrigators and irrigation water providers.

There have been many positive outcomes from this research investment. These include more efficient water and land management, more effective water delivery with less wastage, and less nutrient and salt movement to waterways. Assessment of the program found expenditure of \$23 million (present value) was offset by projected benefits of \$123 million (present value).

Waterway protection guidelines

During the 1990s there was increasing recognition that the condition of many of Australia's rivers had deteriorated, together with the ecosystems they support. Investment in river rehabilitation had been

recognised as an important activity for some time, and Land & Water Australia has responded by investing in a range of related research and the development of waterway protection guidelines.

Three projects in particular supported the development of the waterway protection guidelines. The benefit:cost ratio for the guidelines has been projected to be 17.71 to 1 with costs of \$0.30 million (present value).

The key guidelines produced related to:

- ecological value - a method for defining the natural (flora and fauna, geomorphology, hydrology and water quality) values of waterways
- ecological sustainability - comparison of methods for determining the ecological sustainability of waterways
- planning - an outline of planning instruments and processes, including guidance on setting priorities
- evaluation - a systematic method for evaluating impacts of planning and development on waterways.

The waterway protection guidelines have been adopted, in whole or part, by a range of local and State government agencies, often facilitated by consultants. In particular, widespread use is being made of the guidelines by the Queensland Environment Protection Agency and the New South Wales Department of Infrastructure, Planning and Natural Resources. Environmental benefits

should accrue from the adoption of the protection guidelines due to re-allocation of resources for waterway rehabilitation, improved development plans of local government and improved decision making regarding water allocation.

Managing Climate Variability

Managing Climate Variability Phase 1 commenced in 2002-03 and ended in 2006-07, with some projects carried over into 2007-08 to conclude the science and its uptake. Government agencies and Rural Research and Development Corporations have been involved, with Land & Water Australia as the managing agent. Managing Climate Variability provided a continuation of the three phases of the Climate Variability in Agriculture Program from 1992-93 to 2001-02, also managed by Land & Water Australia. Phase 2 of Managing Climate Variability started in July 2007.

The most significant outcomes have been in the form of increased profitability for farmers by incorporating seasonal forecasting in their practice decisions as well as the more difficult to quantify benefits from more sustainable natural resource management. The increased profit is typically a consequence of changes in management practice following increased expertise in climate and use of tools and techniques under the broad concepts of climate risk management.



Vive La Difference - a reflection of the difference between green and dry (Jennifer McKay, Tas)

The total investment in research of \$17 million (present value), has already yielded projected benefits of \$29 million (external evaluation - Agtrans).

Through its multiple projects and Masters of the Climate initiatives, Managing Climate Variability has contributed to and increase in the number of Australian primary producers taking seasonal climate forecasts into account in their decision-making. From 2000 to 2002, the proportion of farmers taking seasonal climate forecasts into account increased from 37.3 percent to 44.7 percent, with the biggest increases in the southern and western states.

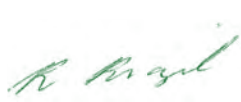
Managing Climate Variability lead extension projects in Victoria, New South Wales, South Australia and in Western Australia. These projects have provided a base for increased adoption of climate risk management. Examples of outputs include the special climate section routinely featured in the Grains Research and Development Corporation publication Ground Cover, The Break in Victoria and many of the outlook predictions on the Australia-wide National Agricultural Monitoring System website.



REPORT OF OPERATIONS

CERTIFICATE CONCERNING THE REPORT OF OPERATIONS

The Directors of the Land and Water Resources Research and Development Corporation (which is the legislated title of Land & Water Australia) are responsible under section 9 of the *Commonwealth Authorities and Companies Act 1997* for preparation and content of the following Report of Operations in accordance with the Commonwealth Authorities and Companies (Report of Operations) Orders 2005 and the Finance Minister's Orders. This Report of Operations is made in accordance with a resolution of the Directors out of session on 11 October 2007.



Roberta Brazil,
Chairman



Michael Robinson,
Executive Director

DIRECTORS' REVIEW OF OPERATIONS AND FUTURE PROSPECTS

Overview

Land & Water Australia continues to provide national leadership and deliver excellent returns against its important **vision, mission** and desired **outcomes**.

Vision

Sustainable use and management of natural resources for the benefit of primary industries and the Australian community.

Mission

To invest in knowledge, partnerships, innovation and adoption to underpin sustainable natural resource management.

Outcomes

Knowledge, understanding and informed debate to inspire innovation and action in sustainable natural resource management.

The Corporation's Strategic and Operational Plans ensure we maintain a diverse portfolio of work to address our broad mandate and wide stakeholder base. Our investments include both innovative and applied research, they include social and institutional research, and they include a substantial focus on the management of knowledge to maximise adoption. The focus

on adoption remains a key challenge that we willingly embrace with a diverse set of target audiences: direct to farmers, regional authorities, governments at all levels, agribusiness, and the scientific community at large.

Our leading Return on Investment work, now being used by all the Research and Development Corporations jointly, has shown a 4.4 to 1 benefit cost ratio and an internal rate of return of 23 percent on investments by Land & Water Australia and its partners. However, our returns go well beyond those measurable by present day numbers: many of the outcomes will be achieved in the years ahead and in intangible ways where attribution and financial measurement are impossible.

There is no question that we continue to deliver against our operational and strategic plans. The vast majority of our annual milestones have been delivered and are recorded in subsequent sections.

Collaboration

The Corporation continues to invest resources heavily in collaborative programs and projects. We believe that partnership programs, while resource intensive, deliver much greater outcomes than otherwise. Our programs include 31 co-investing research partners at the program level, and more than a hundred partners at the project level. Our \$12.7 million Commonwealth

appropriation was leveraged through program level partnerships to a record of \$35.2 million revenue in 2006-07; in-kind contributions of resources and cash at a project level by research providers stretch our funding even further.

During the year, Land & Water Australia has been moving to expand its partner base beyond its traditional collaborators and collaboration models. Examples include the Tropical Rivers and Coastal Knowledge initiative in Northern Australia, work with the National Water Commission and an increasing focus on the Department of the Environment and Water Resources.

Land & Water Australia is greatly appreciative of the contributions of our partners in developing and delivering on our portfolio of work.

Financial performance

Land & Water Australia continued its strong financial performance in 2006-07. The Corporation's revenue for the year was \$35.2 million. This is a significant level of financial leverage on an appropriation from the Australian Government through the Department of Agriculture, Fisheries and Forestry of \$12.7 million. Around 138 new research projects were contracted, which together with ongoing projects attracted \$21.48 million of partner co-investment in cash and significantly more in-kind from research providers. Research

expenditure of \$27.5 million increased \$0.4 million over the previous year, continuing a strong pattern of growth. Expenditure on Knowledge and Adoption at a corporate level increased by \$0.35 million (13 percent), and expenditure on administration as a proportion of total expenditure increased slightly, from 8.5 percent to 8.7 percent, as a result of investment in a new project management information system.

The overall financial result for 2006-07 was an operating surplus of \$1.6 million, compared with an operating deficit of \$1.4 million in 2005-06. The Corporation's equity position of \$14.87 million includes \$13.38 million set aside for program or project expenditure either as a result of formal agreements with external funding bodies or Board decisions. A further \$0.18 million is set aside in the asset revaluation reserve leaving \$1.31 million in unallocated reserves at 30 June 2007.

Future prospects

The mission and vision for Land & Water Australia have never been more important to the Australian community than today with a substantial water crisis and the spectre of climate change looming large. So much of the country remains in drought with little prospect of substantial relief in the foreseeable future. The Corporation will continue to invest a significant proportion of its limited funds in the climate and water

areas both through specific programs (such as Tropical Rivers and Coastal Knowledge, National Program for Sustainable Irrigation, Managing Climate Variability, Environmental Water Allocation) and cross cutting investments (through the Social and Institutional Research Program and the Innovations program).

However, many of our co-investing Research and Development Corporation partners have been hit hard by the drought with revenues expected to decline dramatically. This will impact substantially on their ability to co-invest with Land & Water Australia in the coming years.

The Research and Development Corporations, like all research organisations, also face increasing scrutiny on their investments at both a program and project level. The need to demonstrate a clear return on investment to stakeholders (for all Research and Development Corporations except Land & Water Australia this means levy payers as well as government) is also impacting upon their ability to invest in large and long-term programs, including with Land & Water Australia.

Furthermore, five of our current programs (Grain & Graze, Healthy Soils for Sustainable Farms, Knowledge for Regional NRM, Defeating the Weed Menace research, and the National Land & Water Resources Audit) are due for completion in June 2008.

The prospect of reduced revenue in coming years is highly likely and the Corporation must prepare by exploring new opportunities and partnership models. We remain confident our significant track record of delivery and the importance of our mandate will ensure we remain as the leading national research agent in sustainable natural resource management in Australia.

To do so we must focus our efforts on better delivery of outcomes against the key research priorities of relevance. In particular we need to ensure we remain aligned with the National Research Priority 'An environmentally sustainable Australia' and the Rural Research Priorities generally.

We must maintain our position of leading and informing natural resource management debate in Australia, and as a leading research program manager, by strengthening our procedures and knowledge management and adoption activities in our investment areas. Specifically, we must continue to focus on water and climate (variability and change), building an integrated investment strategy and stronger pathways to change (for example leadership in developing stewardship programs and capacity building in our rural communities).

Land & Water Australia is committed to delivering on its mandate and is looking forward to leading the sustainable use and management of our natural resources. The wonderful staff and Directors of the Corporation are grateful for the opportunity to play such an important role in the Australian community.

REVENUE AND EXPENDITURE TARGETS

Revenue

The 2006–07 audited financial statements on pages 113 – 144 show that Land & Water Australia received revenues totalling \$35.2 million, of which external contributions totalled \$21.5 million, or 61 percent of total revenue (2005–06 \$17.7 million or 56.8 percent of total revenue) and monies from Government totalled \$12.7 million or 36.2 percent of total revenue (2005–06 \$12.5 million or 40.1 percent of total revenue). Interest and other income totalled \$1.00 million or 2.8 percent of total revenue (2005–06 \$0.98 million or 3.1 percent of total revenue). Figure 1 provides a break-up of Land & Water Australia revenue for 2006–07.

Expenditure

During 2006–07 fiscal year Land & Water Australia’s expenses totalled \$33.6 million, of which \$27.5 million (81.8 percent) was invested in research. Communication and adoption investment at the corporate level totalled \$3.0 million (8.9 percent) while portfolio management expenditure including strategic planning and evaluation activities accounted for \$0.2 million or 0.6 percent of expenditure. Administrative expenditure totalled \$2.9 million or 8.6 percent of total expenditure. Figures 2–4 show the break-up of Land & Water Australia expenditure by activity, research programs and comparison between 2005–06 and 2006–07.

Figure 1. Revenue 2006–07

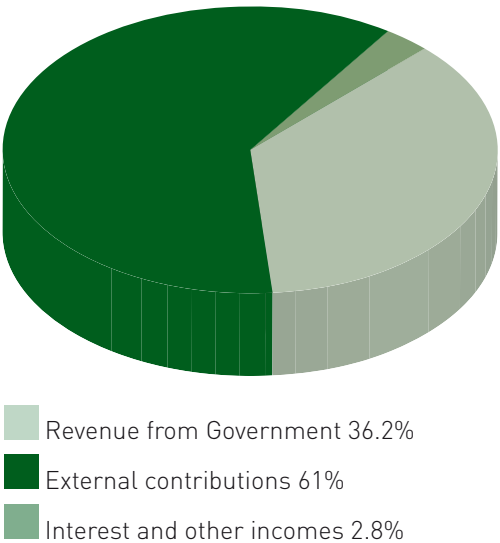


Figure 2. Expenditure by activity 2006–07

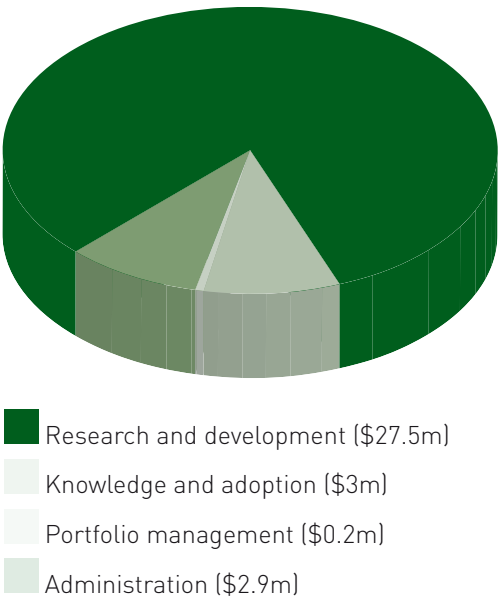


Figure 3. Expenditure on research programs 2006-07

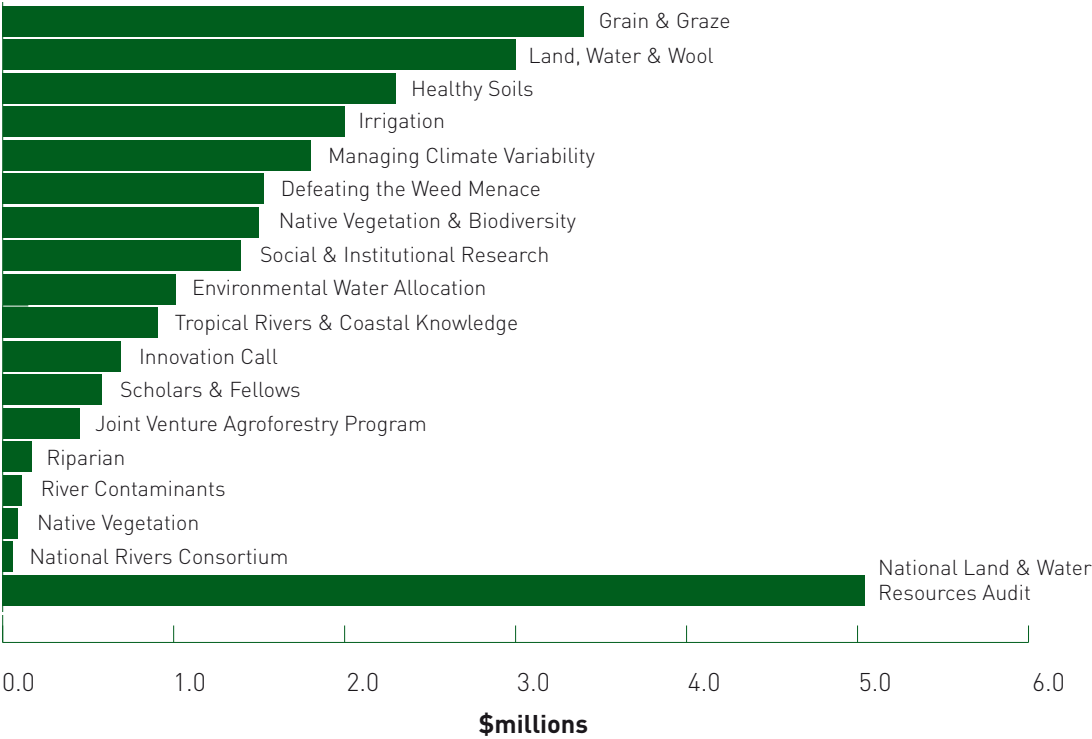
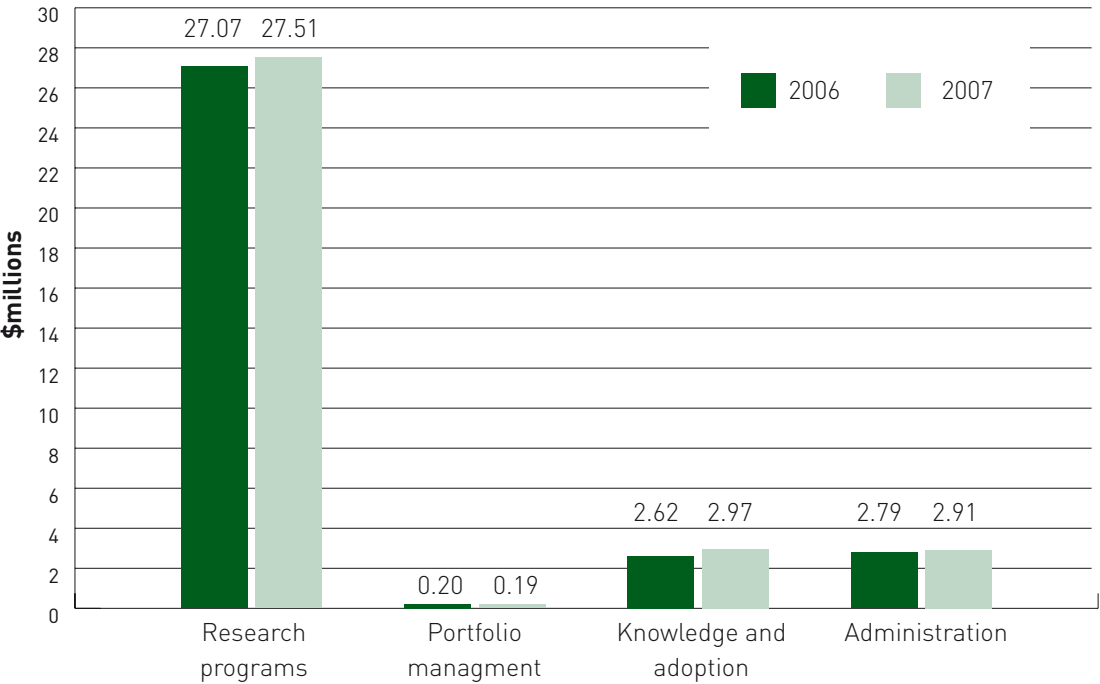


Figure 4. Comparison between 2005-06 and 2006-07 expenditure



OPERATING ENVIRONMENT

Analysis of operating environment

Natural resource management and primary industries are of critical importance to Australia. Our rich unique natural environment is among the nation's defining characteristics; our agricultural industries provide employment and export income while sustaining rural and regional communities and providing necessities of life for all.

Climate extremes are the norm in Australia. However, extended drought over wide parts of Australia and consequent impacts on dryland crops, grazing, natural ecosystems and availability of water for irrigation, urban supplies, and environmental flows, highlight the threat of climate change to Australia's natural resources and primary production. Further, the increasing recognition that groundwater is integrally connected with surface water and not a separate resource heightens the pressure on our water systems and the farming community.

Drought is imposing strains on most Australian farmers, as well as natural resource managers still working through the transition to regional authorities. Authorities in some regions are more advanced than others in developing sustainable responses to the extended drought.

The declining terms of trade caused by the recent high value of the Australian dollar pose additional difficulties for rural industries. However, Australian farmers have a long and strong record of responding positively to difficulties, and the current environment can be expected to present opportunities as well as challenges.

In the past year the Australian Government has announced several programs that will have significant impacts on natural resource management over coming years:

- The National Plan for Water Security is intended to ensure rural water use is placed on a sustainable footing over the next decade. It is expected to substantially improve water management across the nation with a special focus on the Murray-Darling Basin, where the bulk of Australia's agricultural water use takes place.
- The announcement that a third round of the Natural Heritage Trust will be funded for five years from July 2008 gives security and continuity to work to address biodiversity decline, salinity and water quality, coastal and peri-urban areas, productive and sustainable landscapes, and capacity-building and institutional change. The \$2 billion promised over five years maintains funding at levels comparable with the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust over the past seven years.

- The new Environmental Stewardship program provides \$50 million from 2007-08 to 2010-11, focussing on the protection and management of targeted nationally important environmental assets on private land, enabling long-term contracts with private land managers to deliver environmental outcomes. A longer and more substantive program can be expected and will likely alter the way farming systems are managed.
- A national greenhouse gas emissions trading system is to be implemented in Australia, though as details are unknown the impact on natural resource management remains uncertain.

The Research and Development Corporations continue to operate in an increasingly challenging environment. The drought has reduced income substantially for many, and they are facing significant cuts in research expenditure in coming years. In addition, there is significant increasing pressure to show strong returns on investment to key stakeholders (both the government and industry). There is also an increasing pressure to collaborate on shared issues to make the most of the scarce research dollar. The two drivers often mean less opportunity for substantive collaboration, and a greater focus on smaller applied projects with a shorter time to outcomes and measurable returns to stakeholders.

Land & Water Australia finds itself in a unique position, where the demand for our products and potential products is greater than ever in the current climate and water situation. However, the Corporation will find itself under increasing pressure to maintain its impressive record of partner investments as the research dollar continues to be squeezed. While we maintain strong working relationships with our partners, the challenge of developing new multi-partner programs of significant scale is becoming increasingly difficult and time consuming. We must explore alternative funding models to maintain and grow the resource base from which to achieve our mission.

With the announcement of the National Plan for Water Security we have consciously strengthened our engagement with the National Water Commission and the Department of the Environment and Water Resources. This broader focus will need to consolidate if we are to achieve our mission of sustainability, especially in the face of climate change.

Land & Water Australia has been leading Return on Investment analysis for over five years and has been able to make a substantial contribution to the development of a consistent framework for the Research and Development Corporations.

Return on Investment analysis has driven efficiency and innovation in program management by being explicit about the

results being delivered and comparing their value to the cost of investment.

The robust, transparent and conservative methods being applied dramatically increased the credibility of program evaluation and have now been adopted by all Rural Research and Development Corporations.

Investment criteria calculated for 33 case studies chosen for Return on Investment analysis show the benefit cost ratio is 4.4 to 1, or a return of almost \$3 billion from an investment of \$669 million by Land & Water Australia and its partners.

Stakeholders and stakeholder relations

Land & Water Australia has a wide range of stakeholders (Appendix 6). We strive to maintain strong working relationships with our key stakeholders, and indeed our representative organisations - the National Farmers' Federation and the Australian Conservation Foundation. As required under the *Primary Industries and Energy Research and Development Act 1989* we report to these organisations annually.

Considerable effort is made in keeping the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry the Hon. Sussan Ley MP informed of our key activities with regular interactions and communications. Land & Water Australia also engages with other key ministers on

occasion, in particular the Minister for Agriculture the Hon. Peter McGauran MP and the Minister for the Environment and Water Resources the Hon. Malcolm Turnbull MP.

This year has seen increased interaction with both the National Farmers' Federation and the Australian Conservation Foundation. The National Farmers' Federation Chief Executive Officer Ben Fargher attended a Board meeting. Both the Australian Conservation Foundation and the National Farmers' Federation were also invited to participate in various Land & Water Australia activities and committees.

The Corporation also openly and regularly engages in a dialogue with various agency staff at all levels, in particular with the Department of Agriculture, Fisheries and Forestry, the Department of the Environment and Water Resources, the National Water Commission and the Murray-Darling Basin Commission. With the announcement of the National Plan for Water Security, it has become even more imperative that we engage beyond the agriculture department in order to achieve our mission.

A highlight of the year was a national conference in December on *Delivering the National Water Initiative: understanding the social and industry dimensions*. This conference involved policy makers, social and biophysical scientists and land and water managers in a dialogue around key issues.

Statements of Expectations and Intent

On 1 March 2007 the Hon. Sussan Ley MP, Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry provided a Statement of Expectations to Land & Water Australia as required by the Australian Government following the Review of Corporate Governance of Statutory Authorities and Office Holders (Uhrig review). On 1 May 2007 we responded with the required Statement of Intent which complements Land & Water Australia's other planning and reporting documents including the Annual Operational Plan and Annual Report.

The Statement of Expectations outlined five key areas to be addressed:

1. the role of the Research and Development Corporations and Land & Water Australia
2. adherence and contribution to Government policies
3. performance reporting
4. communication with Government and other key stakeholders
5. accountability.

Our Statement of Intent can be summarised as follows.

1. The role of the Research and Development Corporations and Land & Water Australia

Land & Water Australia focuses its activities on the four objects of the PIERD Act:

1. achieving the sustainable use and sustainable management of natural resources
2. increasing the environmental, social and economic benefits to primary industries and the community
3. making more effective use of the resources and skills of the scientific and general community
4. improving accountability for research and development expenditure.

Our intention is to focus more strongly on the increasingly prominent issues of climate, water and healthy landscapes to ensure our primary industries have a sustainable future. The Corporation will continue to promote innovation and adoption. Land & Water Australia is re-emphasising the importance of innovation by dedicating around 20 percent of its core funding to innovation. The Corporation will further direct its research and adoption efforts to contribute to all major government natural resource management initiatives. We will also play a leading role in knowledge-brokering between Australian Government agencies and the regional

natural resource management bodies to meet their knowledge needs. Land & Water Australia will continue to forge new partnerships and to collaborate to meet identified emerging research priorities.

2. Adherence and contribution to Government policies

Land & Water Australia will respond proactively to the National Research Priorities and Rural Research Priorities. This is demonstrated through alignment of new research with the stated priorities and detailed reporting of outputs and outcomes against the priorities.

3. Performance reporting

Land & Water Australia will continue to work with the Department of Agriculture, Fisheries and Forestry and the Council of Rural Research and Development Corporations Chairs, in developing new joint Research and Development Corporation reporting mechanisms.

The Corporation will continue to lead the evaluation of natural resource management research impact in Australia. Our Return on Investment methodology allows a wide range of economic, environmental and social benefits to be evaluated at project, program and portfolio levels.

4. Communication with Government and other key stakeholders

Land & Water Australia, through the Chairman and Executive Director, will maintain regular communication with the Parliamentary Secretary, relevant Ministers and their staff on issues of national importance. We will continue to adopt a 'no surprises' approach to risk management, ensuring Ministers are aware of any controversial research outputs prior to their dissemination.

The Corporation actively promotes good communication with stakeholders and extension of research outcomes. We will work to increase adoption of research through effective research processes (including stakeholder involvement), targeted communication of results including tailoring communication to meet stakeholder preferences, and broader awareness-raising.

5. Accountability

Land & Water Australia will fully comply with its obligations under the *Primary Industries and Energy Research and Development Act 1989* and the *Commonwealth Authorities and Companies Act 1997*. The Corporation expects to maintain its good record of meeting all accountability obligations in a timely manner. To achieve this we will soon be completing a major upgrade of

all business systems, including financial, information technology, human resource management, project management, procurement and knowledge management.

Since the Statement of Intent was submitted on 1 May 2007, Land & Water Australia has continued to ensure that we meet expectations outlined in the Statement of Expectations.

We have continued to strengthen our capacity to contribute to government priorities, for example through a new phase of the National Program for Sustainable Irrigation and a new phase of the Managing Climate Variability program (outlined on pages 48-53)

Detailed reports of our investments aligned with the National and Rural Research and Development Priorities can be found on pages 11-22. Our Return on Investment

analyses, outlined on page 24, continue to show the triple bottom line benefits of our research. These analyses allow us to demonstrate the alignment of our research outcomes with Government priorities. We have also continued to develop our knowledge and adoption strategy to ensure effective communication with stakeholders and uptake of research results (see page 83). Continued adherence to our corporate accountability framework is demonstrated in the corporate governance section (page 89) and through the financial statements (page 113).

PROGRESS AGAINST STRATEGIC PLAN

Land & Water Australia has identified three objectives for the period 2005-10, and three key strategies to achieve these objectives.

