



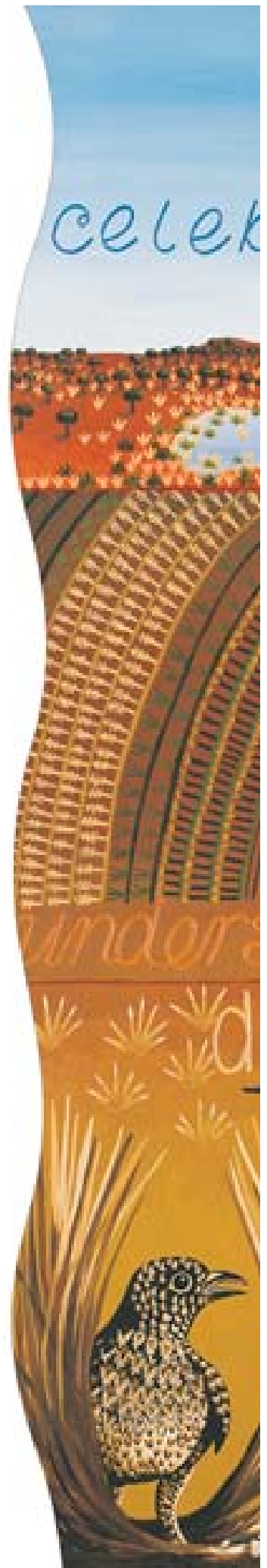
**Land & Water**

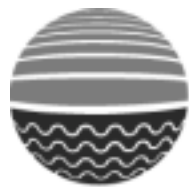
A U S T R A L I A

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**ANNUAL  
OPERATIONAL PLAN**

**2002 - 2003**





**Land & Water**

A U S T R A L I A

research • development • innovation

## **ANNUAL OPERATIONAL PLAN**

**2002-2003**

**Land & Water Australia's mission is  
to provide:**

*National leadership in generating knowledge,  
informing debate and inspiring innovation and action  
in sustainable natural resource management.*

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# **1. Background**

## ***1.1 Establishment***

Land & Water Australia<sup>1</sup> is a statutory corporation established under the provisions of the Primary Industries and Energy Research and Development (PIERD) Act of 1989, within the Commonwealth Agriculture, Fisheries and Forestry portfolio.

Land & Water Australia is specifically responsible for research and development (R&D) aimed at the productive and sustainable management of the land, water and vegetation resources underpinning Australia's primary industries and regional communities. We do not fund general atmospheric or marine research or research on urban issues.

As a Commonwealth Authority, the Corporation has a particular charter to foster national collaboration in order to improve the efficiency and effectiveness of this R&D effort. The Corporation emphasises the establishment of national research programs, most of which are supported jointly by several partner organisations, which bring together resource managers and researchers to identify priorities and to ensure that research findings are adopted and implemented. The R&D Plan takes an integrated approach to program design and implementation and to the development of packages of information relevant to decision-makers.

A Board of nine Directors governs the Corporation. The Board develops policy, evaluates the Corporation's performance and creates committees/working groups to work on specific activities. The term appointment of six Directors of the Board will conclude at 30 June 2002. The Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry will appoint incoming Directors for a three year period. The Corporation staff carry out the day-to-day work involved in establishing R&D programs and in developing, implementing, supporting, communicating and reviewing R&D work. Land & Water Australia is only one of several organisations involved in this endeavour. Responsibilities in natural resource management, whether for legislation, policy, programs or onground works, are distributed across all levels of government, community-based groups such as catchment committees and Landcare groups, rural industries and individual landholders.

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<sup>1</sup> Formerly and legally the Land and Water Resources Research and Development Corporation

## 1.2 Land & Water Australia Mission and Objectives

The Land & Water Australia Mission is to provide:

*national leadership in generating knowledge, informing debate and inspiring innovation and action in sustainable natural resource management.*

Figure 1 shows the corresponding corporate objectives and performance indicators, as detailed in the 2001-2006 R&D Plan (R&D Plan).

FIGURE 1

### Relationship between Land & Water Australia Corporate Objectives and Performance Measures

OBJECTIVE	MEASURE
LEADERSHIP: To be, and be seen to be, at the forefront of Australian thinking on sustainable natural resource management.	Stakeholder feedback through surveys. The extent to which R&D funded by Land & Water Australia puts issues on the national agenda.
INFLUENCE: To maximise the impact of the Corporation's investments, at onground policy and institutional levels in improving the sustainability of natural resource management.	Adoption of Land & Water Australia-funded R&D, measured through analyses and surveys of adoption rates.  The ratio of total R&D effort in Land & Water Australia's programs to the core Land & Water Australia investment.
RELEVANCE: To ensure that the Corporation targets investment to where it can make a real difference, by meeting critical natural resource policy and management needs	The degree of alignment of Land & Water Australia-funded R&D effort with issues identified by key stakeholders and natural resource management experts as critical national priorities.  Stakeholder feedback through surveys.
RETURN ON INVESTMENT: To maximise the return on public funding invested through the Corporation.	The average benefit:cost ratio across the R&D and communication effort funded by the Corporation, with a target average of at least ten to one.
ACCOUNTABILITY: To meet all statutory obligations and accountability requirements in a comprehensive, timely and transparent manner.	Independent and internal audit reports; feedback from AFFA and ANAO; the timeliness of compliance.