OBJECTIVES	PROGRESS TO DATE
1. Generate new knowledge useful to the sustainable management and use of Australia's natural resources	The generation of new knowledge for sustainable natural resource management is core business for Land & Water Australia.
2. Develop productive partnerships and undertake strategic investment in natural resource management	Land & Water Australia collaborates with many other organisations and groups.
3. Improve adoption of the outputs of research	Land & Water Australia invests in a knowledge and adoption strategy which it continues to develop and improve.

KEY STRATEGIES	2006-07 ACTIVITIES
Strategy 1. Research investment	The research investment strategy is organised into four streams of activity, focusing on sustainable industries, sustainable landscapes, social and institutional research and innovation.
Strategy 2. Collaboration and strategic analysis	Much of Land & Water Australia's research activity is organised through collaborative arrangements, at program and project levels. Our program of strategic analysis is used to ensure research investments are directed appropriately and address current and emerging issues.
Strategy 3. Knowledge into practice	Land & Water Australia has continued to make inroads for improved adoptability and applicability of its research programs through its focus on knowledge and adoption activities.

The operations of Land & Water Australia are supported by a range of corporate enabling functions, which include financial management, information technology, corporate governance, accountability and human resource management. Expenditure on administration equalled 8.7 percent and included a significant investment in a new project management system.

The following section presents the results for individual programs against planned outputs from the *Annual Operational Plan 2006-07*.

Table 4. Land & Water Australia expenditure by program 2006-07 (\$'000)

Program	ACTUAL EXPENDITURE		PROGRAM TOTAL
	LWA	Partners	
Strategy 1 - Research investment			
Land, Water & Wool	\$ -	\$ 2.941	\$ 2.941
Grain & Graze	\$ 0.600	\$ 2.834	\$ 3.434
National Program for Sustainable Irrigation	\$ 0.134	\$ 1.848	\$ 1.982
Managing Climate Variability	\$ 0.376	\$ 1.458	\$ 1.834
Healthy Soils for Sustainable Farms	\$ -	\$ 2.225	\$ 2.225
Environmental Water Allocation	\$ 0.805	\$ 0.206	\$ 1.011
National Vegetation and Biodiversity Program	\$ 1.198	\$ 0.311	\$ 1.509
Native Vegetation Program	\$ 0.076	\$ 0.014	\$ 0.090
Defeating the Weed Menace (the National Weeds research program)	\$ -	\$ 1.531	\$ 1.531
Joint Venture Agroforestry Program*	\$ 0.450	\$ -	\$ 0.450
National Rivers Consortium	\$ 0.029	\$ 0.013	\$ 0.042
River Contaminants	\$ 0.075	\$ 0.041	\$ 0.116
Riparian Lands	\$ 0.165	\$ 0.005	\$ 0.170
Tropical Rivers and Coastal Knowledge	\$ 0.473	\$ 0.439	\$ 0.912
Social and Institutional Research	\$ 1.643	\$ 0.310	\$ 1.953
Innovation	\$ 1.403	\$ -	\$ 1.403
Other	\$ 0.525	\$ 0.064	\$ 0.589
Total Strategy 1	\$ 7.952	\$ 14.240	\$ 22.192

* managed by the Rural Industries Research and Development Corporation

Table 4. Land & Water Australia expenditure by program 2006-07 (\$'000) continued

Program	ACTUAL EXPENDITURE		PROGRAM TOTAL
	LWA	Partners	
Strategy 2 - Collaboration and strategic analysis			
Partnerships	\$ 0.473	\$ -	\$ 0.473
National Land & Water Resources Audit	\$ -	\$ 5.038	\$ 5.038
Total Strategy 2	\$ 0.473	\$ 5.038	\$ 5.511
Strategy 3 - Knowledge into practice			
Knowledge and adoption	\$ 1.792	\$ 0.322	\$ 2.114
Knowledge for Regional NRM	\$ -	\$ 0.858	\$ 0.858
Total Strategy 3	\$ 1.792	\$ 1.180	\$ 2.972
Corporate enabling functions	\$ 2.912	\$ 0.004	\$ 2.916
Total investment*	\$ 13.129	\$ 20.462	\$ 33.591

*The figures in this table refer to direct cash investment only. Actual investment at the level of research projects is higher again, when project-level and in-kind contributions from research providers are considered. Additionally, Land & Water Australia provides in-kind contributions to research programs through provision of corporate services and management-level support.

Progress against Strategy 1 - Research investment

Performance indicator:

- Generation of knowledge useful to the sustainable management and use of Australia's natural resources

Performance measure:

- Audit of knowledge assets and technologies produced and disseminated and predictions of their utility

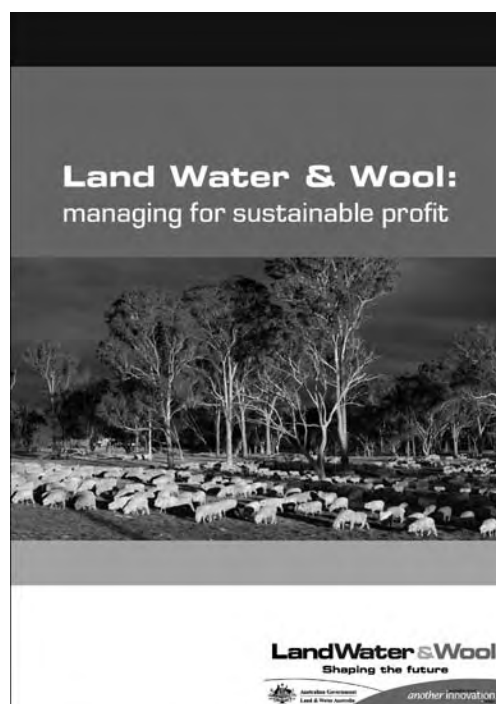
Land, Water & Wool

Land, Water & Wool is an industry driven environmental program that has brought together woolgrowers and researchers across Australia to participate in environmental, social and economic studies examining topics such as living with dryland salinity, sustaining native vegetation and biodiversity and developing tools to help woolgrowers manage our variable climate.

The program has answered questions that woolgrowers want answered about sustainable production and natural resource management. Research has been undertaken working with woolgrowers to answer those questions in the context of farm businesses and in a way which woolgrowers can adopt and use on their farms. Land, Water & Wool has worked with Australian woolgrowers around the country with more than 4,200 participating directly.

Land, Water & Wool officially finished in March 2007 with a legacy of additional activities continuing into 2007-08. These include continued data collection and a national synthesis product of the Sustainable Grazing on Saline Lands findings.

The major activities for Land, Water & Wool in 2006-07 were the finalisation of research projects, development of extension products and delivery of final reports.



Land, Water & Wool program final report 2007

Land, Water & Wool: Performance against planned outputs 2006-07

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
Final reports	Land, Water & Wool (LWW) Program Management Report	Documents program outputs for partners, industry and farmers
	Land, Water & Wool: managing for sustainable profit report	Documents application of research and findings including research summaries and product directory to be used as a reference for partners, industry and farmers
Ensuring eastern states regional NRM bodies in woolgrowing areas understand LWW research relevant to their Regional Catchment Strategy through a targeted extension activity	The LWW Advocates initiative employed four consultants in Tasmania, Victoria, South Australia, NSW and Queensland to target specific people in NRM Agencies and State Departments. Consultation was carried out, with around 100 people discussing LWW findings.	This approach targeted delivery of LWW research to specific NRM regions. An evaluation of this activity showed that this contact prompted advocate contacts to seek and obtain information that they would not have sought otherwise.
Finalisation of individual LWW projects	Research projects within all sub-programs were finalised. A new sub-program of 'Additional Activities' was started.	The additional activities will extend the application and use of LWW research.
Handover of LWW research and products to Australian Wool Innovation	All final reports have been sent to AWI and a boxed set of DVDs containing print ready copies of all products is in the process of being completed.	Ensures information is available to future users from an industry organisation

Program collaborators

Australian Wool Innovation Limited



Grain & Graze national forum participants inspecting grazing wheat trials in the Corangamite Glenelg Hopkins region, south west Victoria - 2007

Grain & Graze

The Grain & Graze program aims to boost farm profitability across the mixed farming zone of southern Australia, while helping to protect the environment. It is offering exciting opportunities for mixed farmers across Australia. The program brings together more than 60 organisations and local farmer groups who are collaborating to improve farm profitability, resource condition and quality of life. Farmers are combining their experience with that of researchers, extension specialists and catchment managers to deliver on-farm and catchment scale outcomes. Nine major regional projects and six national projects are working together to address social, economic and environment issues for mixed farmers. Projects are exploring opportunities such as grazing cereals, pasture cropping, increasing perennality, integrated pest management and on-farm biodiversity.

Despite drought conditions, 2006-07 was an excellent year for participation in Grain & Graze. 4,308 farmers are now actively participating in the program with 1,861 adopting new practices as a result of their participation. Active participation is being facilitated through a number of activities, including training. In 2006-07 1,961 farmers attended training courses, with 1,559 reporting a skill increase.

Grain & Graze: Performance against planned outputs 2006-07

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
Continue research, development and extension projects in nine regions. Establish national research projects covering economic and social analysis and biodiversity	The program is focussing strongly on adoption of new practices to increase the profitability and sustainability of mixed farming. Activities across regions include: • Look 2 Grow workshop, Avon region • grazing wheat trials established across all regions • climate risk workshops • feed base calculators demonstrated • LeyGrain workshops • native pasture and legume rotations tested for enhanced productivity • alley farm trials underway using salt bush to increase productivity, reduce water leakage and enhance biodiversity • perennial pasture systems established and demonstrated • pasture cropping trials now in their third year • pasture monitoring and groundcover management demonstrations to reduce erosion • Integrated Pest Management courses for farmers • integrated knowledge framework developed National research projects are underway exploring economic and social analysis and biodiversity.	G&G is building the capacity of mixed farmers to maximise their profit while caring for the environment. • climate risk management enables farmers to manage threats of dry years and pursue opportunities. G&G has shown that farmers need to retain cropping and pasture infrastructure if they want to be seasonally responsive to maximise profit • 98 percent of respondents to a survey in the Northern Agriculture region intend to sow perennial pastures. This increase in adoption of perennials delivers resilience in productivity, reduced water leakage and reduced erosion • 18 percent of producers in the Eyre Peninsula, which is traditionally a cropping region, are introducing sheep into their systems as a risk management strategy. 750 producers have reported that their animal management has improved due to G&G • pasture sowing on grain farms in the Border Rivers has doubled since G&G and the conduct of LeyGrain workshops, increasing the resilience of farm businesses and reducing environmental impact • more than 40 percent of producers in the Murrumbidgee are grazing cereals, with the figure thought to be exponentially increasing, delivering substantial productivity gains for farm businesses, particularly in dry years Insights from the national projects include: • In many cases risk aversion has a significant influence on farm strategies and farm profit. The level of risk associated with a new technology or practice will therefore influence its adoption. • A significant barrier for farmers considering returning sheep to their business is labour shortage. • Enterprise mix is determined by more than financial factors – soil type, labour and enterprise preference are considered. The adoption of new practices will therefore be assessed against all factors not just the economics. • The single biggest collection of species is being undertaken across farms through G&G. This collection will assist to answer questions such as the contribution of biodiversity to farm productivity and address trade-offs between biodiversity and production.
Hold national and regional forums which bring together G&G stakeholders	A National Research and National Program Forum have been held during 2006-07, bringing together G&G stakeholders.	The Forums create the opportunity for G&G stakeholders to share research findings and experiences. This sharing of knowledge expands the influence of each project beyond its own regional boundaries. It also assists regions to share solutions to issues.

Grain & Graze: Performance against planned outputs 2006-07 continued

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
Initiate planning and consultation among investment partners about the future of G&G	Scoping study is currently being undertaken on feasibility of a phase 2 due to be completed by October 2007	The study will assist RDC investors to determine the future research needs of mixed farming enterprises and will advise on the optimal model to deliver that. This will ensure investment continues to be appropriately targeted, is not duplicative and meets the needs of mixed farmers.
Continue communication activities	A product catalogue has been updated and presented. All products are being uploaded onto the website. 40 media releases were prepared. Since the program's inception more than 80 tools have been developed for use by mixed farmers, with more than 50 percent being delivered in 2006-07.	The media releases have ensured local stories, relevant to local farming situations have been available through rural media. These stories assist in raising awareness and interest among farmers to get involved in the program. The large number of products and tools now being generated by G&G reflects the program's shift into delivery of the research outcomes and increased engagement with farmers. This approach ensures research is relevant and used by farmers and has a strong focus on getting the right information into the hands of the right people at the right time.

Program collaborators

Australian Wool Innovation Limited
Grains Research & Development Corporation
Meat & Livestock Australia

National Program for Sustainable Irrigation

The National Program for Sustainable Irrigation transitioned from Phase 1 to Phase 2 during 2006-07. The mission of the program is to provide leadership through collaborative investment in research and innovation to achieve sustainable irrigation. Thirteen partners from government, commodities and water providers are collaborating to invest in a new phase of activity over the next three years. The program will identify, scope and purchase applied research which will benefit Australian irrigation from a technical, economic, social and environmental perspective. The program works directly with irrigation farmers to deliver technological advances and improved management practices, while also working with industry and government to answer regional, state and national issues.

Activities during 2006-07 focused on finishing a number of major project investments from Phase 1, developing a new research plan for Phase 2 and building the collaboration among partners by brokering investment.



The National Program for Sustainable Irrigation is present at major research gatherings around Australia, giving irrigation stakeholders the opportunity to discuss the latest research.

National Program for Sustainable Irrigation: Performance against planned outputs 2006-07

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
Complete research projects and their review	Final reports on program research have been delivered on: • economic reckoner for Evaporation Mitigation Systems • the significance of night time evaporation from irrigation farm dams • Irrigation Futures of the Goulburn Broken Catchment • Northern Australia Irrigation Futures – new knowledge, tools and processes • using wetting front detectors.	These new research findings will be useful to irrigators, water managers and policy makers. New findings on evaporation and technologies such as the wetting front detector will provide irrigators with new tools and management practices to increase on-farm productivity. The program will work with its commodity partners – cotton, grains and horticulture RDCs – to extend this knowledge to irrigators in the format most useful to them. A greater understanding about processes which assist regional scale decision making about the future of irrigation, such as new infrastructure, has been achieved through the Goulburn-Broken Futures project. With the key insights valuable to other irrigation regions who face similar decisions.
Develop synthesis products promoting outputs	Synthesis products completed include: • program knowledge base • Irrigation research CD 1993-2006 • Improving productivity and sustainability in Irrigation – case studies of success • Irrigation decisions – from enterprise planning to the paddock • Water recycling in Australia • Using recycled water in horticulture – growers' guide • Ways to improve soil structure and productivity of irrigated agriculture	The program knowledge base and CDs provide access by researchers, regional water managers and leading farmers to the best current knowledge on technology, practice and policy for sustainable irrigation. Repositories of this knowledge ensure that new investments build on existing capacity and that research information is readily accessible to all users. The case study series provides an opportunity for leading irrigators to share their knowledge on technology adoption and management practices to a wider audience. Case studies are a recognised tool for building interest and confidence in end users of a new technology or approach as they give real-world demonstration of the effectiveness and applicability of new research. Synthesis guides for irrigation growers – such as recycled water and soil structure and productivity – provide irrigators with information on the best available technology and management practice to address on-farm issues. Guides also demonstrate how the research was applied and tested on farms, increasing the confidence of new users to adopt.
Communications activities which raise awareness about sustainable irrigation	The program has undertaken the following activities: • Annual Investment Forum to share outcomes of research and extension activities • produced fact sheets, publications and CDs featuring the latest knowledge and how it can be applied. These are made available directly to irrigation audiences and promoted via the program website and at events. • sponsored relevant irrigation conferences.	These activities are used to raise awareness about the research being undertaken and delivered and how irrigators, water managers and policy makers can access and use the knowledge and experience from the program. There is a consistently high demand for NPSI information resources at major events such as the Australian National Committee on Irrigation and Drainage Conference and the Irrigation Australia conference. NPSI resources provide information that delivers the 'complete' picture for sustainable irrigation, along with technical guides and resources which practitioners can use on-farm.

National Program for Sustainable Irrigation: Performance against planned outputs 2006-07 continued

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
Complete program evaluation. Complete scoping and development of new program phase	An external evaluation of Phase 1 was carried out by Hassall & Associates. A Phase 2 Strategic Plan was completed.	The external evaluation highlighted the program's strengths and identified areas which can be strengthened through Phase 2. Key points were: the program created a forum to identify and discuss issues impacting on sustainable irrigation, the program was consensus based and forward looking, and it provided a mechanism to invest in irrigation issues of direct relevance to irrigators' needs and to share knowledge. The Phase 2 Strategic Plan identifies priority issues for investment including evaporation; systems sustainability; climate, energy and water; socio-economic consequences of government policy initiatives; root zone and precision irrigation. Significant collaboration by partners has been brokered against this Plan.
Negotiate investment of new funds by current partners in new phase. Broker new investment from new partners	Phase 2 has 13 investing partners - 10 from Phase 1 and 3 new partners. Partners are irrigation commodities, water managers, and government. Negotiations will continue in 2007-08 to broker further investment.	The collaboration provides financial capacity and efficiency of investment for program partners to address the fundamental issues facing irrigation. The relationships forged foster innovation through brokering knowledge and experience sharing across industry and regional boundaries. The collaboration also enables industry and government to work closely together to deliver positive outcomes for public and private interests - such as enhancing productivity while reducing environmental impact.
Establish strategic alliances with relevant players in water and irrigation, such as National Water Commission	The program has a strong network of alliances within the irrigation industry and with Australian Government agencies. The program has been proactive in seeking to work with the National Water Commission, Department of the Environment and Water Resources, Department of Agriculture, Fisheries and Forestry and the Murray-Darling Basin Commission.	The program's strong engagement within industry and with Australian Government agencies uniquely enables it to align industry investment priorities with Australian Government priorities. The program's technical capacity and understanding of industry practice and need enable it to inform government implementation strategies of major initiatives, such as the National Plan for Water Security.

Program collaborators

Sunwater, Queensland
 Horticulture Australia Limited
 Goulburn-Murray Water, Victoria
 Cotton Research and Development Corporation
 Harvey Water, Western Australia
 Lower Murray Water Authority, Victoria
 Wimmera Mallee Water, Victoria
 Ord Irrigation Cooperative, Western Australia
 Australian Government Department of Agriculture, Fisheries and Forestry
 Department of Natural Resources, Mines and Water, Queensland
 Department of Primary Industries and Resources, South Australia
 Department of Environment Water and Catchment, Western Australia
 Department of Agriculture and Food, Western Australia



Dr Peter Hayman at the Managing Climate Variability parliamentary briefing, Canberra, 28 March 2007.

Managing Climate Variability

The Managing Climate Variability program has been helping Australian farmers to manage climate risk 'on the ground' for more than a decade, providing them with practical tools to incorporate climate information into farm business decisions. The program is a collaborative effort between six of the Rural Research and Development Corporations and the Australian Government. The top priorities are: improving seasonal forecasting - its accuracy, lead-time and ease of use; providing tools and services to farmers and agribusiness for managing climate risk; and increasing the adoption of climate risk management among Australian farmers and natural resource managers. 2006-07 has been a transition year for the program, with a new phase of three year investment ready to commence from 1 July 2007. This retains the focus on forecasting and risk management, and has an increased emphasis on climate change. Managing climate variability is a key strategy for farmers managing under a changing climate and our ability to forecast variability will be influenced by climate change.

A major activity for 2006-07 was the Return on Investment analysis of the program carried out by Agtrans Research and AGECC Consulting. The evaluation reported triple bottom line benefits from the program and found that:

- Increased adoption of seasonal climate forecasting leads to improved profitability in agriculture and decreased farm income variability
- Improved personal capacity of land managers to manage climatic variability and adapt to climate change
- Reduced level of degradation of Western Division grazing lands resulting in less soil erosion, improved biodiversity and improved landscape aesthetics.

Opportunities which could be addressed in future programs include:

- Catchment and regional studies regarding climate change and climate variability including the use of seasonal climate forecasting
- Positioning multiple production locations in the face of climate change and increasing variability.

Managing Climate Variability Program: Performance against planned outputs 2006-07

PLANNED OUTCOME	ACHIEVED OUTCOME	OUTCOME/IMPORTANCE
Complete research projects and their review	Examples of program research and application development during 2006-07 include: • Yield Prophet • building effective climate risk management in the WA grain belt • National Whopper Cropper for farm advisers • using seasonal tools to assist dairy farmers to manage feedbase • a better understanding of Australia's regional climate drivers • improved prediction of the Northern Australia wet season • techniques to increase the success of tree establishment using seasonal forecasts • NRM implications embedded in production-based seasonal climate tools • managing NRM in a changing and variable climate.	The suite of projects across the program is building strong forecasting and risk management tools and capability for Australian farmers. Regional and NRM managers are also increasingly adopting climate risk management tools. Climate risk management increases managers' ability to build the resilience of their businesses from a financial and sustained productivity perspective. Tools such as Yield Prophet enable farmers to make strategic production decisions as seasons unfold – such as to grow or bale a crop. The choice will significantly impact on the profit result. Increasing capability to manage variability, increases farmers' ability to manage under climate change. For farmers the 'within season' and short term expression of climate change has a powerful influence on business viability.
Develop synthesis products promoting outputs	A new project working with Bureau of Meteorology has been established to create a seasonal forecasting hub.	The BoM weather website is one of the most recognised and used websites by farmers and regional managers. A joint venture between the Managing Climate Variability program and BoM will create a hub that increases the accessibility of the best available knowledge and tools for seasonal forecasting and on-farm risk management. The program extension activities will direct users to the hub, increasing adoption and use of tools.
Communications activities which raise awareness about the value of seasonal climate forecasting	The program newsletter Climag has been produced three times during 2006-07. Fact sheets summarising projects are available to raise awareness of knowledge that is available. A tools stock take has been completed which will be web based to increase accessibility.	Climag is a publication recognised for presenting in brief the latest knowledge and advances in seasonal forecasting. It is pitched at an informed readership of researchers, leading farmers and resource managers. It provides a direct link from program to end users keep the forecasting community up to date.
Complete Program evaluation	Final Report submitted May 2007	Provides analysis of the program's activities outlining successes and areas for improvement and of the feasibility of a second phase.

Managing Climate Variability Program: Performance against planned outputs 2006-07 continued

PLANNED OUTCOME	ACHIEVED OUTCOME	OUTCOME/IMPORTANCE
Undertake scoping and development of new phase of climate program	A new phase has been agreed and a new Program Management Agreement is being developed.	To determine the feasibility of a second phase of the program
Negotiate investment of new funds by current partners in new phase	A renewed collaboration of the meat, grains, sugar and dairy RDCs has been brokered. The Australian Government will also once again support the program.	Climate variability is a major issue for all Australian commodities. Drought policy and response are critical national issues for governments. There are strong efficiencies through co-investment, particularly against delivering of fundamental forecasting science which is applicable across jurisdictional boundaries and commodities.
Broker investment from new partners	The fisheries, cotton and wool RDCs have expressed interest in the program. The Australian Greenhouse Office is also a likely investor.	Climate variability impacts on all commodities. There is therefore a strong rationale for those commodities not yet investing in the program to join in 2007-08.
Establish strategic alliances with other climate research investors and providers	South-East Australia Climate Initiative The foundations for a new Northern Australia Climate Initiative established	The South-East Australia Climate Initiative is a collaboration of Murray-Darling Basin Commission, Australian Greenhouse Office, Victorian Department of Sustainability and Environment and the Managing Climate Variability program working with BoM and CSIRO. It will deliver downscaled predictions on climate and water availability for the Murray-Darling Basin and deliver new capacity in seasonal forecasting. The new northern initiative will bring a collaboration of research investors and providers to address climate science, application and implications of climate change and variability for the North.

Program collaborators

Australian Wool Innovation Limited*
Grains Research and Development Corporation
Meat & Livestock Australia
Australian Government Department of Agriculture, Fisheries and Forestry
Sugar Research and Development Corporation
Dairy Australia
Rural Industries Research and Development Corporation
National Farmers Federation*

*Associate Partners

Healthy Soils for Sustainable Farms

The Healthy Soils for Sustainable Farms program is now well established and actively addressing its aims, which are to 'establish, promote and implement the links between soil health, rainfall management, agricultural production and water catchment management'.

The program offers practical, hands-on activities to help improve soil management in ways that are relevant to each region and industry.



Minister for Agriculture, Fisheries and Forestry, the Hon. Peter McGauran MP, President of the Victorian Vegetable Growers Association Luis Gazzola, and Land & Water Australia Executive Director Dr Michael Robinson at the launch of the 'Soil Interpretation Ute guide' for Vegetable Growers. Werribee, Victoria (Catherine Viljoen, 2007).

Healthy Soils for Sustainable Farms: Performance against planned outputs in 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Establish applied research and demonstration sites nationwide	Applied research and demonstration sites were established as part of adoption project activities. Successful field and training days were held (77 in total), with participants in field demonstrations exceeding 8,000. Training material was distributed to approximately 2,500 people.	Field days, demonstration sites and training courses have reached significant numbers of the target audience with information about how to manage soil health. This wide coverage is a critical first step towards improving soil health in Australia.
Complete contracting of new projects	Project contracting was completed and activities are underway.	Contracting is an administrative enabling function for research.
Hold National Forum	The national Healthy Soils Symposium was very successful. 40 percent of delegates were farmers. Feedback indicated that Symposium content had high relevance to participants' business and that changes would be made based on the information given. There was good media coverage. Proceedings are available on www.healthysoils.gov.au	This high profile Symposium was designed to raise awareness about the contribution that healthy soils make to sustainable and resilient agricultural enterprises.
Develop a 'living' Knowledge Base	A framework was established and progress made in developing material to populate the Knowledge Base.	The Knowledge Base is a key resource, providing access to information about management of healthy soils across all regions and commodities in Australia.

Healthy Soils for Sustainable Farms: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Develop communication strategy and undertake activities which raise awareness about healthy soils	A communication strategy was developed and enacted. Awareness raising activities included weekly newsletters, program brochure, fact sheets and workshops.	Communication activities provide important links between the program and end users.
Develop monitoring and evaluation framework	A monitoring and evaluation framework was developed and implemented at individual project and at program level. A mid-term review was conducted.	A rigorous monitoring and evaluation framework was embedded within the program from its inception, to thoroughly demonstrate its impacts and benefits.

Program collaborators

Grains Research and Development Corporation
Australian Government Department of Agriculture, Fisheries and Forestry

Environmental Water Allocation

The Environmental Water Allocation program engages with water managers and regional communities to build upon the knowledge required for managing our rivers and waterways in a healthy state. More effective use of water resources is required in Australia to achieve the multiple aims of viable agriculture, industries, communities and environment. Improved outcomes from limited water drive the focus of environmental water allocation as well as other water uses. This requires a depth of biophysical, technical and institutional understanding. The program aims to achieve this understanding with a two-pronged approach by gaining knowledge on:

- better managing developed river systems to achieve a balance between environmental and consumptive uses
- understanding undeveloped ecosystems to limit threats from altered flow regimes.

Research projects are currently contracted under the following themes:

Theme 1: Improving, demonstrating and evaluating the benefits of environmental management of stressed rivers



Researchers and program management committee meet for the Environmental Water Allocation program's first coordination workshop at Hindmarsh Island, South Australia. The workshop included a visit to view research being undertaken at the mouth of the Murray River (Nadeem Samnakay, 2006).

Theme 2: Environmental water allocation in poorly understood aquatic ecosystems across Australia

Theme 3: Economic, social and institutional aspects of environmental water allocation

Theme 4: Quantify linkages in groundwater dependent ecosystems

Environmental Water Allocation: Performance against planned outputs 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Demonstrated benefits of environmental water allocation	A project was recently completed in Victorian coastal wetlands showing recovery rates in vegetation when wetlands are subjected to more natural variances in inundation. A wetland management manual has been produced with relevance for managing ephemeral coastal wetlands. A model has been calibrated for predicting effects of flows on selected biota in South Australia's Coorong and Lower Lakes at the Murray mouth.	There are multiple pressing demands for the use of Australia's scarce water resources: agriculture, industries, towns and communities, and the environment. The program is producing information which is helping decision-makers at regional, state and national levels understand the water requirements of aquatic ecological systems so that the impacts of their decisions about water allocations to competing demands can be better assessed. The program is achieving this by communicating project results through reports, briefings, workshops and conferences.
Methods for monitoring and evaluating environmental water allocation	A project to test the use of aquatic plants as indicators of environmental water benefits has developed a geo-coded database of aquatic plant collections which will assist in monitoring environmental flow impacts.	
New mechanisms for managing groundwater dependent ecosystems	A pilot project was recently completed, identifying six sites suitable for major projects investigating effects of water-table drawdown on ecosystems. The pilot project provides the foundation for secondary detailed studies.	
Assessments of water needs of aquatic ecosystems across Australia	Field work completed on investigation of water needs of ephemeral streams in the Grampian ranges. The project has revealed that refugia for invertebrates is much more restricted than previously believed – generally only limited to remnant waterpools. Second year of field work completed into water needs of fish in the tropical Daly River. Good relationships have established with indigenous peoples in order to incorporate traditional knowledge and foster participatory research.	

Environmental Water Allocation: Performance against planned outputs 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Collaboration between researchers and managers in designing environmental allocations	Consultancy completed assessing managers' knowledge needs for designing environmental flows. The report will inform the program on developing suitable knowledge adoption activities. A project has been established to assist DEW to understand the existing range of water entitlements used in Australia. The program funded researchers in the Coorong and Lower Lakes, assisting SA water managers with respect to the proposed weir at Wellington. Several of the program's researchers presented at the 5th Stream Management Conference in Albury. The event provided information and ideas to water managers to help improve their management decisions. The event was well attended by 275 people from by a diverse range of NRM groups State, Federal and local government water managers and policy makers. Substantial media coverage of the event included ABC Radio National's PM and World Today programs, TV news bulletins and regional newspaper articles.	
Assessments of innovative institutional approaches to water allocations	Eight 'Droplets' now completed proposing innovative policy approaches to institutional issues. The two page think-pieces have been influential in national debates on water reform with a current subscription list of over 3000 recipients.	

Program collaborators

Australian Government Department of the Environment and Water Resources
Fisheries Research and Development Corporation

Tropical Rivers and Coastal Knowledge

The Tropical Rivers and Coastal Knowledge research initiative brings together a multidisciplinary consortium to focus on the tropical rivers and estuaries of Northern Australia. The consortium includes Land & Water Australia, Charles Darwin University, the University of Western Australia, Griffith University, North Australia Indigenous Land and Sea Management Alliance and CSIRO, and brings together more than 50 of Australia's leading researchers from social, cultural, environmental and economic disciplines. The aim of the initiative is to provide the science and knowledge that governments, communities and industries need to make better decisions for the sustainable use and management of Australia's tropical rivers, estuaries and coasts. It will:

- increase our understanding of the social, cultural, economic and environmental benefits that our tropical rivers and estuaries provide
- develop methods and tools for assessing the implications of current use and potential developments
- identify opportunities to develop sustainable enterprises
- build the capacity and knowledge of local communities to manage Australia's tropical rivers and estuaries.



A research team on the Daly River, Northern Territory, undertakes fish sampling as part of a study investigating flow dependence and seasonal variation in fish distribution. (Brad Pusey 2007).

Land & Water Australia, together with the other consortium partners, has attracted approximately \$18 million to implement the initiative. The program has received Australian Government funding through the Commonwealth Environment Research Facilities program of \$8 million, Land & Water Australia's Tropical Rivers Program of approximately \$3 million, the National Water Commission's Raising National Water Standards program of \$5 million and \$2 million from the Queensland SmartState program. Altogether, in-kind funding of at least \$11 million is being provided from the research institutions, partners and state and territory governments that form the consortium.

Tropical Rivers and Coastal Knowledge: Performance against planned outputs 2006-07

PLANNED OUTPUT	ACHIEVED OUTPUT	OUTCOME/IMPORTANCE
New research projects underway that support the sustainable use, protection and management of Australia's tropical rivers and in particular to deliver: • methods for valuing the ecosystem services of tropical rivers • trial methods for undertaking total water resource assessment in tropical Australia • institutional arrangements for Indigenous participation in the NWI • a remote sensing approach to map and classify riparian gully erosion in Tropical Australia	Project assessing data on tropical rivers completed, providing an information base for determining and applying management priorities and land use practices through: • a multiple-scale inventory of the habitats and biota • risk assessments of the major pressures on the habitats and biota • a framework for analysis of the ecosystem services, provided by the habitats and biota A methodology for valuing and managing ecosystem services of tropical rivers developed Trial undertaken to develop techniques for determining total catchment water availability (surface and groundwater) in gauged and ungauged catchments Analysis of remote sensing data of riparian communities and gully erosion in the Gulf of Carpentaria undertaken.	The program is producing science and information which will help decision-makers in governments, communities and industries understand the ecology and range of values provided by tropical rivers and estuaries in northern Australia so that planning and decisions about the use and management of these water resources can be better informed. The TRaCK program is well linked in with national, state and regional stakeholders, including indigenous groups, to ensure the research is well targeted and its results communicated in a variety of ways. For example, specific consultations have been held with regional natural resource management groups and links have been established with the North Australian Indigenous Land and Sea Management Alliance and over the past year with the Northern Australia Land and Water Taskforce, which is examining the potential for further land and water development in Northern Australia.
New partner links established across Commonwealth, State and Territory agencies	Links established with the Northern Australia Taskforce and Assessment. Partnership and link established with North Australia Indigenous Land and Sea Management Alliance	
Knowledge and adoption strategies developed	Strategies developed and manager appointed. TRaCK brochure produced and website established www.track.gov.au	
Knowledge assets from fish research projects published	The first newsletter produced to provide information about the ecological requirements of fish in the NT's Daly River	

Program collaborators

Australian Government Department of the Environment and Water Resources (Commonwealth Environmental Research Facilities Program)
National Water Commission (Australian Government Water Fund)
Fisheries Research and Development Corporation
The Myer Foundation

Native Vegetation and Biodiversity

The new phase of the Native Vegetation and Biodiversity program started in 2006-07, with fifteen new projects addressing four major themes

- understanding and valuing the role of native vegetation and associated biodiversity in the delivery of ecosystem services
- effective and efficient retention and/or restoration of native vegetation to improve the conservation of native plants and animals
- management regimes for native vegetation that improve biodiversity values and ecosystem services at the landscape scale
- adoption and application of this knowledge to achieve the maintenance and restoration of healthy landscapes.

Several of the projects directly build on achievements from the 2001-05 program, including further work on genetic constraints to vegetation persistence, testing critical thresholds of vegetation cover, and determining guidelines for retention and management of vegetation regrowth. Other projects extend the geographical impact of the program (including the arid rangelands and the tropical woodlands), explicitly seek to measure the value of ecosystem services (including pest control and greenhouse gas abatement), and explore mechanisms for integrating research outputs with planning and on-ground practice (auction



Researchers and program management committee members met at the Old Parliament House in Canberra for the inaugural research coordination workshop for the Native Vegetation and Biodiversity R&D Program (Nadeem Samnakay, 2007). L to R: Alan House, Felix Bianchi, Nancy Schellhorn, Martin Walsh, Jeremy Russell-Smith

mechanisms, Master TreeGrower program, private conservation reserves). A brochure describing the program was produced during the year to increase awareness and participation in the project activities. In addition, a Knowledge and Adoption plan has been developed to raise awareness, provide project-based information, and to explore additional projects that engage directly with our primary stakeholders. There was additional effort during the year to synthesise information from the 2001-05 program into products, with one publication reviewing the value of the focal species approach for guiding the restoration of landscapes, and another providing key findings on how best to manage the genetic diversity of remnants in highly-fragmented landscapes.

Native Vegetation and Biodiversity program: Performance against planned outputs 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
New research projects underway that support the sustainable use, protection and management of Australia's native vegetation and biodiversity including to deliver:-	Fifteen new projects successfully underway	The program is producing information which is helping decision-makers at regional, state and national levels understand the role and function of native vegetation and biodiversity in delivering ecosystem services so that they can make better decisions about how these resources are used and how to manage the impacts of threatening activities.
Quantified benefits of native vegetation for pest control in cotton and grain crops	This project has selected two study landscapes in the agricultural Condamine catchment of southern Queensland, with contrasting levels of remnant vegetation (13 percent vs 6 percent). Assessment of the level of pest control from these native remnants will soon commence.	The program is achieving this by communicating project results through reports, briefings, workshops and conferences, including through the <i>Partners in Vegetation Management</i> group.
Geographical Information Systems tools to assist land managers predict the outcome for fire management tools in the Murray-Mallee region	This project has selected 28 landscape mosaic sites, with contrasting levels and patterns of long-burnt mallee, across south-eastern Australia, and initial biodiversity surveys and Geographical Information Systems fire mapping have commenced.	For example, the program, in partnership with the group, sponsored lead speakers at the November 2006 Fenner Conference on the Environment which brought together some of Australia's leading experts in land management, agronomy, conservation, economics, science, policy and industry to examine and inform the current debate around agricultural productivity and environmental protection.
Landscape design principles for maintaining ecosystems services in tropical agricultural landscapes	This project has selected study sites, and collected preliminary field data, for relating configurations of retained vegetation (ranging from uncleared to highly fragmented) to the distribution and relative abundance of flora and fauna. The results of this phase will be used to design agricultural landscapes thought capable of retaining their character over the long term and supporting important elements of the regional fauna.	(continued next page)

Native Vegetation and Biodiversity program: Performance against planned outputs 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Methods to improve the success of revegetation in productive landscapes	A project on understanding the genetic constraints to vegetation persistence in fragmented landscapes has selected study sites in NSW and south-west Western Australia with relatively low levels of remnant vegetation in patches of varying size. It has started measuring the gene flow of selected plant species among these patches and the consequences for their persistence. This will improve revegetation success through directing the placement of vegetation into the landscape such that gene flow and vegetation persistence will be optimised. A project designed to develop general principles to improve the effectiveness of conservation strategies has commenced meta-analysis of existing large data sets to develop more robust ecological guidelines on which to base planning of landscape restoration activities. A project to measure the biodiversity values and ecosystem services of regrowth vegetation in modified landscapes has selected sites, in mulga lands of south-west Queensland, in which regrowth contributes varying amounts of the native vegetation cover. Measurements of biodiversity and ecological processes will guide how best to manage and configure regrowth in the landscape.	(continued from previous page) The program also worked with the <i>Partners in Vegetation Management</i> group to successfully sponsor and organise a stream of sessions at the Tamar NRM Conference on Biodiversity: Balancing Conservation and Production – Case Studies from the Real World in Launceston, Tasmania, which attracted over 260 delegates including regional NRM groups, farmers, NGOs and policy advisers.
Improved education and extension tools	This project is looking at how best to integrate native vegetation and biodiversity information into the well-regarded Master TreeGrower program.	

Native Vegetation and Biodiversity program: Performance against planned outputs 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
New partner links established across Commonwealth, State and Territory agencies, and industry and non-government groups involved in native vegetation management	LWA has helped establish the <i>Partners in Vegetation Management</i> group, which is a new partnership of leading national NRM organisations to better coordinate information and knowledge exchange across the spectrum of native vegetation management. It includes DAFF, DEW, Greening Australia, Bureau of Rural Sciences, CSIRO, the Joint Venture Agroforestry Program and the University of Melbourne Master TreeGrower program. Representatives from this group contribute to knowledge exchange and knowledge sharing activities in order to deliver consistent messages related to the management of vegetation in rural landscapes.	
National research capacity in native vegetation, ecosystem services and biodiversity management	The 15 projects of the program currently engage directly with 12 regional NRM bodies, 6 universities, 11 State Government departments, several NGOs and corporate organisations and a large number of individual landholders.	

Program collaborators

CSIRO

Native Vegetation Program

The Native Vegetation Program concluded during 2006-07, and delivered three key outputs.

A fourth edition was produced of Thinking Bush, Land & Water Australia's occasional publication on native vegetation management. This summarised the results and provided insights to the knowledge gained from most of the projects from the past five years of the program. The projects have had a considerable impact on how policy makers and regional natural resource management practitioners plan their approaches to landscape conservation. The publication goes out to more than 3000

subscribers and provides a mechanism for readers to pursue specific areas of research of interest to them.

Dr Andrew Huggett produced a commissioned report titled *A review of the focal species approach in Australia*. This publication reviewed the focal species approach - a scientific method for determining native biodiversity conservation priorities - and its application to fragmented agricultural landscapes. It brings together the main findings to emerge from several research projects conducted under the program and was produced to better inform regional natural resource management groups, such as Catchment Management

Authorities, about the strengths and weaknesses of the approach and its applicability. The review has received very favourable feedback from stakeholders with anecdotal evidence that it is already being used to help inform the development and implementation of regional natural resource management strategies for biodiversity conservation.

A technical bulletin *Managing genetic diversity in remnant vegetation* was produced which captures the key results from a major project that studied the genetic variability within remnant populations of plants. The project identified several factors that greatly influence seed quality, such as the size of remnant populations, with

significant consequences for the viability and success of revegetation programs. This means that the conventional wisdom that using seed of local provenance is best is not always true. These results have had a major impact on the operations of FloraBank, a service provided by Greening Australia with Natural Heritage Trust funding that provides information and resources for the native seed sector.

The ongoing harvest of knowledge from this program will continue to be used in the Native Vegetation and Biodiversity program including the planned production of a guide on landscape restoration aimed at state agency and regional natural resource management planners.

Native Vegetation Program: Performance against planned outputs 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/ IMPORTANCE
Synthesised outputs from the concluding Native Vegetation Program (1999-2005) disseminated.	Three publications have been produced and distributed widely. Thinking Bush Issue 4 synthesised the key messages emanating from the program. Project specific publications include reviewing the value of the focal species approach for guiding the restoration of landscapes, and communicating key findings on how best to manage the genetic diversity of remnants in highly-fragmented landscapes.	The program has produced information targeted at decision-makers at regional, state and national levels to improve decisions about the conservation and management of native vegetation in agricultural landscapes. This includes communicating through the occasional publication Thinking Bush, which summarised the results of most projects in this program in its 4th edition, and specific synthesis reports such as <i>A review of the focal species approach in Australia</i> which is informing regional and state planners about the how to apply this particular scientific method for determining native biodiversity conservation priorities in regional landscapes.

Program collaborators

CSIRO

Defeating the Weed Menace research

In May 2006 Land & Water Australia entered into an agreement with the Australian Government Department of Agriculture, Fisheries and Forestry to manage the research component of a larger Defeating the Weed Menace program, which is scheduled to be completed by 30 June 2008. The aim of the research is to generate knowledge to prevent the development of new weed problems, to reduce the impact of existing weeds of national priority, and to build capacity for their management into the future. In 2006-07 the research component

commissioned 14 projects addressing several themes designed to meet the program’s aims. These themes include:

- developing best practice early detection, survey and eradication of potential weed species
- assessing risk of weed spread through different pathways
- the impacts of land use change on weed invasion
- the development of biocontrol agents for priority weed species.

Defeating the Weed Menace: Performance against planned outputs 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Scoping and commissioning new research projects	Fourteen projects from the first round call have been contracted and currently being implemented to generate knowledge against the above themes, some of which include: • assessment of risks of different sources and pathways of weed ingress within Australia under changing trade patterns and environmental conditions • analysis of the risks of productive land use change and peri-urban development on weed incursion within Australia • collaboration with industries to help weed source sectors reduce their risks • identification of new biological control agents for agreed national priority weeds.	Weeds are amongst the most serious threats to Australia’s primary production and the natural environment. The program is producing science and information to support decision-makers lower the rate of emergence of new weed problems, reduce the impact of existing weed problems and increase Australia’s capacity to manage weeds.

Defeating the Weed Menace: Performance against planned outputs 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Developing and implementing a Knowledge and Adoption Plan in conjunction with the broader Defeating the Weed Menace program. See http://www.daff.gov.au/natural-resources/invasive/weed-menace	Draft Knowledge and Adoption Plan developed for Defeating the Weed Menace research. Each contracted project has prepared a Knowledge and Adoption plan for the project and its outcomes.	

Program collaborators

Australian Government Department of Agriculture, Fisheries and Forestry
 Australian Government Department of the Environment and Water Resources (Defeating the Weed Menace Program)



Artificial environments designed to test the impacts of different types of disturbance on invasion of coastal dunes by primary invader species such as Bitou bush and by secondary invaders such as Lantana and Asparagus fern. [Tanya Mason, 2007]

In June 2007, a second round call for research projects in three additional priority areas was completed:

- developing efficient methods for surveying and eradicating agreed emergent weeds, and options
- quantifying the impacts of weeds on sustainability and the environment, and the relative benefits and costs of different control measures.

A knowledge assimilation workshop for Defeating the Weed Menace research is being planned for February 2008 with the intention of synthesising the key findings from the entire suite of research projects. More information on the research component can be sourced from <http://lwa.gov.au/weeds> which includes various downloadable documents providing information on the full suite of research projects and intended outcomes.

Joint Venture Agroforestry Program

The Joint Venture Agroforestry Program was established in 1993 and receives core funding through its partners: the Rural Industries Research and Development Corporation, Land & Water Australia, and Forest and Wood Products Research and Development Corporation.

The program aims to assist the development of profitable agroforestry industries while delivering beneficial natural resource outcomes. Agroforestry can provide multiple products and services: energy, wood and fibre, eucalyptus oil and oil products, other extractives, food, fodder and ecosystem services including improved farm viability, soil and salinity management and carbon sequestration.

In 2006-07, the program invested a total of \$1.3 million, of which \$0.45 million was provided by Land & Water Australia.



A farm forestry plot being supplemented with understorey species to provide biodiversity benefits (Richard Loyn, 2004)

Program collaborators

Rural Industries Research and Development Corporation
Forest and Wood Products Research and Development Corporation

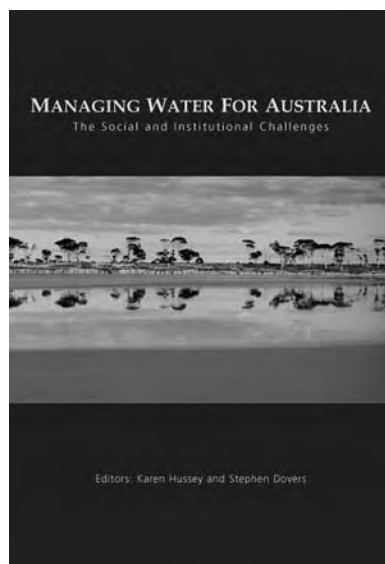
Joint Venture Agroforestry Program: Performance against planned outputs in 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/ IMPORTANCE
New project contracted on improved methods for direct seeding to reduce establishment costs	New project to improve survival and establishment, through seed pre-treatment, improved sowing methods and post-planting weed control. Commercial tree and shrub species will be sown in Western and south-eastern Australia.	Wider consideration of the potential for broadscale planning of woody perennials in low to medium rainfall zones, to improve drought resilience and farm returns
Trial markets for ecosystem services for farm forestry plantings	Evaluated feasibility of including small-scale plantings in carbon trading by regional catchment groups	Greater awareness of the potential for trading ecosystem services provided by trees.
Research portfolio improves guidelines for design and management of plantations for biodiversity and groundwater table outcomes	Surveys show a wide range of vertebrates use farm forestry plantings as part of the rural land mosaic, and shelterbelts are used by birds and predators of agricultural pests. Early trials of shrubs planted within commercial woodlots to enhance biodiversity outcomes Reported growth results from Greening Australia species trials in new farm forestry areas Measurements demonstrate lowered water tables in dryland salinity areas, as a result of planting trees. Productivity of adjacent pasture/crops suggests benefits from phase-farming trees after 3-4 years	Carbon report now in use by carbon consultants, regional groups, BRS and DAFF Improved product options and designs for commercial agroforestry systems Continued improvement in management of existing vegetation and plantations to enhance biodiversity, water use and economic considerations Better understanding of agroforestry product supply and marketing to assist industry
Ongoing research portfolio according to JVAP Five Year Plan: • identification and development of new or existing agroforestry products and services • improve product-market linkages • develop and improve agroforestry designs to optimise social, economic and environmental factors at the paddock, farm and regional-landscape scale	Screened woody perennial species for use as fodder in mixed grazing systems. Species options, nutrient content and digestibility were analysed, and promising species were planted for grazing trials. Evaluated woody perennial species as biomass-based crops incorporated in farming systems Screened lignin and cineole for potential new secondary chemical products, such as herbicides Provided marketing options to encourage use of sugar gum by architects and builders, and tested web-based single-desk marketing by a cooperative Collated improved information on markets and regional prospects for farm forestry products, to assist industry and research planning	
Knowledge and adoption plan implemented for completed projects	Updated the Farm Forestry Toolbox with species growth data from new regions, and delivered 14 regional training workshops Communication of research through Master TreeGrowers program, JVAP projects and conferences JVAP research highlights report to be written in 2007-08 as part of research delivery	

Social and Institutional Research Program

The Land & Water Australia *2005-2010 Strategic R&D Plan* provides a specific focus for research investment directed toward achieving natural resource management outcomes by focussing on social, economic and institutional issues. Investments in many programs are directed toward this outcome, but primarily this work occurs through the Social and Institutional Research Program.

In 2006-07 Land & Water Australia invested in 22 projects in social and institutional research. This investment has delivered new knowledge and contributed to improved natural resource management program design, implementation, and outcomes.



In 2006-07 Land & Water Australia produced a reference book, *Managing Water for Australia: The Social and Institutional Challenges*, in collaboration with the National Water Commission, the Australian National University and the Academy of Social Sciences.

Social and Institutional Research Program: Performance against planned outputs in 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Coordinate and develop the internal Land & Water Australia indigenous research portfolio	Drafted publication synthesising LWA's investment in indigenous NRM research titled <i>Approaches to the engagement of indigenous Australians in natural resource management: A synthesis of investment by Land & Water Australia</i>	The Department of Agriculture, Fisheries and Forestry, indigenous natural resource managers, researchers and LWA have improved capacity to coordinate and develop future research investments targeting indigenous audiences, and deliver NRM outcomes LWA has demonstrated leadership in the indigenous NRM research sector by taking stock of LWA's past research investments, identifying future research priorities in indigenous NRM research, and filling this gap in knowledge.

Social and Institutional Research Program: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Manage and review investment in Cooperative Venture on Capacity Building jointly with partner RDCs	Land & Water Australia represented at CVCB Steering Committee Meetings throughout 2006-07 to ensure CVCB investments aligned with Land & Water Australia and other RDC desired outcomes	LWA has improved knowledge, tools, and access to capacity building expertise as a result of the research outputs delivered by CVCB projects in the each of the four CVCB key result areas: • What works and why in extension and capacity building in rural and regional Australia • Fostering involvement – how to improve participation in learning • Optimising institutional arrangements • Supporting rural educators LWA has improved understanding of capacity building outcomes delivered by other RDCs. LWA has improved understanding and capacity to collaborate with RDCs in the future to deliver capacity building and NRM outcomes.
Promote progressive outcomes from new four year longitudinal project working with ten regional NRM groups to improve learning capacity to make investments that promote effective practice change	Progressive outcomes reported in written and oral form to Land & Water Australia and policy audiences during 2006-07. Fact sheet and other project outputs published and distributed to promote progressive outcomes.	Improved capacity within nine NRM catchment groups across Qld, NSW, Vic, Tas, SA and WA to plan, engage, evaluate and improve Improved understanding among nine NRM catchment groups of the drivers and barriers for practice change in their regions and how can they use this understanding to more effectively direct investment and deliver NRM outcomes

Social and Institutional Research Program: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Negotiate and manage further project partnership arrangements and external program management	Partnership arrangements with Australian Government and other stakeholders managed during 2006-07.	Improved clarity of understanding among 200 representatives of the research, policy, NRM and primary production sectors of the priority social and institutional research challenges to be addressed in order to achieve national water reform Improved clarity of understanding among 40 representatives of the research, policy, NRM and primary production sectors of the priority social and institutional research issues for NRM in peri-urban environments. Prospective project partnership arrangements on prospective research issues aligned with the LWA <i>2005-2010 Strategic R&D Plan</i> scoped and progressed
Develop and conduct second Program Call; commissioned projects for remaining program period 2007-10	All research monies expended as planned in 2006-07	Program research budget achieved as per LWA <i>Annual Operational Plan 2006-07</i>

Innovation

Land & Water Australia annually calls for highly innovative research from the Australian research community. Australia's rural landscapes and industries need new concepts, technologies and processes to make the breakthroughs to improve sustainability. Identifying and managing the high impact discoveries is an exciting opportunity to work with researchers who are responding to new and emerging issues and opportunities, through lateral thinking, fundamental research and detailed feasibility studies. Five projects were selected in the 2006-07 Innovation Call.



Land & Water Australia PhD students at 2006 PhD Workshop Canberra (Prue Vincent, 2006)

Innovation Call: Performance against planned outputs in 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
A group of highly innovative projects selected and funded from a competitive national call	Contracting completed	Innovative research that seeks to improve the sustainable management of Australia's natural resources is supported in this call

Innovation Call: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Research results on: • Policy integration for sustainable NRM. • Tax effective instruments for improving private sector conservation. • Incorporating equity into environmental policy. • Transition to a biofuel economy. • Transport of groundwater contaminants in heterogeneous aquifers. • Molecular environmental diagnostics for sustainable land management.	An approach to achieve policy integration for sustainable NRM is being published. An innovative model using well-established tax systems and private markets as the mechanisms for investing in NRM presented to Australian Government policy makers prior to road testing with philanthropists and private investors. Breakthrough analytical results that demonstrate equity and fairness in natural resource issues can reduce conflict and improve policy. The final report is submitted. Barney Foran is completing the biofuel economy research project. Transport of groundwater contaminants in heterogeneous aquifers project is completed and publication underway. Developed functional gene technology for applications in including pollution monitoring, water quality, soil nutrient dynamics, greenhouse gas emissions, soil acidification, revegetation and ecological restoration. Endocrine disrupting chemicals in Australian riverine environments is published and will be presented in conferences and workshops in November Completed field tests of a subsurface desalination unit suitable for remote settlements and commercialisation program is underway.	Significant research breakthroughs from Australia's leading natural resource scientists that have been presented to policy makers, researchers and the Australian community This has included innovations in resource markets, private funding models for natural resources management, methods for reducing water contamination and obtaining water quality improvements.
Travelling and Visiting Fellowships reports	Prof. William Bond (South Africa) added tree-grass coexistence into the FLAMES and SAVANNAH-AU simulation models model used to understand tropical savannah fire impacts.	Adds an essential piece of knowledge to northern Australian rangeland management
Postgraduate scholarship theses	Three students are finalising their PhDs for submission.	The capacity of Australian research community to do innovative natural resource management research is enhanced.