In keeping with the Commonwealth Government's accrual-based budget framework, the Corporation's planning, operating and reporting framework is centred on delivering outputs that help to achieve clearly stated planned outcomes.

Outcomes are the results, impacts or consequences of actions by the Corporation in the wider Australian community and environment. Outputs are the goods and services that the Corporation produces for external organisations or individuals. Inputs are resources – in the form of people, expertise, materials, energy, facilities and funds – that we use to produce outputs.

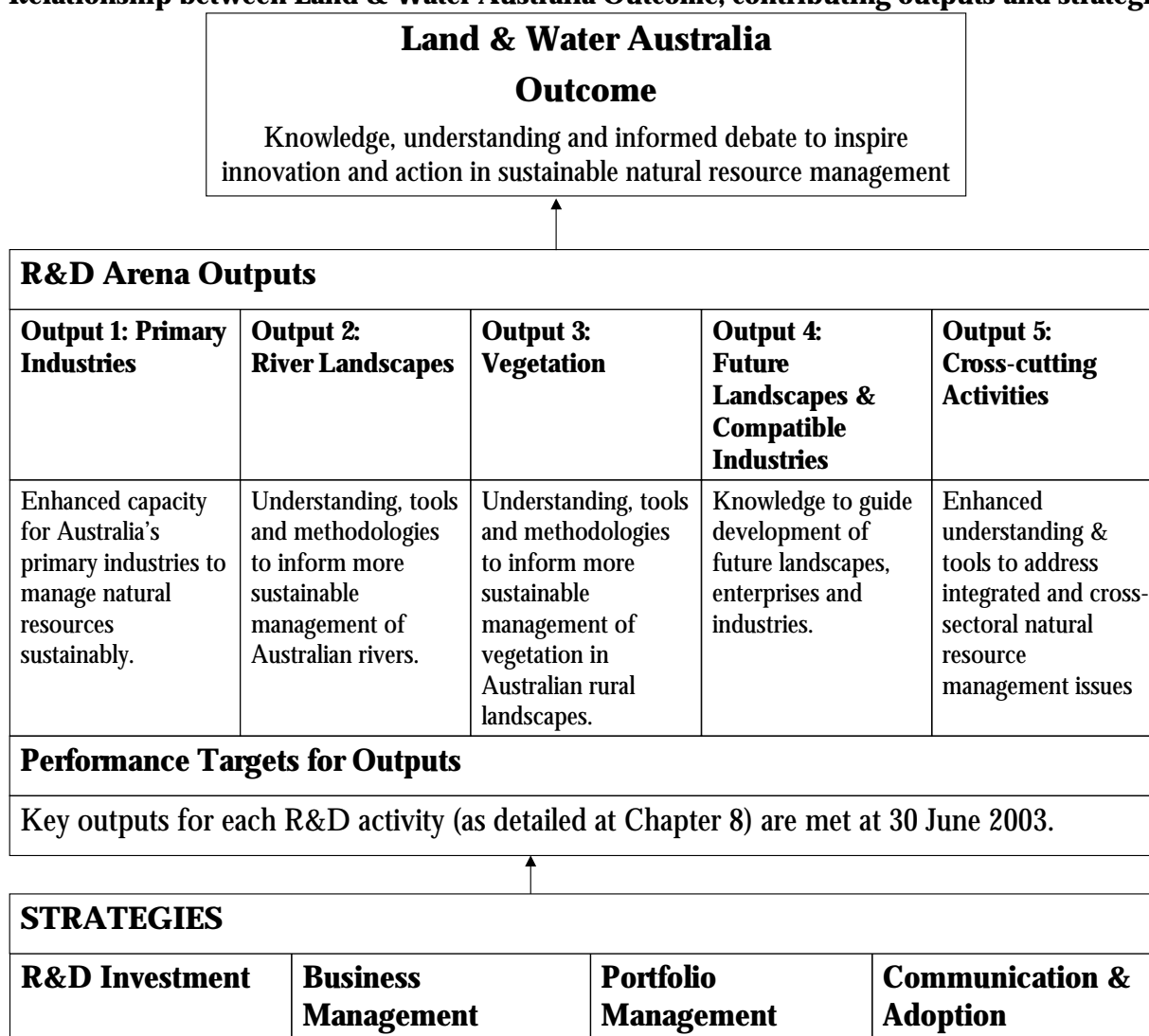
The very nature of R&D and associated communication and adoption activities means that it takes time for investments and actions to produce an effect. Outputs that occur during a particular year generally result from

inputs of previous years. In turn, almost all outcomes are achieved as a result of outputs of previous years. Actual time lags vary according to the activities involved. Further, the given outcome is likely to be the product of a number of outputs, which in turn result from a diversity of inputs. Given the complexities of the natural resource management issues we are tackling and their frequently large spatial and temporal scales, attribution of cause and effect is also notoriously difficult.

Figure 2 below shows the relationship between the outcome and the contributing outputs for the Corporation. Land & Water Australia works towards one outcome, reflected in the Corporation's mission statement. The total R&D investments of the Corporation across its research portfolio are directed towards this outcome. The output and outcome structure is consistent to the Land & Water Australia's contribution to the 2002-2003 Portfolio Budget Statements for the Agriculture, Fisheries & Forestry - Australia Portfolio, a copy is at Appendix C.

FIGURE 2

**Relationship between Land & Water Australia Outcome, contributing outputs and strategies**



### **1.3 Accountability Requirements**

To meet accountability requirements and to provide an adequate reporting mechanism to stakeholders, Land & Water Australia prepares the following documents:

- *R&D Plan* – provides a strategic overview of how Land & Water Australia intends to achieve its mission and objectives. The 2001-2006 R&D Plan took effect from 1 July 2001
- *Annual Operational Plan (AOP)* – provides a detailed account of the specific developments and activities (including the budget) planned for the forthcoming year; and
- *Annual Report* – records and measures achievements against each of the developments and activities listed in the AOP, and meets other statutory reporting requirements. The 2001-2002 Annual Report will comply with the Finance Minister's order on the Report of Operations (CAC Orders) in line with the Commonwealth Authorities and Companies Act 1997 (CAC Act)

In addition, the Corporation is required to report formally to its representative organisations (the National Farmers' Federation and the Australian Conservation Foundation) on an annual basis and in preparing the R&D Plan.

The Corporation, in its R&D Plan, has a mission and five key objectives. As illustrated at Figure 3, these objectives, and the outputs and strategies described in the Plan by which they will be met, give practical expression to the four objects of the *PIERD Act* that Land & Water Australia is required to achieve. Further details on the activities and their coverage against the objects is at Chapter 8.

FIGURE 3

**Link between PIERD Act objects and Land & Water Australia mission and objectives**

<b>PIERD ACT OBJECT</b>	<b>LINK TO LAND &amp; WATER AUSTRALIA MISSION AND OBJECTIVES</b>
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	Land & Water Australia has a planned output to enhance the capacity for Australia's primary industries to manage natural resources sustainably. Land & Water Australia will work with the primary industries (particularly through sister R&D Corporations) to find ways to ensure that natural resources are used sustainably while supporting profitable farming systems.
B. Achieving the sustainable use and sustainable management of natural resources	This object constitutes Land & Water Australia core business and there is a direct link with the Land & Water Australia mission and objectives of our R&D Plan.
C. Making more effective use of the resources and skills of the community in general and the scientific community in particular	To ensure that we meet the Relevance and Influence corporate objectives, we encourage the involvement of all key groups in the design, development and implementation of R&D programs and projects. The communication strategy has an 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. Through funding postgraduate scholarships, and travelling and community fellowships in identified areas of deficiency, the Corporation will enhance R&D capacity and make more effective use of the skills of the community.
D. Improving accountability for expenditure on R&D activities in relation to primary industries.	The Land & Water Australia key accountability objective states " To meet all statutory obligations and accountability requirements in a comprehensive, timely and transparent manner". This objective provides a clear link to accountability for expenditure, and hence to achieving object D of the Act.

## 1.4 **Format of AOP**

This AOP gives effect to the Land & Water Australia's R&D Plan 2001-2006 for the financial year 2002-2003. It takes into account the *PIERD Act* objects and the Commonwealth Government R&D priorities specified by the Minister for Agriculture, Fisheries and Forestry to all rural R&D corporations. It is based on Land & Water Australia's capacity to fund new and continuing programs to the value of \$16.8 million.

<b>In accordance with sub-section 25(2) of the <i>PIERD Act</i>, this AOP:</b>	<b>Page Number</b>
<ul style="list-style-type: none"> <li>• Specifies the broad groupings of R&amp;D activities that Land &amp; Water Australia proposes to fund, wholly or partly, during 2002-2003;</li> </ul>	23 – 39
<ul style="list-style-type: none"> <li>• Describes how and to what extent funding those activities will:               <ul style="list-style-type: none"> <li>- Give effect to the R&amp;D Plan in force during that financial year; and</li> <li>- in particular, pursue the strategies outlined in the R&amp;D plan and help to achieve the objectives described in the R&amp;D plan; and</li> </ul> </li> </ul>	23 – 39
<ul style="list-style-type: none"> <li>• provides an estimate of:               <ul style="list-style-type: none"> <li>- the total amounts likely to be spent by Land &amp; Water Australia in respect of each broad grouping of R&amp;D activities the Corporation proposes to fund during 2002-2003;</li> <li>- the total of all other amounts likely to be spent during the financial year including the payment or discharge of the expenses and liabilities incurred by the Corporation, in payment of remuneration and allowances, expenditure for each broad grouping of R&amp;D activities, for administration, and for servicing the Board Selection Committee; and</li> <li>- the total of all other income other than that paid to Land &amp; Water Australia.</li> </ul> </li> </ul>	23 – 39 21 21

The Corporation is also required under the *CAC Act*, to provide budget estimates for each financial year. Details of the budget estimates are included in the 2002-03 Portfolio Budget Statement - a copy is at Appendix C.