Innovation Call: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOME/IMPORTANCE
Outputs from the three inaugural Senior Research Fellowships widely promoted: • Stream-Aquifer Interaction in Australia (Dr Rick Evans) • ReThinking Rural Australia (Dr Neil Barr) • Drought and Freshwater Ecosystems (Prof Sam Lake)	• Technical and summary reports have been published and briefings held with decision makers to provide evidence for the discussion of water policy and water research in Australia. • Manuscript submitted and in final stage of international peer-review. • Manuscript submitted and approved for publication; now with publishers.	The outcomes of Dr Rick Evan’s work have included recognition of the link between surface and subsurface water. Improving the water accounting is a fundamental step in improving water planning and policy in Australia

Scholarships and Fellowships

Masters and PhD scholarships support outstanding students as they build skills and research capacity in natural resource management at the start of their careers. There are now 18 postgraduate students working in a variety of fields including four who have started in 2006-07. The research is building research capacity for Australia’s sustainable productive landscapes.

Working at the middle of the career path, the Senior Research Fellows program gives senior researchers an opportunity to concentrate their research and knowledge on management of Australia’s natural resources. It is a competitive scheme, designed to produce a specific body of work that in many cases is a synthesis of many years’ research experience. They will stand as significant contributions to sustainable use of Australia’s natural resources.

For example, in 2006-07 Dr Richard Evans, Principal Hydrogeologist with Sinclair Knight Merz, published a powerful analysis of *The Impact of Groundwater Use on Australia’s Rivers*. It proved to be a timely and important contribution to Australia’s water management planning and policy.

There are high expectations for the contributions being made by the other fellows who are working on:

- Drought and Freshwater Ecosystems (Professor Sam Lake)
- Re-Thinking Rural Australia (Dr Neil Barr)
- Capture and synthesis of hydrology and water quality knowledge from Queensland catchment studies (Dr David Freebairn)
- Blueprint for a Red Land (Dr Mark Stafford-Smith)
- Mechanism design approach to environmental policy (Mr Gary Stoneham).
- A New Charter for Exploring Australia’s ‘hidden’ Natural Resource, the Soil Biota (Dr Pauline Mele)
- The Scientist’s Garden: reflections on food and water (Dr Richard Stirzaker)
- Climate change and natural resource management in Australia’s grazing lands (Dr Greg McKeon)

The last three listed were awarded in 2005-06 and are described further below.

Dr Richard Stirzaker - The scientist's garden

Richard Stirzaker has worked for CSIRO since 1990 and has played a leading role in developing new strategies for managing water and soil in Australia's irrigation and extensive dryland agricultural landscapes. His passion for growing vegetables and understanding our use of water is reflected in his own garden which is bursting with fruit trees, vegetables, flowers and devices for measuring water in soil. Richard will use the fellowship to reflect on issues such as irrigation, salinity, agroforestry, organic farming, bio-mimicry, resilience and the commercialisation of intellectual property. These themes will be put side by side with the everyday conundrums that puzzle all those who grow things in their backyard garden.

Dr Pauline Mele - A new charter for exploring Australia's 'hidden' natural resource, the soil biota.

Pauline Mele has made significant contribution to Australia's knowledge of the relationship between soil biology, soil health and agriculture. Pauline is incredibly passionate about understanding the world's most diverse ecosystem – the soil biological ecosystem. In particular Pauline has undertaken extensive research profiling the DNA of microbes in the soil and looking at what species exist and their functions. Pauline works for the Department of Primary Industries in Victoria as a Senior Soil Microbiologist based at Rutherglen. The fellowship will enable her to explore how the vast array of emerging technologies (including soil metagenomics, microsensors and bioinformatics) may assist in the design of a new conceptual framework for soil biology research and the generation of knowledge based on ecological systems thinking and multi-component research.



Celebrating at the Senior Research Fellowships award night are Dr Michael Robinson, Bobbie Brazil, Dr Greg McKeon, Hon Julie Bishop MP, Dr Pauline Mele and Dr Richard Stirzaker, (2006)

Dr Greg McKeon - Climate change and natural resource management in Australia's grazing lands

Greg McKeon has worked in the fields of climate and pasture sciences for more than thirty years and has a deep understanding of the impacts of climate on profitability, productivity and sustainability of the grazed natural resources of Australia. His research crosses a variety of scientific disciplines and he is presently Principal Scientist with the Queensland Department of Natural Resources and Water. Greg will investigate if management regulations, guidelines and drought policies are flexible enough to adapt to climate change and look at what changes are necessary to improve and protect our grazed natural resources.

Progress against Strategy 2 - Collaboration and strategic analysis

Performance indicator:

- Number and financial leverage of program and project partnerships
- Increased research capacity in critical areas
- Quality and analysis of strategic issues in natural resource management

Performance measure:

- Financial leverage of collaborative programs
- Change in the distribution and quality of natural resource management research base
- Government feedback on the quality and utility of Land & Water Australia's reports on NRM research issues

Strategy 2 within the Land & Water Australia *2005-2010 Strategic R&D Plan* focuses on establishing productive partnerships and other collaborative efforts and promoting, integrating and reporting natural resource management research issues.

A number of key collaborative partnerships have been established with government and industry bodies. These partnerships vary from joint investment in research programs

to strategic alliances such as though the Australasian Joint Agency Scanning Network. Partnerships make research investments more efficient and bolster the research effort by reducing duplication, maximising investment and providing a greater platform for adoption.

Strategy 2 has also provided expert written discussion papers on specialised natural resource management issues. These analyses benefit the research effort by providing key information on priority issues, current and planned research activities, and the capacity of the research community to engage in research in priority areas. One outcome of Land & Water Australia's vision is to inform debate. Providing information on topics important to natural resource management and stimulating discussion in these areas helps to increase the understanding of these topics in the community.

Discussion papers so far completed are:

- Biotechnology and its implications for natural resource management in Australia
- Endocrine disrupting chemicals in the Australian environment
- Climate, energy, water: accounting for the links

Australasian Joint Agency Scanning Network

Land & Water Australia currently hosts the Australasian Joint Agency Scanning Network. The network is a cross-government approach to environmental scanning consisting of members from a number of Australian and New Zealand state and federal government agencies. Environmental scanning refers to the process of gathering and analysing information about the corporate environment. Issues and trends are presented in a quarterly report, the 'Horizon Watch Report'. Annual reports are also produced to summarise the year's findings. In addition to this the facilitator, Kate Delaney of Delaney & Associates Pty Ltd, provides seminars to member agency staff on environmental scanning and strategic thinking.

Member agencies all have mission statements concerned with the natural environment, whether it is environmental science, natural resource management, heritage conservation, or environmental security. This gives the group a focus in a mutual area and provides a specific focus for scanning efforts. Engaging with other agencies gives the network a synergistic effect by including people with a range of experience, and exposure to different information. A range of points of views reduces the risks of subjective interpretations of data. It is also an opportunity to forge strategic relationships across organisations and to increase information flow between government departments.

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOMES/IMPORTANCE
Partnerships for new Land & Water Australia initiatives established	New research partnership developed include Phase 2 of the National Program for Sustainable Irrigation and Phase 2 of the Managing Climate Variability Program	Research investments delivered more efficiently through reducing duplication and maximising investment
Global and Australian NRM Trends Reports 2007	Analysis of global NRM issues completed with Australian implications	Land & Water Australia Board better informed of current position of the organisation and Australia on major global NRM issues
Strategic Knowledge Framework completed. First analysis of NRM research activity in Australia by priority issue and region.	Strategic Knowledge Framework completed and populated with NRM issue analyses. Analyses of NRM issues released on website as discussion papers.	The debate on these NRM issues is better informed, and policy makers better able to make decisions
Methods for assessing science/research capacity developed and tested	Analysis of measuring science capacity completed	Future discussion papers better able to discuss science capacity
New Report developed on RDC investment in NRM for the 2006-07 financial year	RDC NRM Investment Report finalised August 2007	Greater consistency and collaboration among RDCs on investment in natural resource management.

National Land & Water Resources Audit

Performance measure:

Delivery of corporate administrative and contract management services per the Service Level Agreement to the Audit signed with the Department of Agriculture, Fisheries and Forestry

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOMES/ IMPORTANCE
Land & Water Australia works to support the achievement of the Audit's Annual Operational Plan, developed by the Audit management unit and endorsed by the Audit Advisory Council and the Natural Heritage Trust Ministerial Board.	Land & Water Australia supported the achievement of the Audit Annual Operational Plan by providing operational, accommodation and corporate support to the Audit through 2006-07.	Agreed national data protocols and standards, and tools and methodologies to: underpin nationwide assessments of Australia's land, water and biological resources; and to support monitoring and evaluation of natural resource management policies and programs to support sustainable development.

Operational report for the National Land & Water Resources Audit

The National Land & Water Resources Audit continues to play an important national role in reporting on the condition of our natural resources and evaluating the impact of government investment. Its partnership approach and independent position are key strengths. The Audit is well placed to facilitate ongoing development of monitoring frameworks and standards, coordinate future data collection, undertake national assessments and support program evaluations.

The Audit is an initiative of the Natural Heritage Trust and has been established to:

- assist in the identification of natural resource management priorities

- allow the progress of natural resource management investments to be assessed through the development and maintenance of accurate, cost-effective and timely data and information on the nation's natural resources.

The Natural Heritage Ministerial Board continues to approve Audit activity. A particular focus of Audit activity is the collation of information underpinning the monitoring and evaluation needs of the Natural Resource Management Ministerial Council.

Partners

The National Land & Water Resources Audit Advisory Council has representation from the Australian Government, all states, ACT and the Northern Territory, CSIRO, the Australian Bureau of Statistics and ANZLIC—the Spatial Information Council.

Land & Water Australia and the State of Environment 2006 have observer status at Council meetings.

Activity and achievements

Integrated reporting

Intensive Land Use Zone

- The reporting concept was piloted in two regions (Far North Queensland, Hunter Region of New South Wales) and a final report completed by the Bureau of Rural Sciences.
- Projects commenced in Victoria (North East Catchment Management Authority) and Tasmania (NRM North).

Rangelands

- The Audit staff participated in the Australian Collaborative Rangeland Information System management committee and an assessment report of the Rangelands was drafted by the ACRIS coordinator with assistance from all ACRIS management committee members.

Biodiversity

- An Australian Government executive steering committee and jurisdictional biodiversity working group was established to undertake a second terrestrial biodiversity assessment to be published in 2008.
- A work plan was developed and endorsed by the Audit Advisory Council.

Australian Agriculture—“Signposts for Australian Agriculture”

Signposts aim to report on the economic, social and environmental contributions of agriculture to society. Over the past year the Audit has been able to:

Leverage investment and technical input by other agencies to advance the Signposts project:

- The Bureau of Rural Sciences invested in the development of the electronic content management system of Signposts Plone and MySource Matrix.
- The Bureau of Rural Sciences commissioned an Australian National University review of the social components of the framework.
- The National Land & Water Resources Audit commissioned the Australian Bureau of Statistics to review the framework and provide recommendations on alternative outcome statements and associated indicators for inclusion.
- The Department of Agriculture, Fisheries and Forestry—Rural Policy and Innovation Division commissioned the Audit to identify relevant business management practices for inclusion in the Signposts framework.
- The Department of Agriculture, Fisheries and Forestry—Food and Agriculture Division commissioned the Audit to explore options for assessing the contributions

of the supply chain to environmental sustainability, using case studies from the confectionary and bread industries.

Enhance arrangements for governance and engagement of stakeholders, via:

- Three meetings of the high level reference group - with representatives from Australian and state governments, the Grains Research and Development Corporation, the National Farmers' Federation, and the National Food and Grocery Council.
- A workshop with Research and Development Corporation and government representatives to comment on the framework.
- Finalisation of a Signposts Communications Strategy – including a strategy for stakeholder engagement.
- Agreement by the cotton and wine industry to also be the subjects of a Signposts profile.
- A Signposts presentation to the Primary Industries Standing Committee's Industry Development Committee.

Information products

- Web profiles were populated for four industries: grains, horticulture dairy and beef.
- A pilot was report generated for the grains industry by the Centre for International

Economics, based on the grains industry web profile.

Data collection / collation

- The Audit commissioned the Australian Bureau of Agriculture and Resource Economics to conduct the Nationally Coordinated Industry Survey – to provide information for inclusion in the Signposts profiles for the grains and beef industries.
- The Audit commissioned the Australian Bureau of Statistics to update Signposts with data from the 2006 Population and Housing Census and Agricultural Census.

Data and information management

Information partnerships

The Audit has an on-going partnership with ANZLIC to report into natural resource management ministerial forums on issues associated with *community* access to natural resources information. The Audit had active involvement in Australian Government Spatial Data Management Group activities.

- A vision, guiding principles and way forward for an improved natural resource information infrastructure was published as a Statement of Intent.
- A background report was produced on the Status of the Australian Natural Resource Information Infrastructure.

Nationally linked data and information systems

- Continued to develop Australia's Resources Online reporting mechanism—built the initial web application.
- Developed initial application schemas for water quality and vegetation extent.
- The Ozcoast website is being developed as the national coastal information system in partnership with Geoscience Australia. This builds on the Ozestuaries website.
- Documented needs for a national Invasive Species Information System.

Maintenance and development of the Atlas and Library

- Continued development and management of the Australian Natural Resources Atlas and the Data Library.
- National Land Use Maps of Australia, Version 3 has data for the years 1992, 1993, 1996, 1998, 2000 and 2001 and is now available on Atlas through the Map Maker module. This data can also be downloaded from the Data Library.

Natural resource information collection standards and baseline assessments

Coordination

- Increased alignment of information needs to ensure efficiencies of data collection and use – all coordinators met to discuss integration activity.

Information needs, standards and products

- Work plans and contractual arrangements are now in place for all Matters for Target, and baseline collations are underway for most extent indicators.
- Protocols have been endorsed by the Audit Advisory Council for the following indicators:
 - land salinity
 - weeds including draft maps of extent and density of 98 weeds in Australia
 - invasive animals, including draft maps of abundance and distribution of ten vertebrate pests in Australia. A draft report was produced scoping an assessment and existing methodologies for monitoring and measuring impact of invasive fish in Australia
 - vegetation extent – and mapping the extent of Australia's native vegetation is underway
 - water quality indicators for nitrogen, phosphorus, turbidity, and in-stream salinity. Preparations of the final protocols are underway. Web based data delivery standards have been established as a proof of concept
 - social and economic indicators (land managers' capacity to change, and capacity of regional organisations) have endorsement and surveys to measure and report on these issue have commenced

- Frameworks for assessing condition are currently being discussed, and subsequent indicators of condition are being trialled for soil, vegetation, river and wetland health, estuaries and coasts.

Direction, planning and administration

Audit Advisory Council

- The Audit Advisory Council met four times during 2006-07 to advise and endorse Audit activity.
- The Council developed and endorsed a document recommending key issues in information collection and some strategic ways forward for the Audit. The discussion paper was delivered to the Natural Heritage Ministerial Board for their consideration.
- Partnerships with States and the Northern Territory progressed with contracted projects and the Audit facilitated workshops and meetings to assist in developing on-going efficient information collection.

Communication

- The Audit's web site was reviewed and updated to reflect the Audit's activities (June 2007).
- A suite of fact sheets about the Audit's activities was produced.

- Final publication formats were agreed and communication activity was targeted at advising of Audit results and jurisdictional interaction.
- Media releases and magazine/newsletter articles developed.

Direction

- Natural Heritage Ministerial Board was presented with proposals for additional Audit activity post 2007-08. With the announcement that the Natural Heritage Trust will be invested in till 2013, the Audit will now continue past the completion of the June 2008 operational plan. The outcomes expected and resources of the Audit will be progressively discussed with key stakeholders over the 2007-08 year.

Administration

- Land & Water Australia continued to provide administrative support (including accommodation, communication advice and services) under the service agreement.

Progress against Strategy 3 - Knowledge into Practice

Performance indicator:

- Rates of adoption of Land & Water Australia research outputs and products over the next five years

Performance measure:

- Adoption profiles of Land & Water Australia program and portfolio outputs and products including e-nalysis and publications.

2006-07 proved to be an exciting and innovative year for knowledge and adoption within Land & Water Australia where we made significant progress towards strategic goals. This included ongoing development and refinement of e-Business systems including the website, intranet and eNewsletters distribution.

Knowledge and adoption: Performance against planned outputs in 2006-07

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOMES/IMPORTANCE
Knowledge and Adoption strategies developed for new programs	Knowledge and adoption strategies are developed for all new programs, and knowledge and adoption plans are a requirement for all new research projects	The development of knowledge and adoption strategies early in the life of programs and projects focuses attention on how research outcomes can be communicated and made accessible, reducing potential barriers to adoption
Legacy products/processes developed for completed programs	Legacy products and processes were developed through the year for programs finishing in 2006-07, including Land, Water & Wool and the National Riparian Program	Legacy products are important to capture and synthesise the broad range of learnings from research projects and programs. Legacy processes recognise that the adoption of research outputs rarely if ever conform to project or program timeframes, and can be enhanced if legacy and adoption is made a focus.
Knowledge and Adoption Toolkit finalised and rolled out with training workshops	Development of the Knowledge and Adoption Toolkit is continuing, and is due to be released in the last quarter of 2007.	The Knowledge and Adoption Toolkit will assist researchers and program managers develop and implement knowledge and adoption plans. Planning for adoption of research outcomes early within the life of a project will improve the likelihood of research yielding adoptable outputs.

Knowledge and adoption: Performance against planned outputs in 2006-07 continued

PLANNED OUTPUTS	ACHIEVED OUTPUTS	OUTCOMES/IMPORTANCE
Synthesis products developed with successful models for developing them	Progress has been made on developing a methodology for systematic reviews and two pilots are being initiated in collaboration with the Knowledge for Regional NRM Program.	Synthesis products and systematic reviews assist in the communication of scientific research by bringing a large amount of research into a package which can be more easily assimilated and implemented at the regional NRM level.
New content management system with a corporate intranet established and update of program websites. Increased interactive capacity of corporate website	The Corporate intranet has been established and rolled out, and program websites migrated onto a new content management system. Developing new and more interactive capacity for the websites continues to be investigated and improvements are planned to be rolled out during 2007-08.	The internet is a primary distribution channel for knowledge and information from Land & Water Australia and its research programs. Activity in this area is designed to ensure a consistent and comprehensive approach to the management of web-based communication, supporting the delivery of knowledge products to key target audiences.
Mechanisms established to facilitate better linkages between regional NRM bodies and knowledge providers, and to assist regional NRM bodies to better manage their information and knowledge.	The Knowledge for Regional NRM program is progressing well with multiple initiatives to address this need. These initiatives include the NRM Toolbar, the Regional Knowledge Resource Kit, including training of Knowledge Leaders, and Knowledge Brokering services.	The expected outcomes of these initiatives are that the regional NRM bodies will be able to store, find and use their information and knowledge more effectively for on ground outcomes and to meet Australian Government reporting requirements. They will also be better able to link with knowledge providers to get on ground research to meet regional knowledge needs.
Corporate and program level events, publications and materials	The Corporation continued to develop and produce high-quality communication products and host a range of successful events, including the annual Open Day and a joint water and social science conference with the National Water Commission.	Solid communication practices, including events, publications and other materials form the basis for a range of knowledge and adoption activities, and the maximising the quality of these activities and materials will enhance adoption results.

Knowledge for Regional NRM Program

The Knowledge for Regional NRM Program is funded by the Australian Government through the Natural Heritage Trust. It aims to facilitate better linkages between regional natural resource management bodies and knowledge providers, and to assist regional natural resource management bodies to better manage their information and knowledge.

In order to achieve these objectives, three major packages have been developed:

1. Package 1 Better practice in knowledge management

This package is designed to provide natural resource management regions with skills and practices to better search, retrieve, manage, evaluate and use information and knowledge.

In order to assist in the development of these skills we have undertaken a series of Regional Knowledge Strategy pilots from which we are developing a Regional Knowledge Resource Kit which will be launched in September 2007.

Regional Knowledge Strategy pilot projects

A number of Regional Knowledge Strategy pilot projects have been undertaken with regional natural resource management bodies as part of the Knowledge for Regional NRM Program. Regions engaged

in the pilots are NRM North in Tasmania, South West NRM in Queensland, Central West Catchment Management Authority in NSW, Corangamite Catchment Management Authority in Victoria and Avon Catchments Council in WA. Andrew Baldwin of NRM North advises that

‘Effective knowledge management practices are essential for the organisation to access and distribute current best available science across the breadth of activities, from regional planning through to on-ground works...’

Although the program is still in the early stages, NRM North has already recognised and is taking action to implement a number of steps to improve current knowledge management practices. With the assistance of Land & Water Australia, NRM North has initiated mapping the organisation’s knowledge needs, and has recently audited current knowledge management practices. Through these activities, NRM North has been able to identify a number of areas where current Knowledge Management Practices fall short of the organisation’s requirements, and with the assistance of the Land & Water Australia project team, has identified a range of simple interventions that will improve the organisation’s current processes.

The experiences of the five regional bodies participating in the pilot projects are contributing to the ongoing development and refinement of the Regional Knowledge Resource Kit - an interactive online resource

for learning and skills development in information and knowledge management for regional natural resource management.

Subsequently, a team of Knowledge Leaders will be trained to deliver the knowledge development program across Australia to the 56 regional natural resource management body staff.

2. Package 2 NRM Toolbar

The NRM Toolbar is made up of several IT components including databases, information management tools and a custom search engine for natural resource management professionals in Australia. It is designed to sit on the web browser of the natural resource management professional rather than being just another web site. The NRM Toolbar is designed to be part of the natural resource management professional's daily work processes.

Excellent progress has been made in the development of the NRM Toolbar. Planning for the NRM Toolbar has determined that it will be released in three distinct stages.

- The first stage will be a web based interface that links to the NRM Search Engine and a number of databases that include information on knowledge brokers, decision support tools, events, and electronic networks servicing natural resource management professionals. The web based interface is scheduled for release in October 2007.

- The second stage of the NRM Toolbar development involves the addition of a mechanism to enable any region to set up a regional collection of information resources that is linked to Australian Agriculture and Natural Resources Online (AANRO). In addition, databases that capture experiences with the implementation of natural resource management practices and a list of funding opportunities available to regional bodies will be added to the site. These components of the NRM Toolbar are scheduled for release late 2007.

- The third stage of NRM Toolbar development will include release of the Toolbar interface and final components of the NRM Toolbar (My Library and the R&D Directory). The toolbar interface is scheduled for release early 2008 and will incorporate all previously released NRM Toolbar components.

Education.au, a non-profit company funded by State and Australian Governments, has been engaged to project manage two aspects of NRM Toolbar development. Education.au is independent from software providers and has considerable expertise in development and operation of online information services.

Education.au will undertake overarching project management of NRM Toolbar IT development. Outsourcing this aspect of the NRM Toolbar's development will draw specialised IT skills into the program to ensure that the more complex

IT components are designed and built according to best practice. This includes the design and technical oversight of My Library, the User profile and access control systems, the Regional Knowledge Bases, Knowledge Market Report and the Toolbar interface itself.

Education.au will also be engaged to develop the NRM Search Engine. Their project proposal indicates the Search Engine will be completed in September 2007, rather than February/March 2008 as originally anticipated.

3. Package 3 Supporting knowledge brokering in the natural resource management sector

The rationale behind the knowledge brokering package was to better utilise existing knowledge and information to address regional natural resource management knowledge needs and management issues.

The benefits were seen as:

- identifying knowledge needs of regional natural resource management bodies that can be met by existing information and provide this in an appropriate format
- link research providers with regional natural resource management bodies to meet their knowledge needs
- support region-to-region sharing of knowledge and experience.

Various products and services were designed to meet these needs:

- building communities of practice
- initiating collaborative investment and innovation
- supporting mentoring
- providing a service whereby questions which could not be answered in the regions could be assisted by a person
- synthesis of existing information products so they are more easily used on the ground.

The following products and services have been developed or are in the process of development within package 3:

Communities of practice

Initial discussions have been made with the Queensland Department of Natural Resources and the regional bodies in Queensland to set up a community of practice based on 'Shaping our knowledge system understanding' and aims for collaboration in natural resource management knowledge sharing in Queensland. Communities of Practice are seen as ideal mechanisms for **mentoring** and coaching by experienced natural resource management staff for those less experienced.

One of the outcomes of this community of practice discussion has been some preliminary discussions around **collaborative investment** across the Queensland regional natural resource management organisations.

Gotta question

Gotta question is a free information provision service provided by the Knowledge for Regional NRM Team. The objective of the service is to source existing material to address requests received through a 1300 telephone number or via an online form. The service is specifically designed for natural resource management professionals employed in regional natural resource management bodies.

We are currently employing an additional staff member available to take questions and have set up both an email contact address and a 1300 number. The new number is 1300 307 457.

Systematic review trial

The team is currently working with Land & Water Australia Landscapes to select some vegetation related questions suitable for a trial of the systematic review technique of synthesis. The reviews will be conducted using the process as defined in the systematic review guidelines released by the Centre for Evidence Based Conservation in the United Kingdom.

Decision support broker trial

A workshop was held earlier this year to discuss ways to build the capacity of regional bodies to select appropriate decision making approaches. A recommendation to come from this workshop was that a broker be made available with an appropriate level of technical knowledge to assist selection of approaches. The team has since allocated funds to trial a decision support broker.

Corporate enabling functions

During 2006-07 Land & Water Australia enhanced its systems support for research investment and contract management through the development and implementation of a new project management information system called Clarity. Clarity is an on-line, 'out of the box' product customised and supported by Computer Associates and was seamlessly commissioned in early July 2007, replacing the existing system known as KMS.

Clarity was procured by Land & Water Australia as part of a collaborative cluster procurement exercise with the National Water Commission, Rural Industries Research and Development Corporation and Cotton Research and Development Corporation. This collaborative approach provides the partners the opportunity to work together and build capacity in this and other areas going forward.

Other high level activities undertaken during the year to enhance the Corporation's enabling functions included a review of procurement systems and security practices. A post review analysis of the outcomes/ findings from both these reviews indicated that Land & Water Australia was demonstrating the application of best practice in both areas.

CORPORATE GOVERNANCE AND MANAGEMENT

This section describes the processes by which Land & Water Australia is directed and controlled to ensure sound strategic direction, high level performance, effective accountability and appropriate standards of risk management.

CORPORATE STATUS AND CORPORATE GOVERNANCE PRINCIPLES

Land & Water Australia is a Rural Research and Development Corporation within the Australian Government's Agriculture, Fisheries and Forestry portfolio. Its legislated title is Land and Water Resources Research and Development Corporation. It was established on 3 July 1990 under the *Primary Industries and Energy Research and Development Act (PIERD Act) 1989*, which provides a foundation for its accountability to Parliament and to natural resource users and managers across Australia. Land & Water Australia also operates under the provisions of the *Commonwealth Authorities and Companies Act (CAC Act) 1997*, which applies high standards of accountability while providing for the independence required by the Corporation's focus on national research programs.

The Rural Research and Development Corporations model

- The Rural Research and Development Corporations take a leading national role in planning, investing in and managing research for their respective industries.
- Research and Development Corporations are not research 'grant' agencies. Their enabling legislation requires them to treat research as an investment in economic, environmental and social benefits to their industries and to the people of Australia.
- Rather than focusing mainly on generating new knowledge for its own sake, Research and Development Corporations strive to deliver high rates of return on research investment by influencing the full range of interactions along the innovation chain.
- Striving for high returns on investment also leads Research and Development Corporations to apply significant resources to translating research outputs into practical outcomes.
- Research and Development Corporations are required to conduct their activities in accordance with strategic research plans and annual operational plans that take account of the research needs of end-users and other stakeholders. The plans are approved at ministerial level.

- Although Research and Development Corporations fund basic research, a high proportion of activity is applied research – both short-term and long-term.
- Research and Development Corporations are accountable to their major stakeholders and to the wider community.

Corporate governance principles

The operations of Land & Water Australia are overseen by a Board of Directors comprising a Chairman, six non-Executive Directors and an Executive Director. In May 2007 an amendment to the *Primary Industries and Energy Research and Development Act 1989* removed the position of Government Director.

The Board of Land & Water Australia is committed to the highest standards of corporate governance, in accordance with required statutes and principles. The Board provides strategic direction to the Corporation and oversees the implementation of Board decisions and directions by the Corporation's managers. The Board places a very high priority on achieving the highest standards of corporate governance and was pleased to see that Land & Water Australia had been given a clean bill of health in internal and external audits. The Board relies on a range of measures to ensure that the Corporation is operating according to the accountability provisions of the *Commonwealth Authorities*

and Companies Act (1997), including:

- induction training and continuing training for directors
- compliance checks and internal and external audits
- a due diligence check and code of conduct for directors
- effective processes for disclosure and management of (or perceptions of) conflicts of interest
- a risk identification and management framework
- effective systems for monitoring performance and ensuring that the Corporation can meet its debts and other obligations as they fall due.

The Corporation has a framework for evaluating Board performance in accordance with corporate governance principles and the Board's charter. This annual report includes a comprehensive summary of corporate governance matters, including a description of how strategic directions, policies and processes have been applied during the year. The Board continually reviews policies and processes concerning all major areas of Board operations. A number of Board committees (including Finance, Audit and Communication, and others deemed necessary from time to time), act on the Board's behalf. Appropriate Research

and Development Program Management Committees are also established to oversee program design and management, ensuring that desired program outputs are being met and that partnership and government funds are spent wisely.

IMPLEMENTATION AND PIERD ACT OBJECTS AND ACCOUNTABILITY TO PARLIAMENT

The paramount authority for Land & Water Australia's activities is section three of Land & Water Australia's enabling legislation (the PIERD Act), which specifies the legislative objects of Research and Development Corporations. The objects are essentially to fund and administer research and development with a view to carrying out:

- development of primary industries
- sustainable use and sustainable management of natural resources
- more effective use of the resources and skills of the community
- improved accountability for expenditure.

Table 1 (on page 6) lists the four objects and outlines the way in which the strategies described in the research and development plan address them.

The web address for the PIERD Act is: www.austlii.edu.au/au/legis/cth/consol_act/piaerada1989531/

The Corporation is accountable to the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, the Hon. Sussan Ley, MP – and, through her, to Parliament. The Minister is empowered by the PIERD Act to:

- approve the Corporation's five-year Strategic Research and Development Plan, Annual Operational Plan and variations to both of these plans, assessed against the objects set out in the Act
- select and appoint the Chairperson; and appoint the Presiding Member and other members to the Selection Committee for nominated Board positions
- approve the nominees for membership on the Board
- transfer contracts, agreements and assets held in the name of the Australian Government to the Corporation.

Under the *Commonwealth Authorities and Companies Act 1997*, the Minister must table the Corporation's annual report in Parliament. The Minister is responsible for the Corporation's enabling legislation and in turn is answerable to Parliament. The Minister also has other discretionary powers (provided through section 143 of the PIERD Act) to give written directions

to the Corporation as to the performance of its functions and the exercise of its powers. The Corporation is also obliged to ensure compliance with any policies of the Australian Government of which it is notified by the Minister under section 28 of the CAC Act.

Responsible ministers

Throughout the year the responsible ministers were:

- current Minister for Agriculture, Fisheries and Forestry - the Hon. Peter McGauran, MP
- current Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry - the Hon. Sussan Ley, MP

Compliance with Australian Government statutes and policies

The Corporation's compliance with statutes and policies of the Australian Government is detailed in Appendix 2. Notifications of Government general policies and administrative matters by the Minister for Agriculture, Fisheries and Forestry or the Parliamentary Secretary in previous years had continuing effect. The Minister for Agriculture, Fisheries and Forestry issued a notification effective 1 March 2007 that the Australian Government's Protective Security Manual is to apply to Land & Water Australia as a general policy.

Important Australian Government rural policy frameworks

Six policy frameworks are particularly significant to Land & Water Australia:

1. Australian Government National Research Priorities
2. Australian Government Rural Research and Development Priorities
3. the Australian Government's Natural Heritage Trust
4. the Prime Minister's National Action Plan for Salinity and Water Quality
5. the National Water Initiative
6. the National Plan for Water Security.

Accountability to representative organisations

Land & Water Australia is accountable to two representative organisations, with memberships comprising key natural resource users and managers. They are:

1. The National Farmers' Federation, PO Box E10, Kingston ACT 2604
2. The Australian Conservation Foundation, 1st floor, 60 Leicester Street, Carlton VIC 3053.

Funding for representative organisations

The Corporation provided funding of \$52,000 (excluding GST) to the Australian Conservation Foundation in 2006-07 for a research project undertaken by Dr Rosemary Hill, *Investigation of a Conservation Economy Model for Indigenous Northern Australia*.

No payments were made to the National Farmers' Federation in 2006-07.

Transparency of research project information

Details of all projects funded by Land & Water Australia during the year are entered on to the publicly available online database (www.aanro.net) as part of the Australian Agriculture and Natural Resources Online information service. Details such as project title, principal investigator, objectives, contact numbers and amounts of funding provided are listed in this database. Abstracts of all final reports received by Land & Water Australia are also entered on the database. The database is currently being redeveloped as a full text digital repository which will further enhance public access to information about and from Land & Water Australia's research investments. Land & Water Australia is managing this project on behalf of a consortium which includes the Primary Industries and Natural Resource Management Standing

Committees and the combined Rural Research and Development Corporations.

RISK MANAGEMENT

Land & Water Australia's risk management policy is integrated into its daily activities and overseen by the management team and the Audit Committee. The policy seeks to protect the Corporation's public and commercial position and its employees, information and property. A risk register identifies each risk, describes its probability, likely consequences and mitigation strategy, and records the status of the mitigation strategy.

The risk management policy also incorporates a fraud control framework in accordance with the Fraud Control Policy of the Commonwealth — Best Practice Guide for Fraud Control (Australian National Audit Office Audit Report No. 39 of 1996-97), which seeks to minimise the likelihood and impact of fraud. The policy is reviewed regularly by the Board's Audit Committee to ensure that it remains relevant to the Corporation's business. Internal audits, an important component of the risk management framework, are managed by the Audit Committee. The Risk Management Plan and the Fraud Control Plan were both substantially overhauled and rewritten during 2004-05.

No incidence of fraud was detected during 2006-07.

Indemnities and insurance premiums for officers

The Corporation has comprehensive insurance cover with the Australian Government insurer Comcover for its directors and officers. In accordance with the contract of insurance with Comcover, the Corporation is prohibited from disclosing details of insurance.

SUSTAINABILITY REPORTING

Land & Water Australia is an organisation focused on sustainability. In order to ensure this focus covers not only the projects in which we invest, we have started a program to analyse and report on the environmental impacts of our office activities. The 2006-07 financial year was our first year collecting data on the environmental performance of our office. The selected measurements are based on the Global Reporting Initiative Guidelines which will be used to develop the sustainability report. We plan for this sustainability report to be a regular inclusion in future annual reports.

This report covers the impact of office activities only. The impact of research funded by Land & Water Australia in a social, economic and environmental context is represented by the Return on Investment report (see page 24).

Resource use and waste

During the year we started a number of initiatives to reduce the resources we use and the amount of waste we generate.

Paper use was reduced by setting photocopiers in the building to duplex as a printing default. The amount of duplex printing has increased from 33 to 75 percent over the year.

In April 2007, Land & Water Australia trialled the use of the Desert Cube waterless urinal system to reduce water consumption. While the office block lacks a dedicated water meter to measure savings, given current water issues, any savings that can be made are important. Estimations of water savings through the Desert Cube system are available on their website (<http://www.desert.com.au/>).

In July 2006 Land & Water Australia began recycling toner and inkjet cartridges through Close The Loop (<http://www.closesthe-loop.com.au>). Over the past year we have diverted 55 kilograms of these wastes from landfill disposal.

Staff also manage a worm farm to reduce the amount of organic waste sent to landfill.

Paper

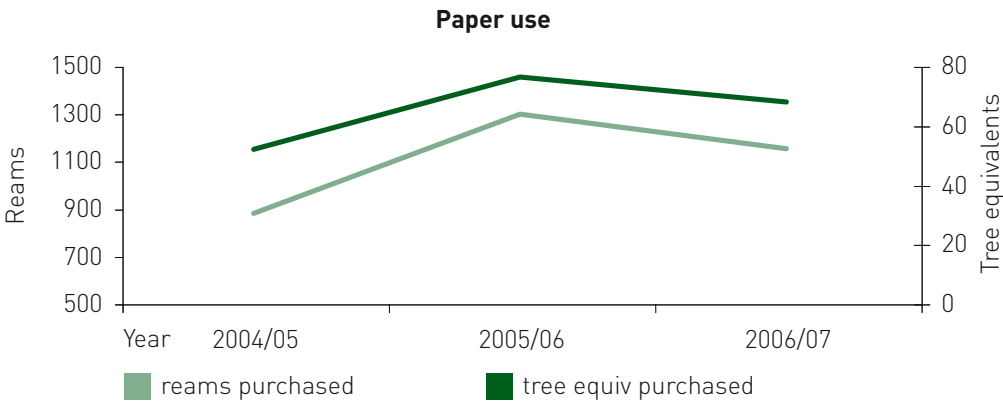
Land & Water Australia uses 100 percent recycled paper for office printing. Total paper consumption has decreased since the last financial year.

Table 5. Paper use by year

	2004-05	2005-06	2006-07
Reams purchased	876	1292	1146
Recycled (Litres ²)	21840	28080	24840
Average duplex	49.28%	36.69%	57.93%
Reams of paper/FTE	20.4	27.5	19.9

FTE - Full Time Equivalent

Figure 5. Paper use by year

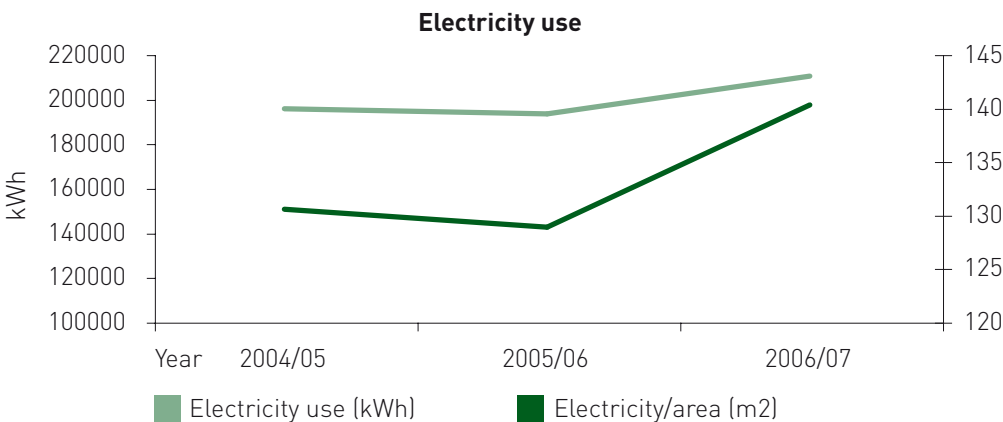


Electricity

Total electricity use at Land & Water Australia has increased since 2004-05 due to an increase in staffing numbers from 43 to 57.5 in 2006-07, and an increase in our IT

capacity involving an increase in the number and power of our servers. Electricity use per staff member has actually decreased over this period. An energy audit is planned for the coming year.

Figure 6. Electricity use



Carbon emissions

Land & Water Australia is investigating ways of reducing and mitigating its carbon footprint.

Figure 7. Tonnes of carbon dioxide emitted in 2006-07 by source (total 407 tonnes)

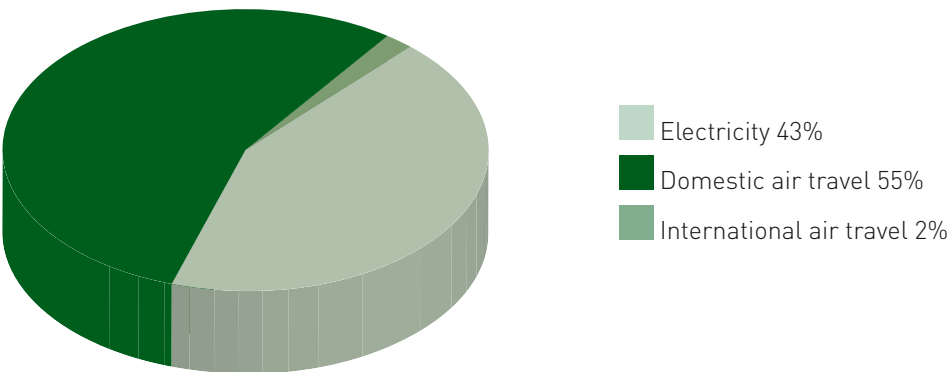


Table 6. Carbon dioxide emissions by year by source (tonnes)

	2004-05	2005-06	2006-07
Electricity	162.9	160.8	175.1
Domestic airmiles			222.2
International airmiles			9.7
Total ¹	162.9	160.8	407.0

1. data for 2004-05 and 2005-06 lacks airmiles data

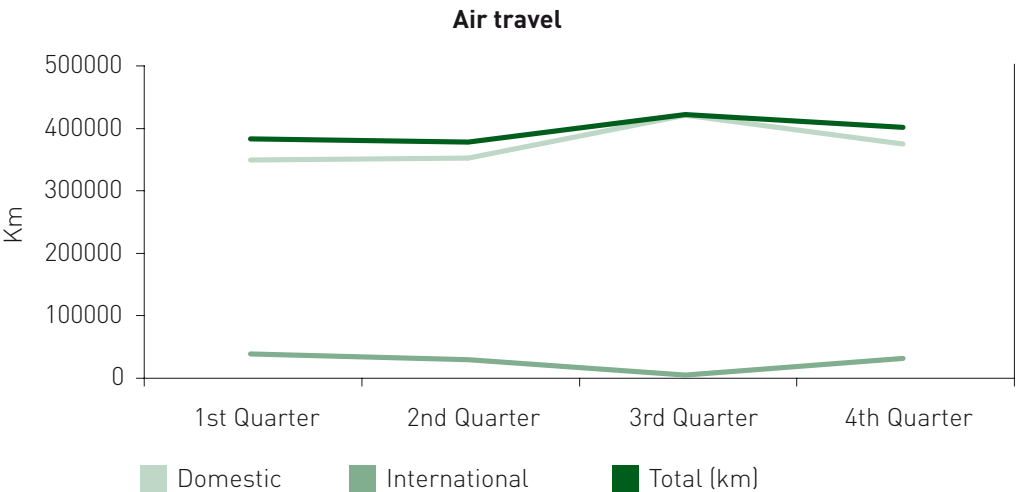
The staff social club organised a tree establishment day with Greening Australia in October 2006. Around 5000 seeds were sown by staff, an enormous effort. With a germination rate of close to 100 percent confirmed by Greening Australia, as adult trees that would offset around 1200 tonnes of carbon dioxide.

Air travel is our biggest contributor to carbon dioxide emissions. Land & Water Australia began collecting airmiles data

at the beginning of the 2006-07 financial year. Domestic travel is an important part of core business to liaise with stakeholders including primary producers in regional locations. However, we are trialling the use of web conferencing facilities to reduce our domestic travel where possible over the coming year.

The office does not operate a car fleet, relying on taxis for local travel and hire cars for longer distance journeys.

Figure 8. Airmiles travelled by staff and Board 2006-07



Staff profile

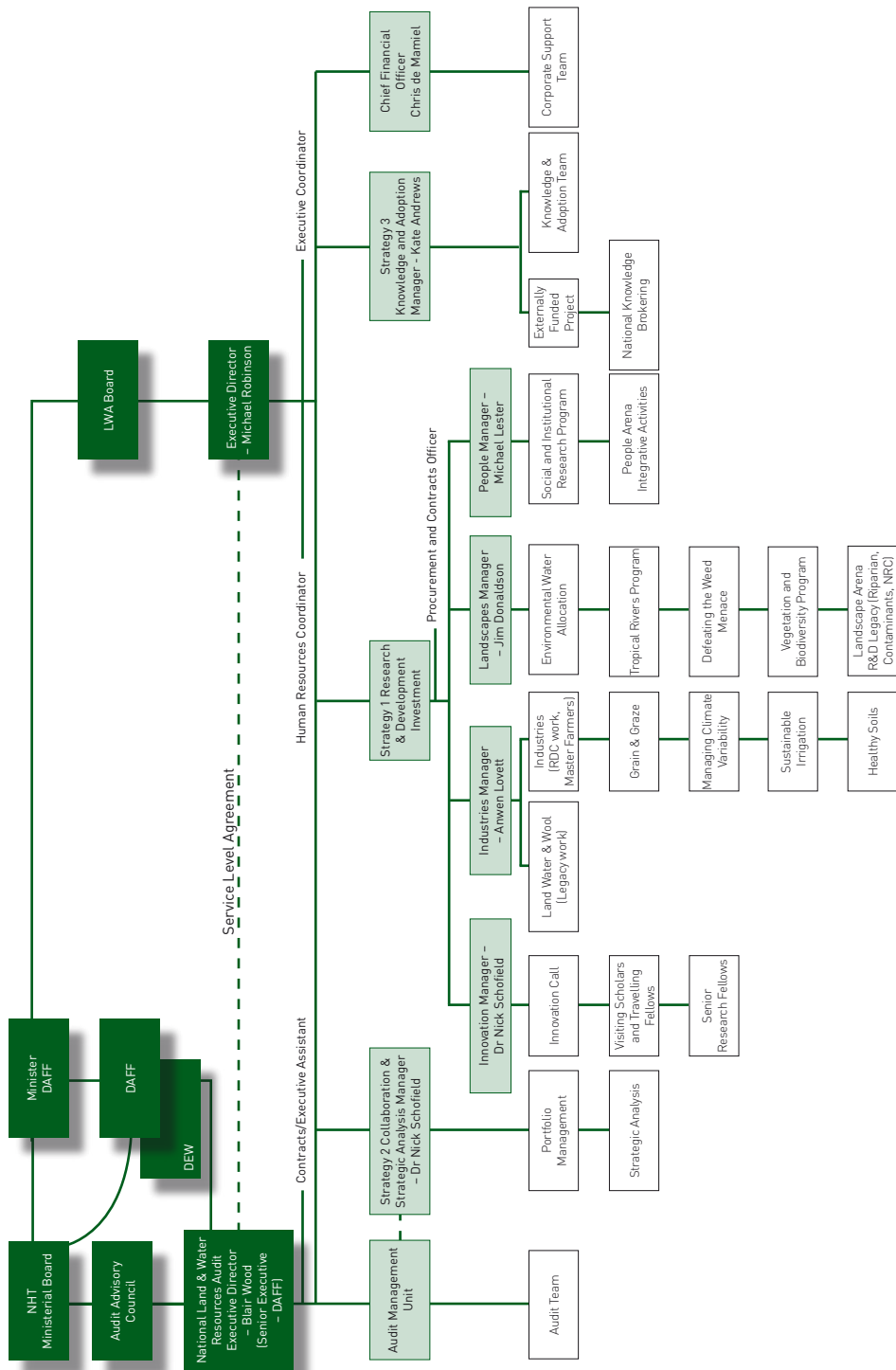
The staff profile gives insight into average resource use per staff member or Full-Time Equivalent (FTE). Electricity use and paper use per staff member have decreased over time. Although our total electricity use has increased over the years this reflects an increase in IT capacity and staff numbers.

Table 7. Each staff member over the 2006-07 financial year has used:

	2004-05	2005-06	2006-07
Electricity kWh	4537	4098	3647
Reams paper	20.4	27.5	19.9
Tree equivalents of paper	1.2	1.6	1.2
Domestic airmiles			25765
International airmiles			1537
Tonnes CO2 emitted ¹	3.8	3.4	7.1
Tree equivalents to offset CO2 ¹	14.8	13.4	27.6

1. data for 2004-05 and 2005-06 lacks airmiles data

OUR ORGANISATION – Organisation structure



BOARD MEMBERSHIP AND PROCESSES

In accordance with section 16 of the PIERD Act, the Board comprises a Chairman selected and appointed by the Minister, six non-executive Directors nominated by an independent selection committee and appointed by the Minister, and an Executive Director appointed by the Land & Water Australia Board. In May 2007 the position of Government Director was discontinued following an amendment to the PEIRD Act.

The Chairman and other Directors (except for the Executive Director) are appointed for a term not exceeding three years and are eligible for re-appointment. The Government Director held office during the Minister's pleasure. The Executive Director holds office during the Board's pleasure. Directors are selected to reflect a balance of expertise in appropriate areas specified in section 131 of the PIERD Act. They are not appointed as representatives of the organisations or sectors with which they are associated. Directors can be contacted through the office of Land & Water Australia, GPO Box 2182, Canberra ACT 2601 or by e-mail [land&wateraustralia@lwa.gov.au].

Directors' biographies



Roberta Brazil
Chairman
(non-executive)

Appointed as Chair from 1 July 2001 to 30 June 2004; re-appointed in 2004 to 30 June 2007, re-appointed 2007 until 30 June 2009

Member of the Audit and Communication Committees

LLM. (UQ), LLB., BA, Grad.Dip.L.P. (QUT)

Roberta (Bobbie) Brazil is a former lawyer and a partner with her husband in large-scale mixed farming and pastoral businesses on Queensland's Darling Downs and in the Northern Territory. Mrs Brazil brings to the Board an excellent understanding of catchment management and extensive experience in a range of natural resource management and industry bodies. She is Chair of the Australian Landcare Council; Chancellor of the University of Southern Queensland; Director of Brazil Enterprises (farming and pastoral interests in Queensland and the Northern Territory); a member of the Natural Heritage Trust Advisory Council; a member of Agforce; a member of the Condamine River Basin Irrigators Association; a member of Northern Territory Cattlemen's Association

and Northern Territory Irrigation; a member of Grain & Fodder Producers Association; levy payer to Cotton Australia; and a member of Darling Downs Cotton Growers Association.



John Childs
Deputy Chairman
(non-executive)

Appointed from 1 July 2002 until 30 June 2005, re-appointed until 30 June 2008

Chair of the Finance Committee

M.Agr.Sc (Melb), B.Rural Science (UNE),
Dip.Ag.Econ (UNE)

John Childs is a director of Queensland-based Bush Business Consulting Pty Ltd; Chair of the Daly River Management Advisory Committee; and a Member of the Northern Territory Pastoral Land Board. Mr Childs has a broad range of skills and experience in natural resource management, adult education and communication, with a special understanding of the situation in northern Australia through his role as Chair of the Daly River Management Advisory Committee and as former Director of the Tropical Savannas Cooperative Research Centre. Mr Childs also has significant experience

working with Aboriginal communities and the sheep and cattle grazing industries.



Dianne Bentley
Director
(non-executive)

Appointed from 1 July 2005 until 30 June 2008

Member of the Finance Committee

BSc (Agric), M.A.I.C.D.

Dianne Bentley is an agricultural research and management consultant with extensive experience in natural resource management, particularly in integrated catchment management. She is Assistant Commissioner of the Natural Resources Commission of New South Wales, and chaired the Liverpool Plains Land Management Committee. She is Deputy Chair of the Northern Regional Panel of the Grains Research and Development Corporation and Director of the Cotton Catchment Communities Cooperative Research Centre.



Andrew Campbell
Executive Director

Appointed from 1
March 2000 until 31
December 2006

Member of the
Finance and
Communication
Committees and

an observer at the Audit Committee

MSc (Wageningen), B.ForSc (Hons) (Melb),
Dip.For (Creswick), FAICD

Andrew Campbell has a farming, forestry and extension background and was previously a senior executive in the Australian Government. He was instrumental in the development of Landcare in Australia through his role as Australia's first National Landcare Facilitator from 1989-92 and as Manager of the Potter Farmland Plan initiative from 1984-88. His family has been farming in western Victoria since the 1860s and he still manages his family property near Cavendish, producing farm forestry, wool and prime lambs. He is a member of the Editorial Board, Ecological Management and Restoration; Honorary Advisor, Future Environment Fund, Glenelg-Hopkins Catchment Management Authority; and a member of the Commonwealth Environment Research Facilities Program Reference Panel.



Peter Cullen, AO
Director
(non-executive)

Appointed from 1
July 2002 until 30
June 2005,
re-appointed until
30 June 2008

Chair of the Communication Committee

M.Agr.Sc. (Melb), B.Agr.Sc. (Melb), Dip.Ed.
(Melb)

Professor Peter Cullen, AO, FTSE is a Commissioner of the National Water Commission; Chair of the Scientific Advisory Panel to the Lake Eyre Basin Ministerial Forum; a member of the Natural Heritage Trust Advisory Committee; and a member of the Wentworth Group.

Professor Cullen spent ten years as the founding Chief Executive of the Cooperative Research Centre for Freshwater Ecology at the University of Canberra. He is a Visiting Fellow at CSIRO Land and Water. Professor Cullen was appointed an Officer of the Order of Australia in 2004 for service to freshwater ecology, particularly in the areas of policy development, implementation and sustainability in relation to water and natural resource management, and to education. Professor Cullen is a graduate in Agricultural Science from the University of Melbourne; a Fellow of the Australian

Academy of Technological Sciences and Engineering; and a Member of the International Water Academy and the International Ecology Institute.