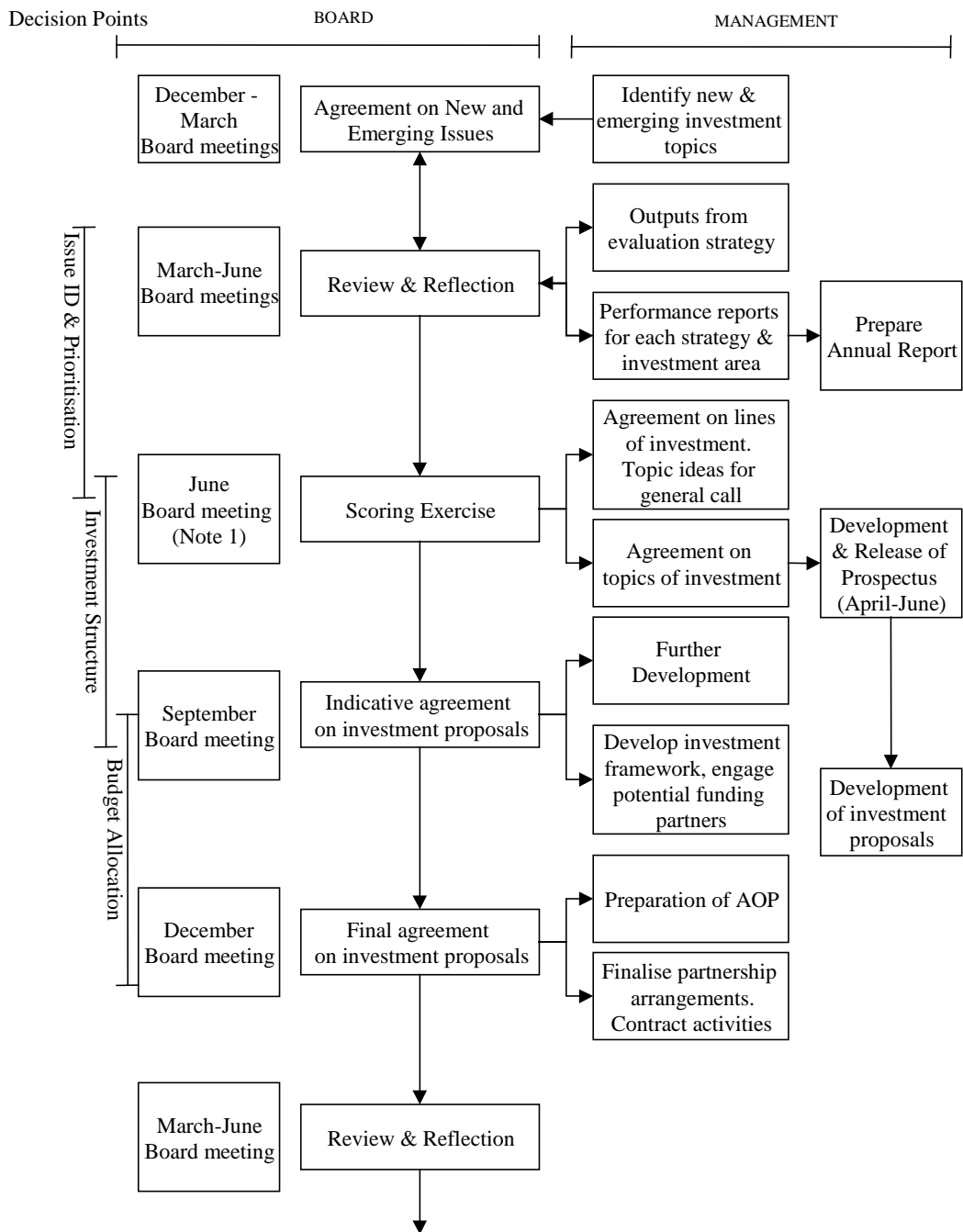
## 1.5 **Portfolio Investment Framework**

The Corporation has in place a Portfolio Investment Framework that provide a transparent approach to the allocation of R&D investment towards natural resource management issues – a copy of each of the key steps is described in the flowchart at Figure 4. The key components in the framework to be implemented in the 2002-3 year include the identification of new and emerging issues, the development of information sheets on each potential investment area, the conduct of the scoring exercise and the final budget allocation.

The scanning of new and emerging issues is an important strategic process that forms an integral component of the Portfolio Investment Framework. Plans for disseminating the outputs across the portfolio and externally as appropriate will be developed.

FIGURE 4

**Portfolio Investment Framework**



## **2. Investment Environment**

### ***2.1 Opportunities***

#### ***2.1.1 Government Priorities and Programs***

As detailed in Chapter 3 below, the Corporation will continue to align its R&D activities to government policies and programs. Land & Water Australia will also contribute to government policy related to the management of land, water and vegetation resources, in particular by working wherever possible to ensure that R&D outputs inform delivery of the National Action plan for Salinity & Water Quality (see below) and the Natural Heritage Trust.

#### ***2.1.2 Collaboration with agricultural R&D Corporations***

In an effort to forge better links with on-ground managers of land and water resources, the Corporation will continue to identify strategic partnerships with rural industry groups, in particular through fellow R&D Corporations. The Corporation has been successful in identifying opportunities in the broad-scale industries. 'Land, Water & Wool' is a major partnership between Land & Water Australia and Australian Wool Innovation Ltd (AWI). Its aim is to provide the wool industry significant benefits in terms of improved industry productivity while improving the natural resource base. Negotiations are in progress to develop a large potential Sustainable Grain and Grazing Systems program in partnership with the Grains R&D Corporation, AWI and Meat and Livestock Australia (MLA). This major farming systems program aimed at mixed farms will integrate productivity and sustainability goals. The Climate Variability in Agriculture R&D Program has previously had strong support from AFFA and several R&D Corporations. Negotiations are in progress to develop a new phase of the program to focus on improved adoption to industry and increased application of better forecasting tools to improve natural resources management. The Corporation will continue its support of the Joint Venture Agroforestry R&D Program, in partnership with the Rural Industries R&D Corporation (RIRDC) and the Forests and Wood Products R&D Corporation. The Corporation has also secured partnerships within the National Dryland Salinity Program (NDSP), with state resource agencies, GRDC, RIRDC, MDBC and AFFA. During the year, the Corporation will also pursue further partnerships with the intensive agricultural industries including horticulture and dairy.

### ***2.1.3 Improved Marketing Strategy for Australia based on 'clean and green' image***

The recent Foot and Mouth outbreak in Europe has underlined the importance of Australia's 'clean and green' image for food production. This image is being used as a major marketing strategy for Australia and has been identified by the Minister as a priority (see below). Industries therefore may need to assess whether their producers and processors are meeting international standards in order to meet market requirements. It is important for Australian land and water users and managers to be able to demonstrate and verify the environmental soundness of management practices. Many of the corporation's R&D programs are aimed at improving current recommended practices. Closer links will be established during 2002-2003 with commodity R&D corporations to expand this work.

## ***2.2 Challenges***

### ***2.2.1 Decline in resources provided by collaborative partners***

The Corporation is finding it progressively more difficult to secure funding partnerships at a program level within its R&D activities. This is due to a range of research and NRM organisations, all with external earnings targets, trying to lever funds from other organisations to improve their own funding bases. Land & Water Australia will continue to foster partnerships where possible in order to engage the key stakeholders at the outset to maximise the ownership and adoption of R&D results.

The decline in the resources provided for some State and Territory agencies responsible for agriculture and natural resource management continues to be a major concern. These agencies play an important role in the Corporation's applied research effort, and are essential participants in extension and implementation activities. Their regulatory and policy roles make them essential partners in many collaborative projects. Declining State resources may have a significant effect on the adoption component of Corporation projects, and hinders agencies' capacity to maintain their long-term commitment to major programs. A corollary of the run-down in extension services at State and Territory levels is that R&D Corporations have to allocate an increasing proportion of their budgets to adoption-focused activities. We are also looking increasingly to local government, non-government organisations and community groups to facilitate the adoption of natural resource management programs and activities by landholders.

### **3. Government Priorities and Programs**

#### **3.1 Government Priorities for Rural Research**

The Government has indicated its on-going financial commitment to R&D and recognition that the system of rural research and development corporations plays a critical role in taking science into the paddock. In December 1999, the Minister wrote to all RDCs outlining the Government's priorities for rural research to increase the competitiveness of Australia's rural industries. The Corporation's response against each of the six priority areas is as follows:

*a. Sustainable natural resource management*

The Corporation's core business relates to protecting and enhancing the natural resource base that underpins rural Australia. Work ranges from developing a better understanding of the key processes that drive Australian ecosystems, to the effective uptake of improved management through industry best practice guidelines. As detailed above, Land & Water Australia is working with the other R&D Corporations to ensure a coordinated R&D effort for NRM across each of the commodity industries.

*b. Whole of industry approach*

The Corporation ensures a whole of industry approach in all its collaborative activities with RDCs, such as incorporating ecological sustainability into the PROGRAZE farming systems package and the NRM kits to be developed as part of the 'Land, Water & Wool' initiative.

*c. Biotechnology*

The Corporation will work with other R&D corporations to review the potential impact of biotechnology on the natural resource base. A review of this issue is currently in progress, and the Board during the 2002-2003 year will determine what role Land & Water Australia should take in this area.

*d. Increase in trade and market access*

Land & Water Australia programs, in association with the other RDCs, are helping landholders to diversify and produce new and improved high-value products (for example agroforestry products and productive use of saline lands) which satisfy the needs of both environmental sustainability and the domestic and export markets.