Tim Fisher
Director
(non-executive)

Appointed from 1 July 2002 until 30 June 2005, re-appointed until 30 June 2008

Chair of the Audit Committee
BA (Monash)

Tim Fisher is a consultant with Marsden Jacob Associates based in Melbourne. Prior to this he was the Manager of the Water and Catchment Unit at the Victorian Environmental Protection Authority and before that spent fourteen years with the Australian Conservation Foundation. He has comprehensive experience with the Murray-Darling Initiative, has worked extensively with farmers and farmer organisations, and has considerable experience on issues as diverse as river health and water resource management, biodiversity conservation and natural resource management policy and funding.

In 2002 Mr Fisher was awarded a centenary medal for contributions to water conservation and salinity management.



Professor Ted Lefroy
Director
(non-executive)

Appointed from 1 July 2005 until 30 June 2008

Member of the Communications Committee

PhD, BSc(Agric) (UWA)

Professor Ted Lefroy is Director of the Centre for Environment at the University of Tasmania; a member of the Reference Panel for the Commonwealth Environment Research Facilities Program; a member of the Tasmanian Natural Resource Management Council; and the Principal Investigator of the National Biodiversity Project, Grain & Graze Program. Professor Lefroy has thirty years' experience in rural extension and research in Australia and overseas, having worked for departments of primary industries in Queensland, Papua New Guinea, Western Australia and CSIRO. He has also been a member of the Cooperative Research Centre for Legumes in Mediterranean Agriculture and the Cooperative Research Centre for Plant-Based Management of Dryland Salinity where he was leader of the biodiversity program. His research interests are in perennial farming systems, agroforestry and the management of

biodiversity in production landscapes. In 2004 he was awarded the Grains Research and Development Corporation Eureka Prize for research into the environmental sustainability of grain production.



Dr Michael Robinson
Executive Director

Appointed
December 2006

Member of
Communications
and Finance
Committee;

Observer on the Audit Committee

PhD (UMelb), BSc Hons (ANU)

Michael Robinson has extensive experience in natural resource management, having worked in research, communication, business development and policy, both in Australia and New Zealand. Prior to joining the Land & Water Australia team, Dr Robinson was Chief Executive Officer with the Cooperative Research Centre for Greenhouse Accounting.

Dr Robinson has worked with CSIRO Forestry and Forest Products in business development, management and communication roles focusing on environmentally sustainable forestry. Dr Robinson also worked with the Heartlands

Initiative (a large, multi-agency research and land-use change project working with landholders in southern New South Wales and northern Victoria).

He is trained as a scientist, having completed his PhD in 1999 with CSIRO and the University of Melbourne, examining the sustainability of using wastes to fertilise plantation forests.



Jack Speirs
Director
(non-executive)

Appointed from 1 July
2005 until 30 June
2008

Member of the Audit
Committee

DipFM

Jack Speirs is a farmer from Casterton, Victoria, who has pioneered sustainable farming practices on his property Satimer. He is a Director of Diamond Beef, a fully integrated paddock to household beef company; a member of the Australian Government's Industry Environmental Management Systems Advisory Group; and a Board Member of the Glenelg-Hopkins Catchment Management Authority. Mr Speirs' extensive experience in natural resource management issues sees him travelling across Australia talking with land managers on issues from ground

cover and grazing systems to soil and river health. He is a graduate of the Australian Rural Leadership Program and in 2004 was awarded the prestigious McKell Medal for excellence in natural resource management.



Charles Willcocks
Government
Director
(non-executive)

Member of the Audit Committee

Appointed from 1 July 1997 until May 2007; appointment discontinued by

the Minister consistent with the *Primary Industries and Energy Research and Development Amendment Act 2007*

B.Rural Science (Hons) (UNE), Dip. Economic Development (Glasgow)

Charles Willcocks is the General Manager, Australian Biosecurity System Taskforce, Corporate Policy, Department of Agriculture, Fisheries and Forestry, and a Member of Rangelands Australia Advisory Council.

COMMITTEES OF THE BOARD

In 2006–07, committees to deal with the matters affecting the Board were:

- the Audit Committee, comprising four non-executive directors, internal and external auditors (and the Chief Financial Officer and Executive Director as observers), which monitors the financial systems, operations and accounts of the Corporation
- the Finance Committee, comprising two non-executive directors, the Executive Director and the Chief Financial Officer, which considers financial matters affecting the Corporation
- the Communication Committee, comprising three non-executive directors, the Executive Director and the Knowledge and Adoption Manager, which develops the knowledge and adoption strategy and oversees its implementation.

The Board has also set up other committees to assist in the management of specific research programs. Membership details of these committees can be found in Appendix 5.

Board and Committee membership and attendance

The number of Board meetings and Board committee meetings attended by directors and officers during 2006–07 were as follows:

	BOARD MEETINGS	AUDIT COMMITTEE MEETINGS	FINANCE COMMITTEE MEETINGS	COMMUNICATIONS COMMITTEE MEETINGS
No of Meetings held	4	5	7	4
Roberta Brazil	4	3		4
Andrew Campbell*	1	2	4	1
Michael Robinson**	3	1	3	2
John ChildsΔ	4		6	
Dianne Bentley	4		7	
Peter Cullen‡	3			4
Tim Fisher•	4	5		
Ted Lefroy	4			4
Jack Speirs	4	4		
Charles Willcocks±	3	4		
Kate Andrews (Manager, Knowledge and Adoption)				4
Jim Donaldson (Manager, Landscapes)				1
Chris de Marniel (Chief Financial Officer)		5	7	

*Executive Director until December 2006

** Executive Director from December 2006

‡ Chair of Communication Committee

Δ Chair of Finance Committee

• Chair of Audit Committee

± Government Director, position discontinued in May 2007



The Land & Water Australia social club is very active in organising events for staff to come together. In October 2006 many staff participated in a seed propagation workshop held in conjunction with Greening Australia. These trees will be used in revegetation projects in southern New South Wales and the Australian Capital Territory.

Directors' interests policy

In accordance with the *Commonwealth Authorities and Companies Act 1997*, the Board has a process to manage all direct and indirect conflicts of interest, including directors' formal declarations of their interests at each Board meeting, documented in the minutes of the meeting. This policy extends to all committees of Land & Water Australia.

Board charter

The Board has developed and agreed a charter under which it operates.

Board evaluation

Periodic, independent evaluations of Board performance are conducted – usually twice in the life of each Board. The most recent evaluation was conducted during 2005-06 by Dr Andy Pearce.

STAFF MEMBERSHIP AND PROCESSES

Land & Water Australia staff support the establishment, management, adoption and evaluation of research projects. They also provide corporate services. Staff are employed under Australian Workplace Agreements. As at 30 June 2007, 57 full time equivalent staff were employed.

Table 8. Land & Water Australia staff 2006-07

EXECUTIVE DIRECTOR'S OFFICE	
Executive Director (to December 2006)	Andrew Campbell
Executive Director (from December 2006)	Michael Robinson
Executive Coordinator (to March 2007)	Renee Berry
Executive Coordinator (from May 2007)	Whilemina Prendergast
RESEARCH TEAM	
Manager Landscapes	Jim Donaldson
Manager People	Michael Lester
Manager Industries	Anwen Lovett
Science Manager	Nick Schofield
Manager Land, Water & Wool (to May 2007)	Mike Wagg
Program Coordinator	Noel Beynon
Program Coordinator (from June 2007)	Tracy Henderson
Administration Officer (to March 2007)	Natalie Blood
Program Officer	Ben Bryant
Administration Officer (to January 2007)	Amelia Forsyth-Smith
Program Officer	Andrew Lawson
Strategic Analyst	Louise Osborne
Program Officer	Joanna Pinkas
Administration Officer	Michelle Smith
Grain & Graze Extension Coordinator	Gill Stewart
Senior Program Officer	Catherine Viljoen
Program Officer	Prue Vincent (P/T)
Administration Officer (to December 2006)	Inela Weeks
Administration Officer (from January 2007)	Laura Harris
Administrative Assistant (from June 2007)	Diana Reid-Rowland
Administrative Assistant (from May 2007)	Kim Flannery (P/T)
Senior Program Officer (to December 2006)	Gill Whiting
Senior Program Officer (from March 2007)	Mark Lettfuss
Program Officer (from April 2007)	Teresa Oppy

Table 8. Land & Water Australia staff 2006-07 continued

KNOWLEDGE AND ADOPTION TEAM	
Manager Knowledge and Adoption	Kate Andrews
Communication Officer	Tim Lester
Communications Officer/Events	Sandy Brogan
E-Business Officer (to January 2007) E-Business Officer (from February 2007)	Jennifer Bruce Chris Skene
E-Business Support Officer (from February 2007)	Melissa Gabelle (P/T)
Program Officer - Knowledge and Adoption	Samantha Burt
Program Officer - Knowledge and Adoption (from October 2006)	Tracey Hillier
Administration Officer/Clarity Implementation	Carmel Ewing
Senior Knowledge Broker	Stuart Pearson
Knowledge and Adoption Officer	Stacey Fraser
Knowledge and Adoption Officer	Nadeem Samnakay
Knowledge and Adoption Officer	Lynne Sealie (P/T)
Knowledge and Adoption Officer	Merryn West (P/T)
Receptionist (to April 2007)	Brianna Walsh
Receptionist (from April 2007)	Tanya Major
Manager, Knowledge for Regional NRM Program	Nerida Hart
Knowledge and Access Coordinator	Mathew Silver
Regional Liaison Officer (from September 2006)	Bruce Boyes
Research and Information Officer (from September 2006)	Georgina Usher
Science Liaison Officer (from September 2006)	Melanie Randall

Table 8. Land & Water Australia staff 2006-07 continued

CORPORATE SUPPORT TEAM	
Chief Financial Officer	Chris de Mamiel
Financial Controller	Albert Blair
Human Resources Officer (to October 2006) Human Resources Officer (from October 2006)	Jenny Nitschke Marie Byrne
Procurement and Contracts Officer (to December 2006) Procurement and Contracts Officer (from Jan 2007)	Jane Briggs Amelia Forsyth-Smith
Finance Officer	Liz Kooymans
Assistant Accountant	Andrew Martin
Project Officer Project Management Information Systems (to March 2007)	Camille McMahon (P/T)
Business Systems Administrator (from April 2007)	Alex Charteris
Corporate Support Officer	Ken Rampling
Corporate Support Officer	Laura Varsanyi
Corporate Support Assistant (from May 2007)	Kylie Relf
NATIONAL LAND & WATER RESOURCES AUDIT	
Executive Director (Employed by DAFF)	Blair Wood
Technical Coordinator	Rob Thorman
Data and Information Coordinator	Peter Wilson
Social and Economic Coordinator	Karen Cody
Project Officer	Alana Innes (P/T)
Project Officer (from March 2007)	Natalie Blood
Project Officer, Thematic Data Delivery	Vivienne Bordas (P/T)
Project Officer	Martine Franco
Project Officer (from October 2006)	Valerie Wayte
Communication Officer (to March 2007)	Genine Sutton
Communication Officer (from March 2007)	Denise Fowler
Executive Assistant (from October 2006)	Melissa Edwards
Administration Assistant	Toni Latta

Remuneration policy

Land & Water Australia’s salary banding structure is based on four broad salary bands. Work value indicators are used to evaluate the level of a position and its place in the appropriate band. Land & Water Australia has a comprehensive performance management system, which includes annual and mid-term reviews of performance. Land & Water Australia’s Australia Workplace Agreement details employee remuneration benefits and performance obligations.

Staff development

Land & Water Australia is in the knowledge business — investing in, brokering and managing research. In the process the Corporation generates, transforms, utilises and works with knowledge — some of it formal, but much of it tacit, informal, experiential and intangible. The Corporation’s portfolio of more than 1850 projects during the past sixteen years represents a considerable knowledge bank.

However the talents, experience, skills and know-how of staff represent probably the Corporation’s greatest knowledge asset. Accordingly, the Corporation places priority on recruiting, developing and retaining people of high quality, commensurate with its national leadership role and very challenging mandate. The table below shows the formal qualifications of the Corporation’s staff and, importantly, the significant number of staff who are undertaking further study as part of their training and development plans.

Training and development opportunities are not limited to formal qualifications, but may also include short courses, secondments and development opportunities that are not represented in the table above.

Each staff member’s performance management agreement incorporates a training and development plan in which areas for development and activities or training are nominated.

Table 9. Formal qualifications held by Land & Water Australia staff 2006-07

	PHD	MASTERS DEGREE	BACHELOR DEGREE	GRADUATE DIPLOMA OR CERTIFICATE
Completed	5	10	38	17
In progress	1	5	2	2

Organisational health

Land & Water Australia constantly strives to promote a friendly, supportive and continual learning environment for staff members. Activities during the year that contributed to promoting the health and morale of the organisation included:

- Corporation-sponsored influenza vaccinations
- a fitness and healthy living allowance for all staff
- an active and enthusiastic Social Committee

Compliance with human resource statutes

An independent review of the Land & Water Australia compliance requirements concluded that the Corporation has demonstrated compliance across the relevant statutes.

Occupational health and safety

Land & Water Australia is obliged to comply with the *Occupational Health and Safety (Commonwealth Employment) Act 1991* (OH&S Act) and the *ACT Occupational Health and Safety Act 1989*. The Corporation's Occupational Health and Safety policy sets out staff obligations with respect to Occupational Health and Safety and

establishes an Occupational Health and Safety Officer. The Corporation conducts Occupational Health and Safety reviews of workstations on a regular basis. There have been no reports of any accidents or dangerous incidents during the past year that required notice to be given under section 68 of the OH&S Act. No investigations were conducted during the year.

During 2006-07 there have been occasions where staff numbers have surpassed 50 people, and a staff complement above 50 people is likely to be consolidated in the 2007-08 year. Under section 34 of the *OH&S Act* an employer must establish a Health and Safety Committee if there are normally 50 or more employees in the organisation. This committee will be established in the 2007-08 year to ensure continued compliance with the Act.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2007



INDEPENDENT AUDITOR'S REPORT

To the Minister for Agriculture, Fisheries and Forestry

Matters relating to the Electronic Presentation of the Audited Financial Statements

This auditor's report relates to the financial statements published on the website of the Land and Water Resources Research and Development Corporation for the year ended 30 June 2007. The Directors of the Land and Water Resources Research and Development Corporation are responsible for the integrity of the web site.

This auditor's report refers only to the primary statements, schedules and notes named below. It does not provide an opinion on any other information which may have been hyperlinked to/from the audited financial statements.

If the users of this report are concerned with the inherent risks arising from electronic data communications they are advised to refer to the hard copy of the audited financial statements in the Land and Water Resources Research and Development Corporation's annual report.

Scope

I have audited the accompanying financial statements of the Land and Water Resources Research and Development Corporation for the year ended 30 June 2007, which comprise: a statement by the Directors and Chief Executive; income statement; balance sheet; statement of changes in equity; cash flow statement; schedule of commitments; a summary of significant accounting policies; and other explanatory notes.

The Responsibility of the Directors for the Financial Statements

The Directors of the Land and Water Resources Research and Development Corporation are responsible for the preparation and fair presentation of the financial statements in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997* and the Australian Accounting Standards (including the Australian Accounting Interpretations). This responsibility includes establishing and maintaining internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error, selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

My responsibility is to express an opinion on the financial statements based on my audit. My audit has been conducted in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. These Auditing Standards require that I comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

GPO Box 707 CANBERRA ACT 2601
Centenary House 19 National Circuit
BARTON ACT
Phone (02) 6203 7300 Fax (02) 6203 7777

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Land and Water Resources Research and Development Corporation's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Land and Water Resources Research and Development Corporation's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Directors, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Independence

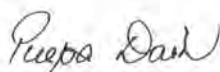
In conducting the audit, I have followed the independence requirements of the Australian National Audit Office, which incorporate the ethical requirements of the Australian accounting profession.

Auditor's Opinion

In my opinion, the financial statements of the Land and Water Resources Research and Development Corporation:

- (a) have been prepared in accordance with the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*, and the Australian Accounting Standards (including the Australian Accounting Interpretations); and
- (b) give a true and fair view of the matters required by the Finance Minister's Orders including the Land and Water Resources Research and Development Corporation's financial position as at 30 June 2007 and of its financial performance and its cash flows for the year then ended.

Australian National Audit Office



Puspa Dash
Acting Executive Director

Delegate of the Auditor-General

Canberra
6 September 2007

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
STATEMENT BY DIRECTORS AND CHIEF EXECUTIVE

In our opinion, the attached financial statements for the year ended 30 June 2007 are based on properly maintained financial records and give a true and fair view of the matters required by the Finance Minister's Orders made under the *Commonwealth Authorities and Companies Act 1997*.

In our opinion, at the date of this statement, there are reasonable grounds to believe that the Corporation will be able to pay its debts as and when they become due and payable.

This Statement is made in accordance with a resolution of the directors.



Roberta Brazil
Chairman



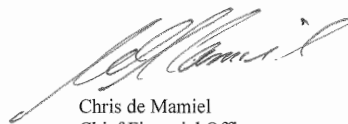
Date of signing



Michael Robinson
Executive Director



Date of signing



Chris de Mamiel
Chief Financial Officer



Date of signing

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
INCOME STATEMENT

for the year ended 30 June 2007

	Notes	2007 \$	2006 \$
INCOME			
Revenue			
Revenues from Government	4A	12,751,000	12,513,000
External contributions	4B	21,476,663	17,737,888
Interest	4C	955,713	949,933
Other revenue	4D	33,429	29,817
Total revenue		35,216,805	31,230,638
Gains			
Reversal of previous asset write-downs	4E	-	4,224
Total Income		35,216,805	31,234,862
EXPENSES			
Employee benefits	5A	4,858,144	4,109,028
Supplier expenses	5B	6,712,544	6,227,893
Depreciation and amortisation	5C	263,249	220,160
Net losses from disposal of assets	5D	-	11,854
Research and development	5E	21,757,454	22,112,856
Total Expenses	6	33,591,391	32,681,791
SURPLUS (DEFICIT)		1,625,414	(1,446,929)

The above statement should be read in conjunction with the accompanying notes.

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
BALANCE SHEET
as at 30 June 2007

	Notes	2007 \$	2006 \$
ASSETS			
Financial Assets			
Cash and cash equivalents	7A	7,073,437	6,357,418
Trade and other receivables	7B	1,340,879	1,135,216
Investments	7C	11,929,984	11,027,001
Total financial assets		20,344,300	18,519,635
Non-Financial Assets			
Land and buildings	8A	532,240	680,786
Plant and equipment	8B	140,405	163,588
Intangibles	8D	660,225	199,854
Other non-financial assets	8E	48,983	109,385
Total non-financial assets		1,381,853	1,153,613
Total Assets		21,726,153	19,673,248
LIABILITIES			
Payables			
Suppliers	9A	268,842	550,371
Other payables	9B	5,526,089	4,865,625
Total payables		5,794,931	5,415,996
Provisions			
Employee provisions	10A	899,909	851,353
Other provisions	10B	160,000	150,000
Total provisions		1,059,909	1,001,353
Total Liabilities		6,854,840	6,417,349
Net Assets		14,871,313	13,255,899
EQUITY			
Reserves		13,564,613	12,553,216
Retained surpluses		1,306,700	702,683
Total Equity		14,871,313	13,255,899
Current Assets		20,393,283	18,629,020
Non-Current Assets		1,332,870	1,044,228
Current Liabilities		6,608,742	6,016,968
Non-Current Liabilities		246,098	400,381

The above statement should be read in conjunction with the accompanying notes.

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
STATEMENT OF CHANGES IN EQUITY
as at 30 June 2007

Item	Retained Earnings		Research and Development Reserve		Asset Revaluation Reserve		Total Equity	
	2007 \$	2006 \$	2007 \$	2006 \$	2007 \$	2006 \$	2007 \$	2006 \$
Opening balance	702,683	746,319	12,354,549	13,757,842	198,667	168,087	13,255,899	14,672,248
Adjusted opening balance	702,683	746,319	12,354,549	13,757,842	198,667	168,087	13,255,899	14,672,248
Income and expense								
Revaluation adjustment	-	-	-	-	(10,000)	30,580	(10,000)	30,580
Sub-total income and expenses recognised directly in equity	-	-	-	-	(10,000)	30,580	(10,000)	30,580
Surplus (deficit) for the period	1,625,414	(1,446,929)	-	-	-	-	1,625,414	(1,446,929)
Total Income and Expenses	1,625,414	(1,446,929)	-	-	(10,000)	30,580	1,625,414	(1,446,929)
Transfers between equity components	(1,021,397)	1,403,293	1,021,397	(1,403,293)	-	-	-	-
Closing balance as at 30 June	1,306,700	702,683	13,375,946	12,354,549	188,667	198,667	14,871,313	13,255,899

The research and development reserve represents funding which has been set aside for programmes or projects, either as a result of formal agreements with external funding bodies or of Board decisions.

The above statement should be read in conjunction with the accompanying notes.

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
CASH FLOW STATEMENT
for the period ended 30 June 2007

	Notes	2007 \$	2006 \$
OPERATING ACTIVITIES			
Cash received			
Revenue from Government		12,751,000	12,513,000
External contributions		23,258,496	20,476,488
Interest		966,663	929,103
Net GST received		913,660	549,491
Research and development refunds		119,760	132,455
Other		47,120	30,058
Total cash received		38,056,699	34,630,595
Cash used			
Employees		4,809,588	3,891,720
Suppliers		7,684,396	8,063,042
Research and development		23,391,822	21,700,214
Total cash used		35,885,806	33,654,976
Net cash from operating activities	11	2,170,893	975,619
INVESTING ACTIVITIES			
Cash received			
Proceeds from sales of property, plant and equipment		-	2,160
Investments		-	917,758
Total cash received		-	919,918
Cash used			
Purchase of property, plant and equipment		551,891	401,401
Investments		902,983	-
Total cash used		1,454,874	401,401
Net cash (used by) / from investing activities		(1,454,874)	518,517
Net increase in cash held		716,019	1,494,136
Cash at the beginning of the reporting period		6,357,418	4,863,282
Cash at the end of the reporting period	7A	7,073,437	6,357,418

The above statement should be read in conjunction with the accompanying notes.

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
SCHEDULE OF COMMITMENTS

as at 30 June 2007

	2007	2006
	\$	\$
BY TYPE		
Commitments Receivable		
GST recoverable on commitments	<u>(2,257,587)</u>	<u>(2,969,687)</u>
Capital Commitments		
Plant and equipment ¹	<u>28,457</u>	<u>89,513</u>
Other Commitments		
Operating leases ²	2,091,640	2,631,458
Goods and services contracts ³	53,454	69,355
Research and development ⁴	<u>22,659,905</u>	<u>29,876,227</u>
Total other commitments	<u>24,804,999</u>	<u>32,577,040</u>
Net commitments by type	<u>22,575,869</u>	<u>29,696,866</u>
BY MATURITY		
Commitments Receivable		
One year or less	(1,647,069)	(1,560,967)
From one to five years	(610,518)	(1,406,720)
Over five years	-	(2,000)
Total commitments receivable	<u>(2,257,587)</u>	<u>(2,969,687)</u>
Commitments Payable		
Capital Commitments		
One year or less	<u>28,457</u>	<u>89,513</u>
Operating Lease Commitments		
One year or less	558,712	539,818
From one to five years	<u>1,532,928</u>	<u>2,091,640</u>
Total operating lease commitments	<u>2,091,640</u>	<u>2,631,458</u>
Other Commitments		
One year or less	17,530,584	16,541,304
From one to five years	5,182,775	13,382,278
Over five years	-	22,000
Total other commitments	<u>22,713,359</u>	<u>29,945,582</u>
Net commitments by maturity	<u>22,575,869</u>	<u>29,696,866</u>

NB: Commitments are GST inclusive where relevant.

¹ Plant and equipment commitments are for office furniture.

² Operating lease is an effectively non-cancellable rental lease for office accommodation to January 2011 with annual increases in rent of 3.5%.

³ Goods and services commitments are primarily related to IT support and payroll processing activities.

⁴ Research and development commitments comprise amounts payable under research and development agreements in respect of which the recipient is yet to perform the services required.

The above schedule should be read in conjunction with the accompanying notes.

LAND AND WATER RESOURCES RESEARCH AND DEVELOPMENT CORPORATION
NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 2007

Note 1:	Summary of Significant Accounting Policies
Note 2:	Economic Dependency
Note 3:	Events after the Balance Sheet Date
Note 4:	Income
Note 5:	Expenses
Note 6:	Total Expenses
Note 7:	Financial Assets
Note 8:	Non-Financial Assets
Note 9:	Payables
Note 10:	Provisions
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Notes to and forming part of the Financial Statements

Note 1: Summary of Significant Accounting Policies

1.1 Basis of Accounting

The Financial Statements and notes are required by clause 1(b) of schedule 1 to the *Commonwealth Authorities and Companies Act 1997* and are a General Purpose Financial Report.

The Financial Statements and notes have been prepared in accordance with:

- Finance Minister's Orders (FMOs) for reporting periods ending on or after 1 July 2006; and
- Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The Financial Statements have been prepared on an accrual basis and are in accordance with historical cost convention, except for certain assets at fair value. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The Financial Statements are presented in Australian dollars.

Unless alternative treatment is specifically required by an Accounting Standard or the FMOs, assets and liabilities are recognised in the Balance Sheet when and only when it is probable that future economic benefits will flow to the Corporation and the amounts of the assets or liabilities can be reliably measured. However, assets and liabilities arising under agreements equally proportionately unperformed are not recognised unless required by an Accounting Standard. Liabilities and assets that are unrecognised are reported in the Schedule of Commitments and the Schedule of Contingencies (other than unquantifiable or remote contingencies, which are reported at Note 12).

Unless alternative treatment is specifically required by an Accounting Standard, revenues and expenses are recognised in the Income Statement when and only when the flow, consumption or loss of economic benefits has occurred and can be reliably measured.

1.2 Significant Accounting Judgement and Estimates

No accounting assumptions or estimates have been identified that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next accounting period.

1.3 Statement of Compliance

Australian Accounting Standards require a statement of compliance with International Financial Reporting Standards (IFRSs) to be made where the financial report complies with these standards. Some Australian equivalents to IFRSs and other Australian Accounting Standards contain requirements specific to not-for-profit entities that are inconsistent with IFRS requirements. The Corporation is a not for profit entity and has applied these requirements, so while this financial report complies with Australian Accounting Standards including Australian Equivalents to International Financial Reporting Standards (AEIFRSs) it cannot make this statement.

Adoption of new Australian Accounting Standard requirements

No accounting standard has been adopted earlier than the effective date in the current period.

Other effective requirement changes

The following amendments, revised standards or interpretations have become effective but have had no financial impact or do not apply to the operations of the Corporation.

Amendments:

- 2005-1 Amendments to Australian Accounting Standards [AASBs 1, 101, 124]
- 2005-6 Amendments to Australian Accounting Standards [AASB 3]
- 2006-1 Amendments to Australian Accounting Standards [AASB 121]
- 2006-3 Amendments to Australian Accounting Standards [AASB 1045]

Interpretations:

- UIG 4 Determining whether an Arrangement contains a Lease

Notes to and forming part of the Financial Statements

- UIG 5 Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds
- UIG 8 Scope of AASB 2
- UIG 9 Reassessment of Embedded Derivatives
- UIG 4 and UIG 9 might have impacts in future periods, subject to existing contracts being renegotiated.