Land & Water Australia is also supporting the development of increased processing and value adding, through work into the management and re-use of wastes from rural industries. Work on farming systems incorporates opportunities for new rural industries based on agroforestry and higher-value crops that are more suitable to the Australian environment.

*e. Clean and green, and food safety*

The emergence of 'clean green' marketing, and the threat of non-tariff trade barriers being imposed on Australia's exports, make Land & Water Australia's research vital in winning and maintaining overseas markets and in increasing farm productivity. Work funded by the Corporation is developing improved methods of resource management that are taken up by rural industries. Rural industries are direct partners in many Land & Water Australia programs, thereby promoting a whole-of-industry approach that brings productivity and sustainability together.

*f. Improving our human resources*

Land & Water Australia has attracted philanthropic support for a new program of Community Fellowships to assist members of the community with valuable experience in or insights into natural resource management to distil the lessons and share them with a much wider audience. The Corporation will continue to provide postgraduate scholarships in areas where research capacity requires expansion. The Corporation assists researchers within its programs to upgrade their skills by providing joint support, with research organisations, for attendance at training workshops and courses. Land & Water Australia will also provide a number of annual travelling and visiting fellowships to boost Australia's research capacity in areas of identified need and to ensure that we remain at the cutting edge of natural resource management research worldwide. The Social and Institutional Research Program will contribute to the understanding of the uptake and adoption of sustainable management practices.

### **3.2 *Natural Heritage Trust***

The Federal Government's Natural Heritage Trust (NHT) has provided a substantial boost to the level of onground work in environmental management. The Corporation has worked during the first phase of NHT (NHT1) to establish good links /between its R&D programs and those of the NHT. Our aim is to make sure that research findings are available to onground managers in a readily accessible form, and also that the information needs of those managers are being taken up and incorporated within R&D programs. Under NHT1 successful linkages have been developed in a range of programs including the National Land & Water Resources Audit, National Dryland Salinity Program, National Rivers Consortium and the Riparian Lands R&D Program.

The National Dryland Salinity Program has informed the development of catchment strategies and subsequent Landcare projects across Australia. The major NHT management agencies, including AFFA and the MDBC, together with state agencies and industry R&D Corporations, are vital participants in the second phase of the National Dryland Salinity Program, ensuring that there will be close linkages between R&D and on-ground works in this area of land and water degradation. The Corporation has also established linkages with the National Rivercare Initiative through implementing the First National Assessment of River Health. The Riparian Lands R&D Program has published a set of technical guidelines on riparian management and an Australian

Manual and CD-ROM on Stream Rehabilitation. These guidelines are assisting catchment and community groups to plan and implementing works that will inform improved management of rivers and waterways.

Land & Water Australia aims to continue to strengthen linkages in these programs with the recently announced extension of the Natural Heritage Trust. With its adoption of a more strategic, regionally integrated approach to sustainable agriculture, biodiversity conservation and capacity building there is an even greater need for access to up to date information, decision support tools and scientific technical expertise. Land & Water Australia is actively exploring the opportunities with AFFA, EA and others to build stronger partnerships at both the national and regional levels. Potential areas for partnership include: investment to generate new knowledge to address emerging issues under the NHT, including the challenges posed by regional delivery, institutional change and integration; facilitating better information exchange and partnerships with regional and industry bodies; and improving policy – research linkages with policy makers.

### ***3.3 Prime Minister's National Action Plan for Salinity and Water Quality***

Under the National Action Plan for Salinity and Water Quality (NAP), there is an expectation that planning, implementation and monitoring of integrated natural resource management at the regional level will be underpinned by good science. As such, the NAP provides opportunities for Land & Water Australia to target its priorities, research activities and communication effort towards regions where significant partnership investment can be focused. In particular the NDSP will need to complement and support the activities of the NAP, as will other industry, water and vegetation programs. Land & Water Australia is well placed to broker collaborative R&D programs within NAP regions with other R&D investors, and in particular with the commodity RDCs. AFFA and EA have approached Land & Water Australia to coordinate the scoping of a number of research and capacity issues in implementing the NAP; these include mapping regional capacity, identifying regional planning skills and desalination technologies. As with the NHT, Land & Water Australia will continue to investigate ways to forge stronger partnerships with AFFA, EA, state agencies and regional bodies to facilitate the generation and exchange of new knowledge and information.

## 4. Overview of 2002 – 2003 Activities

### 4.1 Research & Development Activities

#### **KEY HIGHLIGHTS**

Land & Water Australia will be investing and managing a range of R&D programs that will contribute to the arena outputs and Corporation mission. During 2002-03, the Corporation is expected to realise the following significant outputs:

- Implementation of a number of new program initiatives including large collaborative partnerships for sustainable grain & grazing systems, sustainable irrigation and climate variability
- The Land, Water & Wool Initiative (LWW) will develop and distribute the first Wool producer LWW NRM Toolkit by December 2002, publish the wool producer NRM benchmarking survey and launch the SGSL Saltland Pastures Book to provide an initial text to managing saline soils productively
- The National River Consortium will establish a training and education program for river managers to enhance skills and capacity and implement catchment projects at the regional level to demonstrate best practice restoration, riparian and catchment practice
- The River Contaminants R&D Program will provide river managers with the tools to effectively manage river contaminants across Australia
- The Native Vegetation R&D Program will review the effectiveness of programs and policies that integrate native vegetation into agricultural production systems and develop principles for integrating native vegetation into agriculture
- The Joint Venture Agroforestry Program will develop a silvicultural decision support system for farm forestry and prepare the first of the Integration Series booklets (the first of which is Trees and Riparian Zone Management) which synthesise research supported by JVAP, LWA and MDBC.
- The Social and Institutional Research Program will develop a high quality and accessible social and institutional knowledge base for improved NRM and provide targeted communication packages and new models and knowledge for extension/ adoption.
- The Ord-Bonaparte Program will develop a spatial database for the Ord-Bonaparte Region containing the key regional data sets, pilot integration projects developed with regional stakeholders and document the ethnoecological/ethnoeconomic knowledge with Aboriginal Traditional Owners in the upper Ord catchment.
- Provision of almost 50 post-graduates scholarships, travelling and visiting fellowships, and community fellowships.

In order to meet its mission and objectives, within the context of the *PIERD Act* objects, the core business of the Corporation is the establishment of national research programs. These programs are supported by partner organisations, and aim to bring together resource managers and researchers to jointly identify priorities and ensure that research findings are adopted and implemented. Further development of these programs and their efficient management, supported by professional business and communication support will remain core business for Land & Water Australia in 2002-2003. Chapter 8 details each R&D activity in terms of the input-output and outcome structure.

A key priority for the Corporation is to improve the linkages between the R&D we fund and its end-users, both in policy development and on-ground management of natural resources. The R&D Plan emphasises an integrated approach to program design and implementation, and the development of packages of information relevant to decision-makers within their wider operating environment and range of concerns.

The Corporation will be implementing a range of new programs during the year, some of which are new phases of investment for existing programs. These include:

1. National Program for Sustainable Irrigation
2. Sustainable Grain and Grazing Systems
3. Climate Variability Applications Program
4. Future Landscapes & Compatible Industries
5. Integrated catchment and water resource management in the northern Murray Darling basin
6. Integrated framework and products

The new National Program for Sustainable Irrigation will build on the successful investment Land & Water Australia has made in supporting a national program of irrigation R&D. The program is to have a much greater focus on natural resource management, and deliver a significantly better leverage on Land & Water Australia investment particularly through engaging the Rural RDCs. The Corporation is currently negotiating with GRDC, AWI and MLA on a collaborative program on Sustainable Grain and Grazing Systems. This program will promote large scale on-farm change of a sufficient order to enable an adequate increase in profitability to meet environmental and social values. Land & Water Australia is negotiating with a range of Rural RDCs, AFFA and other partners on a potential next phase of the Climate Variability in Agriculture program. The CVAP structure encourages collaboration, giving stakeholders access to expertise to understand and respond to climate-related risks and opportunities in their industry. The Corporation will be also implementing a new program to guide development of future sustainable landscapes, enterprises and industries.

The Corporation will provide for the satisfactory conclusion of the current phase of the National Land & Water Resources Audit and will provide for the necessary transitional arrangement to the next phase. The challenge is to maintain the capacity built up in the first stage of the Audit and to extend the benefits of this work to a range of catchment groups, industries and natural resource management agencies. The Corporation is hopeful that the Government will retain Land & Water Australia as the managing agent for the next phase of the Audit.

Land & Water Australia will again be advertising a General Call for R&D applications in June 2002, with project funding to commence in 2003-2004. The General Call will have a funding allocation of around \$1.5 million and focus on highly innovative projects and special priorities set by the Board. In this process, each year the Corporation seeks to identify the most important emerging issues and innovations in natural resource management.

## **4.2 Portfolio Management**

Portfolio management is essentially an interpretation of the more holistic approach to strategy that Land & Water Australia is striving to achieve. It incorporates the key elements of both organisational change and operational planning:

1. Strategic planning: setting direction in accord with the R&D Plan and the Portfolio Investment Framework, creating a future based on core values and purpose, and ensuring compatibility between the internal and external environments;
2. Science leadership: creating awareness of new and emerging scientific ideas and technologies and their implications, and enhancing the quality of R&D processes;
3. Integration: designing and managing processes to enhance research-policy-management linkages and to synthesise outputs;
4. Knowledge Management: developing the capacity for effective knowledge capture, sharing, transfer and use;
5. Evaluation: evaluating progress towards desired outcomes and feeding back into R&D processes to achieve them.

Each of these interrelated activities requires appropriate human and financial resources to yield substantial benefits to the organisation and its clients. A key challenge in the year is to review and enhance the procedures for R&D program design and program management.