Future Australian Accounting Standard requirements

The following new standards, amendments to standards or interpretations have been issued by the Australian Accounting Standards Board but are effective for future periods. It is estimated that the impact of adopting these pronouncements when effective will have no material financial impact on future reporting periods.

Financial instrument disclosure

AASB7 Financial Instruments: Disclosures is effective for reporting periods beginning on or after 1 January 2007 (the 2007-08 financial year) and amends the disclosure requirements for financial instruments. In general AASB 7 requires greater disclosure than that presently. Associated with the introduction of AASB 7 a number of accounting standards were amended to reference the new standard or remove the present disclosure requirements through *2005-10 Amendments to Australian Accounting Standards [AASB 132, AASB 101, AASB 114, AASB 117, AASB 133, AASB 139, AASB 1, AASB 4, AASB 1023 & AASB 1038]*. These changes have no financial impact but will affect the disclosure presented in future financial reports.

Other

The following standards and interpretations have been issued but are not applicable to the operations of the Corporation.

- AASB 1049 Financial Reporting of General Government Sectors by Governments
- UIG 10 Interim Financial Reporting and Impairment

1.4 Revenue

Revenues from Government

The full amount of funding from the Government, through the Department of Agriculture, Fisheries and Forestry, for the Corporation's outputs for the year is recognised as revenue at its nominal amount.

External contributions

External contributions comprise voluntary contributions from government, industry and other organisations to particular research programmes or projects. These contributions are recognised on receipt, or when receivable under contractual arrangements, in the period when the obligation is due.

Interest

Interest revenue is recognised using the effective interest method as set out in AASB 139 - *Financial Instruments: Recognition and Measurement*.

Other revenues

Revenue from the sale of goods is recognised when:

- The risks and rewards of ownership have been transferred to the buyer;
- The seller retains no managerial involvement nor effective control over the goods;
- The revenue and transaction costs incurred can be reliably measured; and
- It is probable that the economic benefits associated with the transaction will flow to the Corporation.

Royalties are recognised when the royalty is entitled to be received by the Corporation.

Notes to and forming part of the Financial Statements

Receivables, which have 30 day terms, are recognised at the nominal amounts due less any allowance for bad and doubtful debts. Collectability of debts is reviewed at balance date. Provisions are made when collectability of the debt is no longer probable.

1.5 Gains

A gain from disposal of non-current assets is recognised when control of the asset has passed to the buyer.

1.6 Employee Benefits

Liabilities for services rendered by employees are recognised at the reporting date to the extent that they have not been settled.

Liabilities for 'short-term employee benefits' (as defined in AASB 119) and termination benefits due within twelve months of balance date are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

All other employee benefit liabilities are measured as the present value of the estimated future cash outflows to be made in respect of services provided by employees up to the reporting date.

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the Corporation is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration, including the Corporation's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave is recognised and measured at the present value of the estimated future cash flows to be made in respect of all employees as at 30 June 2007. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Separation and Redundancy

Provision is made for separation and redundancy benefit payments. Land and Water Resources Research and Development Corporation recognises a provision for termination when it has developed a detailed formal plan for the terminations and has informed those employees affected that it will carry out the terminations.

Superannuation

Staff of the Corporation contribute to the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS), the PSS accumulation plan (PSSap) or an approved superannuation scheme of their choice.

The CSS and PSS are defined benefit schemes for the Commonwealth. The PSSap is a defined contribution scheme.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course.

For CSS and PSS members, the Corporation makes employer contributions based at rates determined by an actuary to be sufficient to meet the cost to the Government of the superannuation entitlements of the Corporation's eligible employees. The Corporation accounts for the contributions as if they were contributions to defined benefit plans. For other approved superannuation schemes the employer contributes a minimum of 9% of superannuable salaries.

The liability for superannuation recognised as at 30 June represents outstanding contributions for the final two days of the year.

Notes to and forming part of the Financial Statements

1.7 Leases

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased non-current assets. An operating lease is a lease that is not a finance lease. In operating leases, the lessor effectively retains substantially all such risks and benefits.

The Corporation has no finance leases. Operating lease payments are expensed on a straight line basis which is representative of the pattern of benefits derived from the leased assets.

Lease incentives taking the form of 'free' leasehold improvements and rent holidays are recognised as liabilities. These liabilities are reduced by allocating lease payments between rental expense and reduction of the liability.

1.8 Research and Development Expenses

Research and development expenses are expensed as incurred.

The Corporation recognises research and development provisions and liabilities. Most research and development agreements require the grantee to perform services, provide facilities, or to meet eligibility criteria. In these cases, liabilities are recognised only to the extent that the services required have been performed or the performance eligibility criteria have been satisfied by the grantee. Where research and development monies are paid in advance of performance or eligibility, a prepayment is recognised.

1.9 Cash

Cash means notes and coins held and any deposits held at call with a bank or financial institution. Cash is recognised at its nominal amount.

1.10 Financial Risk Management

The Corporation's activities expose it to normal commercial financial risk. As a result of the nature of the Corporation's business and internal and Australian Government policies, dealing with the management of financial risk, the Corporation's exposure to market, credit, liquidity and cash flow and fair value interest rate risk is considered to be low.

1.11 Derecognition of Financial Assets and Liabilities

Financial assets are derecognised when the contractual rights to the cash flows from the financial assets expire or the asset is transferred to another entity. In the case of a transfer to another entity, it is necessary that the risks and rewards of ownership are also transferred.

Financial liabilities are derecognised when the obligation under the contract is discharged or cancelled or expires.

1.12 Impairment of Financial Assets

Financial assets are assessed for impairment at each balance date.

1.13 Supplier and Other Payables

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

1.14 Contingent Liabilities and Contingent Assets

Contingent liabilities and assets are not recognised in the Balance Sheet but are reported in the relevant schedules and notes. They may arise from uncertainty as to the existence of a liability or asset, or represent an existing liability or asset in respect of which settlement is not probable or the amount cannot be reliably measured. Contingent assets are reported when settlement is probable, and contingent liabilities are recognised when settlement is greater than remote.

Notes to and forming part of the Financial Statements

1.15 Acquisition of Assets

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

1.16 Property Plant and Equipment

Asset Recognition Threshold

Purchases of property, plant and equipment are recognised initially at cost in the Balance Sheet, except for purchases costing less than \$2,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

The initial cost of an asset includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located. This is particularly relevant to 'makegood' provisions in property leases taken up by the Corporation where there exists an obligation to restore the property to its original condition. These costs are included in the value of the Corporation's leasehold improvements with a corresponding provision for the 'makegood' taken up.

Revaluations

Fair values for each class of asset are determined as shown below:

Asset class	Fair value measured at:
Land and buildings (leasehold improvements)	Depreciated replacement cost
Plant and equipment	Market selling price

Following initial recognition at cost, property plant and equipment are carried at fair value less accumulated depreciation and accumulated impairment losses. Valuations are conducted with sufficient frequency to ensure that the carrying amounts of assets do not differ materially from the assets' fair values as at the reporting date. The regularity of independent valuations depends upon the volatility of movements in market values for the relevant assets.

Revaluation adjustments are made on a class basis. Any revaluation increment is credited to equity under the heading of asset revaluation reserve except to the extent that it reverses a previous revaluation decrement of the same asset class that was previously recognised through the Income Statement. Revaluation decrements for a class of assets are recognised directly through the Income Statement except to the extent that they reverse a previous revaluation increment for that class.

Any accumulated depreciation or amortisation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

Depreciation and Amortisation

Depreciable property, plant and equipment assets are written-off to their estimated residual values over their estimated useful lives to the Corporation using, in all cases, the straight-line method of depreciation. Land and buildings (leasehold improvements) are amortised on a straight-line basis over the lesser of the estimated useful life of the improvements or the unexpired period of the lease.

Depreciation and amortisation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Depreciation and amortisation rates applying to each class of depreciable asset are based on the following useful lives:

	2007	2006
Leasehold improvements (leasehold improvements)	Lease term	Lease term
Plant and equipment	3 to 8 years	3 to 8 years

Impairment

All non-current assets were assessed for impairment at 30 June 2007. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if the Corporation were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

1.17 Intangibles

The Corporation's intangibles comprise externally acquired software and internally developed software for internal use. These assets are carried at cost.

Software is amortised on a straight-line basis over its anticipated useful life. The useful lives of the Corporation's software are 3 to 4 years (2006: 3 to 4 years).

All software assets were assessed for indications of impairment as at 30 June 2007.

1.18 Taxation

The Corporation is exempt from all forms of taxation except fringe benefits tax (FBT) and the goods and services tax (GST).

Revenues, expenses and assets are recognised net of GST:

- except where the amount of GST incurred is not recoverable from the Australian Taxation Office; and
- except for receivables and payables.

1.19 Insurance

The Corporation has insured for risks through the Government's insurable risk managed fund, called 'Comcover'. Workers' compensation is insured through the Government's Comcare Australia.

1.20 Comparative Figures

Comparative figures have been adjusted to conform to changes in presentation in these Financial Statements where necessary.

Note 2: Economic Dependency

The Corporation was established under the provisions of the *PIERD Act 1989* and is controlled by the Commonwealth of Australia.

The Corporation is dependent on funding from the Government through the Department of Agriculture, Fisheries and Forestry for its continued existence and ability to carry out its normal activities.

Note 3: Events after the Balance Sheet Date

The Corporation is not aware of any events that have occurred since the balance date which will affect the amounts disclosed in the financial statements.

Notes to and forming part of the Financial Statements

	2007	2006
	\$	\$
Note 4: Income		
<i>Revenue</i>		
Note 4A: Revenue from Government		
Funding through the Department of Agriculture, Fisheries and Forestry	<u>12,751,000</u>	<u>12,513,000</u>
Note 4B: External contributions		
Related parties	17,240,739	10,666,191
External entities	<u>4,235,924</u>	<u>7,071,697</u>
<i>Total external contributions</i>	<u>21,476,663</u>	<u>17,737,888</u>
Note 4C: Interest		
Deposits	<u>955,713</u>	<u>949,933</u>
Note 4D: Other revenues		
Publications	5,891	4,583
Royalties	2,261	1,873
Other	<u>25,277</u>	<u>23,361</u>
<i>Total other revenues</i>	<u>33,429</u>	<u>29,817</u>
<i>Gains</i>		
Note 4E: Reversals of previous asset write-downs		
Financial assets		
Doubtful debts recovered	-	4,224
<i>Total reversals of previous asset write-downs</i>	<u>-</u>	<u>4,224</u>

Notes to and forming part of the Financial Statements

	2007 \$	2006 \$
Note 5: Expenses		
<u>Note 5A: Employee benefits</u>		
Wages and salaries	4,081,831	3,532,770
Superannuation	473,235	375,555
Leave and other entitlements	269,928	159,095
Other employee benefits	<u>33,150</u>	<u>41,608</u>
Total employee benefits	<u>4,858,144</u>	<u>4,109,028</u>
<u>Note 5B: Supplier expenses</u>		
Provision of goods - external entities	322,393	556,639
Rendering of services - related entities	291,464	990,147
Rendering of services - external entities	5,606,599	4,205,955
Operating lease rentals:		
Minimum lease payments	461,592	451,484
Workers compensation premiums	<u>30,496</u>	<u>23,668</u>
Total supplier expenses	<u>6,712,544</u>	<u>6,227,893</u>
<u>Note 5C: Depreciation and amortisation</u>		
Depreciation:		
Plant and equipment	94,995	82,416
Amortisation:		
Intangibles - computer software	19,708	28,391
Leasehold improvements	<u>148,546</u>	<u>109,353</u>
Total depreciation and amortisation	<u>263,249</u>	<u>220,160</u>
<u>Note 5D: Net losses from disposal of assets</u>		
Plant and equipment:		
Proceeds from disposal	-	(2,160)
Net book value of assets disposed	<u>-</u>	<u>14,014</u>
Total net losses from disposal of assets	<u>-</u>	<u>11,854</u>
<u>Note 5E: Research and development</u>		
Services from external entities	16,853,184	15,975,227
Services from related entities	<u>4,904,270</u>	<u>6,137,629</u>
Total research and development	<u>21,757,454</u>	<u>22,112,856</u>
Note 6: Total Expenses		
Total operating expenses are classified by functional type as follows:		
Administration	2,914,747	2,791,022
Research and development related activities	27,510,581	27,071,843
Portfolio management	194,397	195,594
Communication, knowledge and adoption	<u>2,971,666</u>	<u>2,623,332</u>
Total expenses	<u>33,591,391</u>	<u>32,681,791</u>

Notes to and forming part of the Financial Statements

	2007	2006
	\$	\$

Note 7: Financial Assets

Note 7A: Cash and cash equivalents

Cash at bank	7,073,187	6,357,168
Cash on hand	250	250
Total cash and cash equivalents	7,073,437	6,357,418

All cash recognised is a current asset.

Note 7B: Trade and other receivables

GST receivable from the Australian Taxation Office	45,833	310,769
Goods and services	1,254,038	763,402
Interest receivable	40,409	51,359
Other receivables	599	9,686
Total trade and other receivables	1,340,879	1,135,216

All receivables are current assets.

The interest rates on deposit accounts range from 6.00% to 6.15% (2006: 5.25% to 5.82%) and the frequency of payments ranges from monthly to quarterly.

Receivables are aged as follows:

Not overdue	1,155,915	1,106,026
Overdue by:		
Less than 30 days	66,550	16,827
30 to 60 days	33,356	12,363
60 to 90 days	68,488	-
More than 90 days	16,570	-
	184,964	29,190
Total receivables (gross)	1,340,879	1,135,216

Note 7C: Investments

Term deposits (under s18 of the CAC Act)	11,929,984	11,027,001
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All investments are current assets.

Term deposits are with commercial banks, and earn an effective rate of interest of 6.32% to 6.71% (2006: 5.62% to 5.82%) payable monthly to bi-annually.

Notes to and forming part of the Financial Statements

	2007	2006
	\$	\$

Note 8: Non-Financial Assets

Note 8A: Land and buildings

Leasehold improvements:

- fair value	722,100	722,100
- accumulated amortisation	(189,860)	(41,314)

Total leasehold improvements **532,240** **680,786**

Total land and buildings (non-current) **532,240** **680,786**

No indicators of impairment were found for land and buildings

Note 8B: Plant and equipment

Plant and equipment:

- fair value	349,853	278,041
- accumulated depreciation	(209,448)	(114,453)

Total plant and equipment (non-current) **140,405** **163,588**

All revaluations are independent and are conducted in accordance with the revaluation policy stated in Note 1. A review carried out by the Australian Valuation Office confirmed that the current net book values of assets are in line with fair value. No revaluations were conducted during the year.

No indicators of impairment were found for plant and equipment.

Note 8C: Analysis of property, plant and equipment

TABLE A - Reconciliation of the opening and closing balances of property, plant and equipment (2006-07)

Item	Buildings - Leasehold Improvements \$	Plant and Equipment \$	Total \$
As at 1 July 2006			
Gross book value	722,100	278,041	1,000,141
Accumulated depreciation/amortisation and impairment	(41,314)	(114,453)	(155,767)
Net book value 1 July 2006	680,786	163,588	844,374
Additions:			
By purchase	-	71,812	71,812
Depreciation/amortisation expense	(148,546)	(94,995)	(243,541)
Net book value 30 June 2007	532,240	140,405	672,645
Net book value as of 30 June 2007 represented by:			
Gross book value	722,100	349,853	1,071,953
Accumulated depreciation/amortisation and impairment	(189,860)	(209,448)	(399,308)
Closing net book value	532,240	140,405	672,645

Notes to and forming part of the Financial Statements

TABLE B - Reconciliation of the opening and closing balances of property, plant and equipment (2005-06)

Item	Buildings - Leasehold Improvements \$	Plant & equipment \$	TOTAL \$
As at 1 July 2005			
Gross book value	785,396	235,382	1,020,778
Accumulated depreciation/amortisation and impairment	(137,213)	(70,913)	(208,126)
Net book value 1 July 2005	648,183	164,469	812,652
Additions:			
By purchase	101,376	95,549	196,925
Net revaluation increment	40,580	-	40,580
Depreciation/amortisation expense	(109,353)	(82,416)	(191,769)
Disposals:			
Other disposals	-	(14,014)	(14,014)
Net book value 30 June 2006	680,786	163,588	844,374
Net book value as of 30 June 2006 represented by:			
Gross book value	722,100	278,041	1,000,141
Accumulated depreciation/amortisation and impairment	(41,314)	(114,453)	(155,767)
Closing net book value	680,786	163,588	844,374

Note 8D: Intangibles

Computer software at cost:

Internally developed - in progress

Internally developed - in use

- Accumulated amortisation

Externally acquired

- Accumulated amortisation

Total intangibles (non-current)

No indicators of impairment were found for intangible assets

	2007 \$	2006 \$
Computer software at cost:		
Internally developed - in progress	631,015	150,936
	631,015	150,936
Internally developed - in use	329,035	329,035
- Accumulated amortisation	(329,035)	(329,035)
	-	-
Externally acquired	151,246	151,246
- Accumulated amortisation	(122,036)	(102,328)
	29,210	48,918
Total intangibles (non-current)	660,225	199,854

Notes to and forming part of the Financial Statements

TABLE A - Reconciliation of the opening and closing balances of intangibles (2006-07)

Item	Computer software internally developed \$	Computer software purchased \$	Total \$
As at 1 July 2006			
Gross book value	479,971	151,246	631,217
Accumulated depreciation/amortisation and impairment	(329,035)	(102,328)	(431,363)
Net book value 1 July 2006	150,936	48,918	199,854
Additions:			
By purchase or internally developed	480,079	-	480,079
Amortisation	-	(19,708)	(19,708)
Net book value 30 June 2007	631,015	29,210	660,225
Net book value as at 30 June 2007 represented by:			
Gross book value	960,050	151,246	1,111,296
Accumulated depreciation/amortisation and impairment	(329,035)	(122,036)	(451,071)
Net book value	631,015	29,210	660,225

TABLE B - Reconciliation of the opening and closing balances of intangibles (2005-06)

Item	Computer software internally developed \$	Computer software purchased \$	Total \$
As at 1 July 2005			
Gross book value	329,035	97,706	426,741
Accumulated depreciation/amortisation and impairment	(322,362)	(80,610)	(402,972)
Net book value 1 July 2005	6,673	17,096	23,769
Additions:			
By purchase or internally developed	150,936	53,540	204,476
Reclassifications	(1,244)	1,244	-
Amortisation	(5,429)	(22,962)	(28,391)
Disposals			
Other disposals	-	-	-
Net book value 30 June 2006	150,936	48,918	199,854
Net book value as at 30 June 2006 represented by:			
Gross book value	479,971	151,246	631,217
Accumulated depreciation/amortisation and impairment	(329,035)	(102,328)	(431,363)
Net book value	150,936	48,918	199,854

Notes to and forming part of the Financial Statements

	2007	2006
	\$	\$

Note 8E: Other Non-Financial Assets

Prepayments	48,983	109,385
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All other non-financial assets are current assets.

No indicators of impairment were found for other non-financial assets.

Note 9: Payables

Note 9A: Suppliers

Trade creditors - general suppliers	268,842	201,290
Trade creditors - research and development suppliers	-	349,081
Total supplier payables	268,842	550,371

All supplier payables are current liabilities.

Settlement is usually made net 30 days.

Note 9B: Other Payables

Suppliers:

Accrued expenses	246,873	242,780
Operating lease incentive	106,256	135,885
	353,129	378,665

Research and development:

Accrued expenses	3,207,500	4,424,687
Revenue in advance	1,965,460	62,273
Total other payables	5,526,089	4,865,625

Other payables are represented by:

Current	5,449,463	4,759,370
Non-current	76,626	106,255
Total other payables	5,526,089	4,865,625

Note 10: Provisions

Note 10A: Employee provisions

Salaries and wages	280,748	398,459
Leave	611,616	446,148
Superannuation	7,545	6,746
Total employee provisions	899,909	851,353

Employee provisions are represented by:

Current	730,437	707,227
Non-current	169,472	144,126
Total employee provisions	899,909	851,353

The classification of current includes amounts for which there is not an unconditional right to defer settlement by one year, hence in the case of employee provisions the above classification does not represent the amount expected to be settled within one year of reporting date. Employee provisions expected to be settled in one year \$600,294 (2006: \$627,188), in excess of one year \$299,614 (2006: \$224,165).

Notes to and forming part of the Financial Statements

	2007	2006
	\$	\$

Note 10B: Other provisions

Provision for 'makegood'	160,000	150,000
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All other provisions are non-current liabilities.

	Provision for 'make good'
Carrying amount at beginning of period	150,000
Unwinding of discount or change in discount rate	10,000
Amount owing at end of period	160,000

The Corporation currently has an agreement for the leasing of premises which has provisions requiring the Corporation to restore the premises to their original condition at the conclusion of the lease. The Corporation has made a provision to reflect the present value of this obligation.

Note 11: Cash Flow Reconciliation

Reconciliation of cash and cash equivalents as per Balance Sheet to Cash Flow Statement

Report cash and cash equivalent as per:

Cash Flow Statement	7,073,437	6,357,418
Balance Sheet	7,073,437	6,357,418
Difference	-	-

Reconciliation of operating result to net cash from operating activities:

Operating result	1,625,414	(1,446,929)
Depreciation and amortisation	263,249	220,160
Loss on disposal of assets	-	11,854
(Increase) / decrease in gross receivables	(205,663)	826,046
Decrease / (increase) in prepayments	60,402	(60,511)
Increase in employee provisions	48,556	217,313
Decrease in supplier payables	(281,529)	(1,111,113)
Increase in other payables	660,464	2,318,799
Net cash from / (used by) operating activities	2,170,893	975,619

Note 12: Contingent Liabilities and Assets

As at 30 June 2007 there are no quantifiable or unquantifiable contingencies (2006: \$nil).

Notes to and forming part of the Financial Statements

Note 13: Director Remuneration

	2007	2006
The number of directors of the Corporation included in these figures are shown below in the relevant remuneration bands:		
\$Nil to \$14 999	1	1
\$15 000 to \$29 999	6	6
\$30 000 to \$44 999	-	1
\$45 000 to \$59 999	1	-
\$90 000 to 104 999	1	-
\$150 000 to \$165 000	1	-
\$210 000 to \$225 000	-	1
Total number of directors of the Corporation	10	9
Remuneration received or due and receivable by directors of the Corporation	\$ 474,692	\$ 426,123

The part time directors of the Corporation received remuneration and allowances as determined by the Remuneration Tribunal. In accordance with the *PIERD Act*, the part time directors are appointed by a selection committee. The Executive Director is the only full time director of the Corporation.

Note 14: Related Party Disclosures

Directors of the Corporation

The Directors of the Corporation during the year were:

Mrs R Brazil	Chairman
Mrs D Bentley	Director
Mr A Campbell	Executive Director (Resigned effective 31 December 2006)
Mr J Childs	Director and Deputy Chairman
Prof P Cullen	Director
Mr T Fisher	Director
Prof T Lefroy	Director
Dr M Robinson	Executive Director (Appointed effective 01 January 2007)
Mr J Speirs	Director
Mr C Willcocks	Government Director (Resigned effective 28 May 2007)*

The aggregate remuneration of Directors is disclosed in Note 13.

*The position of Government Director was removed in an amendment to the *PIERD Act 1989*.

Loans to Directors and Director related entities

There were no loans made to Directors or Director related entities.

Notes to and forming part of the Financial Statements

Note 14: Related Party Disclosures (continued)

Other transactions with Directors or Director related entities

Research and development expenses were paid to the following Director related entities. The Directors involved took no part in the relevant decisions of the Board. In the interests of transparency, all transactions with Director-related entities are disclosed. These disclosures relate to involvement in honorary, part-time advisory roles with respect to the University of Southern Queensland and CSIRO. With respect to payments to other Director related entities, payments made to these entities were not associated with the areas of responsibility of the relevant Directors.

Mrs R Brazil	Chancellor, University of Southern Queensland.
Mr C Willcocks	General Manager, Australian Biosecurity System Taskforce, Corporate Policy, Department of Agriculture, Fisheries and Forestry.
Prof P Cullen	Member, Board of the CRC for Irrigation Futures. Visiting Fellow, CSIRO Land and Water.
Prof T Lefroy	Director, Centre for Environment, University of Tasmania.
Mrs D Bentley	Director, Cotton Catchment Communities CRC.

	2007	2006
	\$	\$
Department of Agriculture, Fisheries and Forestry	50,000	276,950
University of Southern Queensland	104,357	169,338
Department of Infrastructure, Planning and Resources, NSW	-	88,000
CSIRO Land and Water	716,964	1,025,551
Meat and Livestock Australia	-	82,500
CRC for Irrigation Futures	350,000	398,200
University of Tasmania	271,020	209,315
Cotton Catchment Communities CRC	440,000	51,538
Total	1,932,341	2,301,392

Notes to and forming part of the Financial Statements

Note 15: Executive Remuneration

	<u>2007</u>	<u>2006</u>
The number of senior executives who received or were due to receive total remuneration of \$130,000 or more:		
\$130 000 to \$144 999	1	2
\$145 000 to \$159 999	-	2
\$160 000 to \$174 999	<u>5</u>	<u>2</u>
Total	<u>6</u>	<u>6</u>
The aggregate amount of total remuneration of executives shown above	<u>\$ 978,181</u>	<u>\$ 910,104</u>

The executive remuneration includes all senior executives concerned with or taking part in the management of the Corporation during 2006-07 except the Executive Director. Details in relation to the Executive Director have been incorporated into Note 13: Director Remuneration.

Note 16: Remuneration of Auditors

	<u>2007</u>	<u>2006</u>
	<u>\$</u>	<u>\$</u>
Financial statements audit services are provided to the Corporation by the Auditor General.		
The fair value of audit services provided was:		
The Corporation	<u>31,000</u>	<u>27,000</u>
The fair value of other services provided was:		
Audit of individual Corporation programmes	<u>12,000</u>	<u>10,000</u>

Note 17: Average Staffing Levels

	<u>2007</u>	<u>2006</u>
The average staffing levels for the Corporation during the year were:	<u>49</u>	<u>40</u>

Notes to and forming part of the Financial Statements

Note 18: Financial Instruments

Note 18A: Interest Rate Risk

Financial Instrument	Note	Floating Interest Rate		Fixed Interest Rate Maturing In						Non-Interest Bearing		Total		Weighted Average Effective Interest Rate	
		2007	2006	1 Year or Less		1 to 5 Years		> 5 Years		2007	2006	2007	2006	2007	2006
		\$	\$	2007	2006	2007	2006	2007	2006	\$	\$	\$	\$	%	%
Financial Assets															
	Deposits on call	7A	7,073,187	-	-	-	-	-	-	-	-	7,073,187	6,357,168	5.94	5.31
	Cash on hand	7A	-	-	-	-	-	-	-	250	250	250	250	-	-
	Receivables for goods and services (gross)	7B	-	-	-	-	-	-	-	1,254,038	763,402	1,254,038	763,402	-	-
	Other receivables (excluding GST)	7B	-	-	-	-	-	-	-	41,008	61,045	41,008	61,045	-	-
Investments - term deposits	7C	-	-	11,929,984	-	-	-	-	-	-	-	11,929,984	11,027,001	6.35	5.65
Total		7,073,187	6,357,168	11,929,984	11,027,001	-	-	-	-	1,295,296	824,697	20,298,467	18,208,866		
Total Assets												21,726,153	19,673,248		
Financial Liabilities															
	Suppliers	9A	-	-	-	-	-	-	-	268,842	550,371	268,842	550,371	-	-
	Other payables - revenue in advance	9B	-	-	-	-	-	-	-	1,965,460	62,273	1,965,460	62,273	-	-
Total		-	-	-	-	-	-	-	-	2,234,302	612,644	2,234,302	612,644		
Total Liabilities												6,854,840	6,417,349		

Notes to and forming part of the Financial Statements

Note 18B: Fair Values of Financial Assets and Liabilities

		2007		2006	
	Notes	Total Carrying Amount \$	Aggregate Fair Value \$	Total Carrying Amount \$	Aggregate Fair Value \$
Financial Assets					
Deposits on call	7A	7,073,187	7,073,187	6,357,168	6,357,168
Cash on hand	7A	250	250	250	250
Receivables for goods and services (gross)	7B	1,254,038	1,254,038	763,402	763,402
Other receivables (excluding GST)	7B	41,008	41,008	61,045	61,045
Investments - term deposits	7C	11,929,984	11,929,984	11,027,001	11,027,001
Total Financial Assets		20,298,467	20,298,467	18,208,866	18,208,866
Financial Liabilities (Recognised)					
Suppliers	9A	268,842	268,842	550,371	550,371
Other payables - revenue in advance	9B	1,965,460	1,965,460	62,273	62,273
Total Financial Liabilities (Recognised)		2,234,302	2,234,302	612,644	612,644

Note 18C: Credit Risk Exposures

The Corporation's maximum exposures to credit risk at reporting date in relation to each class of recognised financial assets is the carrying amount of those assets as indicated in the Balance Sheet.

The Corporation has no significant exposures to any concentrations of credit risk.

All figures for credit risk referred to do not take into account the value of any collateral or other security.

Notes to and forming part of the Financial Statements

Note 19: Reporting of Outcomes

The Corporation is structured to meet one outcome:

Knowledge, understanding and informed debate to inspire innovation and action in sustainable natural resource management.

Six outputs are identified for this outcome. These are:

Output 1:	Landscapes
Output 2:	People
Output 3:	Industries
Output 4:	Innovation
Output 5:	Collaborative and Strategic Analysis
Output 6:	Knowledge into Practice

Note 19A: Net Cost of Outcome Delivery

	Outcome 1		Total	
	2007	2006	2007	2006
	\$	\$	\$	\$
Expenses				
Administered expenses	-	-	-	-
Departmental expenses	33,591,391	32,681,791	33,591,391	32,681,791
Total expenses	33,591,391	32,681,791	33,591,391	32,681,791
Costs recovered from provision of goods and services to the non-government sector				
Administered	-	-	-	-
Departmental	-	-	-	-
Total costs recovered	-	-	-	-
Other external revenues				
External contributions	21,476,663	17,737,888	21,476,663	17,737,888
Interest	955,713	949,933	955,713	949,933
Other	33,429	29,817	33,429	29,817
Total Departmental	22,465,805	18,717,638	22,465,805	18,717,638
Total other external revenues	22,465,805	18,717,638	22,465,805	18,717,638
Net cost of outcome	11,125,586	13,964,153	11,125,586	13,964,153

Notes to and forming part of the Financial Statements

Note 19B: Major Classes of Departmental Revenues and Expenses by Output Groups and Outputs

Outcome 1	Output Group 1		Output Group 2		Output Group 3	
	Output 1.1.1		Output 1.2.1		Output 1.3.1	
	2007	2006	2007	2006	2007	2006
	\$	\$	\$	\$	\$	\$
Departmental expenses						
Employees	568,604	488,333	437,120	394,737	1,140,365	1,118,380
Suppliers	793,636	744,172	402,161	456,851	2,413,592	2,091,241
Research and development	5,075,168	4,180,867	1,283,074	1,750,853	10,478,732	11,169,945
Depreciation and amortisation	48,917	33,713	16,128	18,931	109,080	91,995
Write-down of assets	-	659	-	6,978	-	1,752
Total departmental expenses	6,486,325	5,447,744	2,138,483	2,628,350	14,141,769	14,473,313
Funded by:						
Income from Government	4,097,842	3,196,195	1,691,168	2,141,562	2,369,571	2,515,447
External contributions	5,883,091	1,877,091	211,831	280,000	8,267,902	11,311,638
Interest	287,021	148,469	-	-	580,754	668,352
Other income	11,983	7,571	-	6,589	3,340	15,657
Gains	-	447	-	67	-	2,694
Total departmental revenues	10,279,937	5,229,773	1,902,999	2,428,218	11,221,567	14,513,788

Notes to and forming part of the Financial Statements

Outcome 1 (continued)	Output Group 4		Output Group 5		Output Group 6		Outcome 1 Total	
	Output 1.4.1		Output 1.5.1		Output 1.6.1			
	2007	2006	2007	2006	2007	2006	2007	2006
	\$	\$	\$	\$	\$	\$	\$	\$
Departmental expenses								
Employees	144,956	147,671	1,132,132	859,995	1,434,967	1,099,912	4,858,144	4,109,028
Suppliers	102,785	132,179	1,330,296	1,327,089	1,670,074	1,476,361	6,712,544	6,227,893
Research and development	1,277,922	1,718,995	3,519,025	3,018,283	123,533	273,913	21,757,454	22,112,856
Depreciation and amortisation	11,593	12,448	52,084	45,322	25,447	17,751	263,249	220,160
Write-down of assets	-	243	-	1,874	-	348	-	11,854
Total departmental expenses	1,537,256	2,011,536	6,033,537	5,252,563	3,254,021	2,868,285	33,591,391	32,681,791
Funded by:								
Income from Government	1,568,372	1,764,140	924,010	846,170	2,100,037	2,049,486	12,751,000	12,513,000
External contributions	-	-	5,224,545	3,838,659	1,889,294	430,500	21,476,663	17,737,888
Interest	-	-	83,601	122,113	4,337	10,999	955,713	949,933
Other income	-	-	18,106	-	-	-	33,429	29,817
Gains	-	-	-	913	-	103	-	4,224
Total departmental revenues	1,568,372	1,764,140	6,250,262	4,807,855	3,993,668	2,491,088	35,216,805	31,234,862

Administration income and expenditure has been allocated across outputs, proportionally, based on output income and expenditure. The net costs shown include intra-government costs that would be eliminated in calculating the Budget outcome.

APPENDICES

APPENDIX 1: THE CORPORATION'S LEGISLATION

Enabling legislation

Land & Water Australia was established on 3 July 1990 under the PIERD Act.

Objects

The legislated objects of all Research and Development Corporations are set out in section 3 of the PIERD Act. Sub-sections 3(a) to (c) respectively cover primary industry and community benefits, sustainability of natural resources, and social capital development — equating to the economic, environmental and social components of ecologically sustainable development to which the Research and Development Corporations direct their efforts. Sub-section 3(d) encompasses accountability.

The four PIERD Act (section 3) objects are:

- increasing the economic, environmental or social benefits to members of primary industries and to the community in general by improving the production, processing, storage, transport or marketing of the products of primary industries
- achieving the sustainable use and sustainable management of natural resources
- making more effective use of the resources and skills of the community in

general and the scientific community in particular

- improving accountability for expenditure on research activities in relation to primary industries

Functions

The functions of Land & Water Australia, deriving from section 11 of the PIERD Act, are to:

- investigate and evaluate the requirements for research and development relevant to issues affecting the management of land, water and related vegetation resources and, on that basis, prepare a five-year research and development plan, review it annually and revise it if required
- prepare an annual operational plan for each financial year
- coordinate or fund the carrying out of research and development activities that are consistent with the annual operational plan
- monitor, evaluate and report on natural resources management research and development activities that are coordinated or funded, wholly or partly, by the Corporation to the Parliament, the Minister and its representative organisations

- facilitate the dissemination, adoption and commercialisation of the results of its research and development in relation to the activities in respect of which the Corporation was established
- such other functions as are conferred on the Corporation by the PIERD Act or any other Act.

Powers

Section 12 of the PIERD Act grants powers to Land & Water Australia to:

- enter into agreements for carrying out research and development activities
- make applications for and deal with patents vested in the Corporation
- charge for work or services rendered by the Corporation
- accept gifts, grants and bequests, and act as a trustee of money or property vested in the Corporation
- acquire, hold and dispose of real and personal property
- join in the formation of a company
- do anything incidental to any of its powers.

The web address for the PIERD Act is:
www.austlii.edu.au/au/legis/cth/consol_act/piaerada1989531/

APPENDIX 2: COMPLIANCE WITH AUSTRALIAN GOVERNMENT STATUTES AND POLICIES

Table 10. A summary of Land & Water Australia's compliance with specific statutes and government policies.

STATUTE/GOVERNMENT POLICY	OBLIGATION	COMPLIANCE (SEE NOTE 1)
PIERD Act	Various	Fully compliant — demonstrated through completed compliance checklist
PIERD Act section (1)(a)(iii)	Revision of the research and development plan and annual operational plan	No revisions during the year
PIERD Act section 28(1)(a)(v) to (viii)	Report if Land & Water Australia applied for or commercially exploited a patent or was granted a licence under a patented invention, had interests in a company or in forming a company, undertook activities to form a company, or transacted significant acquisitions or disposals of real property.	Nothing to report during the year
PIERD Act section 28(1)(a)(iv)	Details of Land & Water Australia research projects	See Report of Operations
PIERD Act section 143	Ministerial directions	No Minister has notified the Corporation of a Ministerial direction.
CAC Act and Auditor-General Act 1997	Various	Fully compliant — demonstrated through completed compliance checklist reviewed by the Corporation's internal auditors and Audit Committee
CAC Act section 15	Significant events	Nil reported during period
CAC Act Section 16 (1) (c)	Keeping the responsible Minister and Finance Minister informed	Compliant. The Finance Minister required for the year ending 30 June 2007 a CAC Act compliance report to be forwarded to the responsible Minister and Finance Minister by the 15th day of the fourth month following fiscal year end.
CAC Act Section 28(1)	Ministerial Directions	Compliant. The Protective Security Manual has been applied as a general policy of Land & Water Australia from 1 March 2007.

Table 10. A summary of Land & Water Australia's compliance with specific statutes and government policies continued.

STATUTE/GOVERNMENT POLICY	OBLIGATION	COMPLIANCE (SEE NOTE 1)
CAC Act subsection 47A(2)	Finance Minister 1 December 2004	Compliant
Division 3 section 16 of the Commonwealth Authorities and Companies (Report of Operations) Orders 2002	Disclosure of insurance cover	The Corporation has comprehensive insurance cover with the Australian Government insurer, Comcover, for its directors and officers.
Environment Protection and Biodiversity Conservation Act 1999	Reporting obligations as specified at section 516A	Compliant - Land & Water Australia requires that sustainability of the natural resource base is the overriding objective when researchers and others are designing research projects and programs. Project contracts have specific clauses requiring providers to minimise negative environmental impacts. A significant number of projects across the research portfolio actively progress the intent of the Environment Protection and Biodiversity Conservation Act 1999. The mission and work of the Corporation advance the Government's principles of Ecologically Sustainable Development.
Freedom of Information Act 1982		See Appendix 4
A New Tax System (Goods and Services) Act 1999		Compliant
Occupational Health and Safety (Commonwealth Employment) Act 1991	Compliance with occupational health and safety policy	Compliant
Archives Act 1983		Compliant

Table 10. A summary of Land & Water Australia's compliance with specific statutes and government policies continued.

STATUTE/GOVERNMENT POLICY	OBLIGATION	COMPLIANCE (SEE NOTE 1)
Parliamentary or administrative reviews		No judicial decisions or decisions of administrative tribunals during the reporting period that have had or may have a significant impact on the Corporation's operations There were no reports from a Parliamentary committee or the Australian Government Ombudsman regarding the operations of the Corporation.
Equal Employment Opportunity Act 1987	The Corporation's terms and conditions of employment promote a work environment free from discrimination in employment matters, ensuring application of the principles of merit and equity. The Corporation also promotes the principles of industrial democracy and a participative work place.	Compliant
Government priorities for national and rural research		See Executive summary
Payments made to representative organisations related to consultation		No payments were made
Energy efficiency statement		Land & Water Australia supports the Australian Government's enhanced Energy Management Program and energy management guidelines. The Corporation leases offices as part of a large office complex and does not own large, energy-consuming equipment or commercial vehicles.
Fraud control	Preparation of fraud risk assessments and fraud control plans.	Compliant. Comprehensive fraud risk and control plans were completed in 2004-05.

Table 10. A summary of Land & Water Australia's compliance with specific statutes and government policies continued.

STATUTE/GOVERNMENT POLICY	OBLIGATION	COMPLIANCE (SEE NOTE 1)
Management of frequent flyer points	All frequent flyer points accumulated by directors and staff on Land & Water Australia business must only be redeemed for the benefit of natural resource management.	Compliant
Commonwealth Disability Strategy		Land & Water Australia implemented the strategy to an extent appropriate to the functions and size of the Corporation. The Corporation's premises have easy, safe access by people with special orientation and mobility requirements. The Corporation's recruitment and staff development practices seek to eliminate disadvantage that may be contributed for disabilities.
Legislation/regulations affecting Land & Water Australia business	Land & Water Australia is required to comply with the Australian Government's requirements for regulatory best practice arrangements when proposing new regulation or amending existing regulation which impacts on business.	Land & Water Australia has not been involved in any regulatory proposals during the reporting period.

Note: 1. Where 'compliant' appears in this column, details of the actions or policy that constitutes compliance are available on request from the Corporation (land&wateraustralia@lwa.gov.au, facsimile 02 6263 6099 or telephone 02 6263 6000).

APPENDIX 3: NATIONAL RESEARCH PRIORITIES AND ASSOCIATED GOALS

Priority 1 - An environmentally sustainable Australia

- A1: Water - a critical resource
- A2: Transforming existing industries
- A3: Overcoming soil loss, salinity and acidity
- A4: Reducing and capturing emissions in transport and energy generation
- A5: Sustainable use of Australia's biodiversity
- A6: Developing deep earth resources
- A7: Responding to climate change and variability

Priority 2 - Promoting and maintaining good health

- B1: A healthy start to life
- B2: Ageing well, ageing productively
- B3: Preventive healthcare
- B4: Strengthening Australia's social and economic fabric

Priority 3 - Frontier technologies for building and transforming Australian industries

- C1: Breakthrough science
- C2: Frontier technologies
- C3: Advanced materials
- C4: Smart information use
- C5: Promoting an innovation culture and economy

Priority 4 - Safeguarding Australia

- D1: Critical infrastructure
- D2: Understanding our region and the world
- D3: Protecting Australia from invasive diseases and pests
- D4: Protecting Australia from terrorism and crime
- D5: Transformational defence technologies

APPENDIX 4: FREEDOM OF INFORMATION STATEMENT

As an Australian Government statutory authority, the Corporation is subject to the Freedom of Information Act 1982.

Categories of documents

Documents relating to research and development activities funded by the Corporation are held at the office in Canberra, including those listed in Table 11 on page 153.

Freedom of information statistics

Freedom of information requests received: 1
Internal review received: nil
Administrative Appeals Tribunal appeals: nil

Facilities and procedures for Freedom of Information access

Members of the public can examine documents at the Corporation's office in Canberra by contacting the Chief Financial Officer on 02 6263 6000. Office hours are Monday to Friday between 8.30 am and 5.00 pm. Access to the documents incurs a fee as prescribed under the Freedom of Information Act.

This statement is correct to 30 June 2007.

Table 11. Documents available from Land & Water Australia

CATEGORY	NATURE	CUSTOMARILY MADE AVAILABLE	NOT CUSTOMARILY MADE AVAILABLE*
Planning documents including research and development plan, annual operational plan and annual report	Files Publications	•	•
Annual report	Files Publications	•	•
Applications and agreements	Files and forms		•
Financial and project administration	Files and electronic data Publications	•	•
Information relating to the commercialisation of research and development	Files		•
R&D plan	Files Publications	•	•
R&D reports and occasional papers	Files Publications	•	•
Staff administration and personnel	Files		•

* For privacy or commercial-in-confidence reasons

APPENDIX 5: PROGRAM MANAGEMENT COMMITTEE MEMBERSHIP

Membership is as at 30 June 2007 unless otherwise stated.

Placement of committees in research programs reflects the 2006-07 committee structure.

* denotes Chair of the committee in 2006-07.

A list of abbreviations can be found in Appendix 7.

PROGRAM	NAME	ORGANISATION
Land, Water & Wool (Sustainable Wool Advisory Group)	P. Day	LWA consultant
	T. Dunbabin*	Wool producer
	M. Goodacre	Wool producer
	L. Hogan	AWI
	M. Lloyd	Wool producer
	A. Lovett	LWA
	A. Southwell	Wool producer
	J. Street	Wool producer
	R. Weatherly	Wool producer
Grain & Graze	I. Donges*	Independent
	M. Blumenthal	Grains RDC
	G. Fraser	Grains RDC
	R. Banks	MLA
	K. Baldry	MLA
	I. Rogan	AWI
	J. Speirs	LWA
	A. Lovett	LWA

PROGRAM	NAME	ORGANISATION
National Program for Sustainable Irrigation (ended 30 December 2006)	R. Brazil	Irrigator & LWA
	A. Lovett	LWA
	A. McCrea	WA WRC
	S. Mills	Irrigator & ANCID
	T. Gardner	Qld DNRW
	T. Vanderbyl	Qld SunWater
	B. Pyke	Cotton RDC
	P. Hayes	CRC Irrigation Futures
	C. Thompson	Horticulture Australia Ltd
	D. Flett*	Independent
	T. Busher	WA Consortium
	R. Dalton	DAFF
	G. Schrale	SA DWLBC
Managing Climate Variability	D. Baker*	Grains RDC
	W. Hall	MLA
	D. Poulter	DAFF
	S. Henderson	Sugar RDC
	C. Phelps	Dairy Australia
	G. Wilson	RIRDC
	P. Arkle	NFF
	L. Hogan	AWI
	C. Willcocks	LWA
	A. Lovett	LWA
	M. Blumenthal	Grains RDC (observer)
Healthy Soils for Sustainable Farms	W. Watkins*	Independent
	S. Kearns	Grains RDC
	G. Cattnach	DAFF
	R. Shaw	DAFF
	J. Speirs	LWA
	A. Lovett	LWA
	C. Viljoen	LWA

PROGRAM	NAME	ORGANISATION
Environmental Water Allocation	P. Cullen*	LWA
	D. Bentley	LWA
	C. Schweizer	DEW
	J. Donaldson	LWA
	K. Olssen	NWC
	B. Lawrence	MDBC (observer)
	R. McLoughlin	DAFF (observer)
	R. Davis	LWA (observer)
Tropical Rivers and Coastal Knowledge	T. Fisher*	LWA
	M. Robinson	LWA
	C. Schweizer	DEW
	M. Ross	NAILSMA
	E. Hauck	Dept of Water, WA
	J. Mullins	DNR, QLD
	P. Whitehead	NRETA, NT
	K. Olssen	NWC
	J. Dalton	DAFF
	S. Bunn	Research Executive Committee (observer)
	M. Douglas	Research Executive Committee (observer)
	J. Talbot	LWA (observer)
	B. Edgar	LWA (observer)
Native Vegetation and Biodiversity	J. Childs*	LWA
	P. Wilson	NLWRA
	R. Thackway	BRS
	B. Keating	CSIRO Sustainable Ecosystems
	D. Carr	Greening Australia
	M. Walsh	DAFF
	J. Donaldson	LWA
	J. Boshier	DEW
	M. Quirk	LWA (Observer)

PROGRAM	NAME	ORGANISATION
Defeating the Weed Menace research	J. Childs*	LWA
	G. Cattnach	DAFF
	C. Robinson	DEW
	R. McFadyen	CRC for Australian Weeds Management
	J. Donaldson	LWA
	J. Lambert	LWA (observer)
	B. Auld	LWA (observer)
	V. Wayte	NLWRA (observer)
	G. Bush	DEW (observer)
Joint Venture Agroforestry (managed by Rural Industries Research and Development Corporation)	T. Lefroy*	LWA
	S. Barlow	University of Melbourne
	S. Davis	MDBC
	G. Kile	FWPRDC
	C. Lemerle	RIRDC
	R. Clark	Tasmanian Institute of Agricultural Research
	W. Ragg	Australian Forest Growers
	P. O'Brien	RIRDC
	A. Robinson	DAFF
	R. Lott	RIRDC
	B. Goody	DEH
	A. Campbell	CRC for Plant Based Management of Dryland Salinity (observer)
Social and Institutional Research	T. Fisher*	Marsden Jacobs Associates
	G. Bammer	ANU
	D. Bentley	LWA; NRC, NSW
	B. Brazil	LWA
	M. Buxton	RMIT
	P. Green	Southern Rivers CMA, NSW
	D. Peterson	Productivity Commission
	K. Olsson	NWC
	H. Tomlinson	DAFF
	M. Lester	LWA

PROGRAM	NAME	ORGANISATION
Innovation Call	T. Lefroy*	LWA
	N. Schofield	LWA
	M. Lester	LWA
	M. Robinson	LWA
	A. Lovett	LWA
Scholarships and Fellowships	N. Schofield*	LWA
	T. Lefroy	LWA
	J. Donaldson	LWA
	C. Mitchell	UTS
National Land & Water Resources Audit Advisory Council	G. Gorrie *	Independent Chair
	J. Foster	Environment ACT
	J. Gilmour	NT DPI
	P. Harper	Australian Bureau of Statistics
	C. McRae	DSE Victoria
	B. Nulsen	Department of Agriculture, WA
	T. Slatyer	DEW
	J. Olley	CSIRO Land and Water
	G. Pinkard	DPIW Tasmania
	C. Robson	DNRW Queensland
	P. Sutherland	DIPNR NSW
	W. Watkins	ANZLIC
	R. Wickes	DWLBC, South Australia
	B. Wonder	DAFF
	B. Beeton	University of Queensland (Observer)
	M. Robinson	LWA (Observer)
	J. Donaldson	DAFF (Support)
	A. Watt	DEW (Support)

APPENDIX 6: THE CORPORATION'S STAKEHOLDERS AND CLIENTS

The Australian Government, in particular:

- the Minister for Agriculture, Fisheries and Forestry
- the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry
- the Minister for Transport and Regional Services
- the Minister for the Environment and Water Resources
- the Minister for Science, Education and Training
- the Department of Agriculture, Fisheries & Forestry
- the Department of the Environment and Water Resources
- the National Water Commission
- the Department of Transport and Regional Services
- the Department of Education, Science and Training
- the Chief Scientist

Land & Water Australia's representative organisations:

- the National Farmers' Federation
- the Australian Conservation Foundation

Australian Government natural resource management initiatives:

- Natural Heritage Trust
- National Action Plan for Salinity and Water Quality
- National Landcare Program
- National Water Initiative

Funding agencies that provide collaborative support within commissioned research programs, in particular:

- other Research and Development Corporations
- the National Water Commission
- the Murray-Darling Basin Commission
- State Government departments

Key target audiences for Land & Water Australia's outputs, in particular:

- farmers and other land managers, and the people who advise them
- regional natural resource management bodies and catchment bodies
- industry organisations, non-government organisations and indigenous organisations
- state agencies and local government
- others involved in the use, management, regulation or conservation of Australia's land, water and vegetation resources.

The research and development community, in particular:

- Universities and Cooperative Research Centres
- CSIRO and other Australian Government research organisations
- state agencies and consultants

The public at large who have an interest in the sustainability of Australia's land, water and vegetation resources.

APPENDIX 7: LIST OF ABBREVIATIONS

AANRO Australian Agriculture and Natural Resources Online

ABARE Australian Bureau of Resource Economics

ACRIS Australian Collaborative Rangeland Information System

AJASN Australasian Joint Agency Scanning Network

ANAO Australian National Audit Office

ANCID Australian National Committee on Irrigation and Drainage

ANU Australian National University

ANZLIC Australian and New Zealand Land Information Council (the Spatial Information Council)

Audit National Land & Water Resources Audit

AWA Australian Workplace Agreement

AWI Australian Wool Innovation Limited

BRS Bureau of Rural Sciences

CAC Act *Commonwealth Authorities and Companies Act 1997*

CMA Catchment Management Authority

CRC Cooperative Research Centre

CSIRO Commonwealth Scientific and Industrial Research Organisation

CVCB Cooperative Venture on Capacity Building

DAFF Australian Government Department of Agriculture, Fisheries and Forestry

DEH Australian Government Department of the Environment and Heritage

DEW Department of the Environment and Water Resources

DIPNR Department of Infrastructure, Planning & Natural Resources (New South Wales)

DME Department of Mines and Energy (South Australia)

DNRW Department of Natural Resources and Water (Queensland)

DPI Department of Planning and Infrastructure (Northern Territory)

DPI Department of Primary Industries (Victoria)

DPIW Department of Primary Industries and Water (Tasmania)

DSE Department of Sustainability and Environment (Victoria)

DWLBC Department of Water, Land and Biodiversity Conservation (South Australia)

EPA Environment Protection Authority (Victoria)

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Cth)

ESD Ecologically Sustainable Development

FWPRDC Forest and Wood Products Research and Development Corporation

G&G Grain & Graze

GRDC Grains Research and Development Corporation

JVAP Joint Venture Agroforestry Program

LWA Land & Water Australia (legislated title: Land and Water Resources Research and Development Corporation)

LWW Land, Water & Wool

MDBC Murray-Darling Basin Commission

MLA Meat & Livestock Australia

NAIF Northern Australia Irrigation Futures Project

NAP National Action Plan for Salinity and Water Quality

NFF National Farmers' Federation

NGO Non-Government Organisation

NHT Natural Heritage Trust

NPSI National Program for Sustainable Irrigation

NRC Natural Resources Commission (New South Wales)

NRETA Department of Natural Resources the Environment and the Arts (Northern Territory)

NRM natural resource management

NWAG National Weeds Advisory Group

NWI National Water Initiative

PIERD Act *Primary Industries and Energy Research and Development Act 1989*

R&D research and development

RDC Research and Development Corporation

RIRDC Rural Industries Research and Development Corporation

RMIT Royal Melbourne Institute of Technology

RoI Return on Investment

SIRP Social and Institutional Research Program

SRDC Sugar Research and Development Corporation

TRaCK Tropical Rivers and Coastal Knowledge

UTS University of Technology Sydney

WRC Water and Rivers Commission (Western Australia)

Note: Program/me: A number of older programs funded by Land & Water Australia and its partners have names and logos spelled with a single 'm'. For the sake of consistency we were advised to keep that spelling throughout the Annual Report.

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This index shows the numbers for pages on which information is provided in response Australian Government legislation and policies. A table providing a summary of Land & Water Australia's compliance with specific statutes and government policies is at Appendix 2 on pages 147-150.

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