The Corporation has approved \$0.6 million for portfolio management in 2002/03 (see Chapter 8 for further details)

## **4.3 Communication and Adoption**

Land & Water Australia's mission for communication over the period of its R&D Plan is to establish a new benchmark in Australian natural resource management and science communication. The Corporation has approved a new Communication Strategy for the period of the R&D Plan. A total of \$1.3 million is allocated in 2002-2003 at a corporate level (a similar amount is invested in communication activity at a program level) to implement the priority activities detailed in the Strategy. The Corporation's main emphasis during the life of this operational plan is to develop and deliver information and decision support materials and activities that facilitate adoption on-ground, inform and influence policy, and consolidate the knowledge base that supports sustainable natural resource management.

#### **4.4 Business Management**

The Corporation in its own administrative processes will further develop the systems approach to R&D investment. The Corporation achieved international standard accreditation (ISO 9002) in May 1996 and will maintain its commitment to continuous improvement and the highest level of client service and accountability. These principles will be applied to assist the Corporation meet the highest standards of administrative efficiency and effectiveness, so matching the requirements that Land & Water Australia seeks from research organisations and others involved in its programs. In addition, the Corporation will be implementing a range of improvements to its information technology systems to align to the integration framework and to fully capture the benefits of electronic commerce to enable increased productivity gains. During 2002-2003, administrative expenditure will be held at around 7% of total expenditure.

## **5. Assessment of Performance**

The Corporation has a detailed portfolio evaluation strategy in place that covers detailed measurement, tracking and reporting of the Corporation's overall effectiveness and impact. The evaluation strategy provides for reporting and management feedback at various levels, including the overall performance of the RDC model, Land & Water Australia corporate objectives, annual reporting, program and project performance. Evaluation tools such as portfolio return on investment will be enhanced to better take account of the less tangible benefits, and new tools such as the Goal Attainment Score will be employed to give more incisive feedback. The Input-Output-Outcome model will be extended to report on adoption outcomes and impact outcomes, and the Triple Bottom Line evaluation will feed into the joint RDCs' performance assessment. Implementing the strategy to develop the required monitoring systems and efficiently collect the evaluation data will be a major challenge. The higher level of evaluation feedback to management and use of intelligent portfolio analysis tools will assist implementation of the new R&D plan, refine portfolio management and stimulate continuous improvement in the organisation.

## 6. Management Structure

Land & Water Australia is structured on business lines, with its Board responsible for developing corporate policies and for monitoring and evaluating the operation and performance of the Corporation. This charter is distinct from that of Corporation management whose role is to implement and administer Board policies. A copy of the Management Structure is at **Appendix A** and includes the following:

- Board of Directors responsible for the overall direction of Land & Water Australia provides the strategic direction, policies and investment allocations for commissioned R&D programs and other initiatives. The Chair has been appointed on a three-year term commencing 1 July 2001. The Government Director is appointed on a term as agreed by the Minister. Mr Andrew Campbell was appointed as the Executive Director for a three-year term, commencing February 2000. The Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry will appoint the remaining nominated Directors for a three-year period commencing 1 July 2002.
- The Corporation has established committees and working groups to assist the Board to undertake its functions. These include the Finance, Audit, and Communication committees.
- Formal committees have been established for each joint R&D program comprising representatives of Land & Water Australia and each program-funding partner. These committees are responsible to the Board for program development and the approval, oversight, and evaluation of program activities.
- Management is responsible for the day to day operation of the Corporation.

To ensure that management can discharge its duties effectively over the life of this plan, the Corporation will maintain the following human resource policies:

- the Corporation will continue to implement the principles of continuous improvement and quality assurance in accord with ISO 9001 to ensure the highest standards of administrative efficiency and effectiveness;
- activities will be outsourced where it is evident that it will be cost effective, and where required skills and resources do not reside in management. In 2002-2003, these areas will principally include specialist research program coordination, communications production activities, specialist evaluation studies and support for information technology; and
- the Corporation is committed to its staff through systematic performance planning and appraisal and to flexible, responsive and proactive human resource development and training for all staff members.

## **7. Income & Expenditure in 2002-2003**

Land & Water Australia expects to receive \$11.863m from Commonwealth appropriations in the 2002-2003 financial year. The Department of Finance and Administration agreed that from 1 July 1996 a portion of Land & Water Australia appropriation would be indexed annually by an appropriate rate.

Land & Water Australia will carry forward \$0.817m from 2001-2002 from Corporation funds committed to R&D program activities but not yet expended. It is estimated that third party contributions and other income will be around \$8.131m in 2002-2003, although further partnerships and revenue are likely to be sourced during the year.

The Corporation's emphasis on R&D programs is demonstrated by around 76% of expenditure being directed in this area during 2002-2003. Funding of around \$1.1m will be provided for innovative R&D, postgraduate scholarships and fellowships under the General Call. The Corporation will continue to maintain administration expenditure at around 7% of total expenditure. Forecast expenditure is detailed in the following income and expenditure budget and graph (see Figures 5 and 6). Further details of Land & Water Australia investments in R&D is at Chapter 8. The Corporation has included all the expenditure items as required under Section 33 of the *PIERD Act*.

FIGURE 5

**Land & Water Australia 2002-2003 Budget**

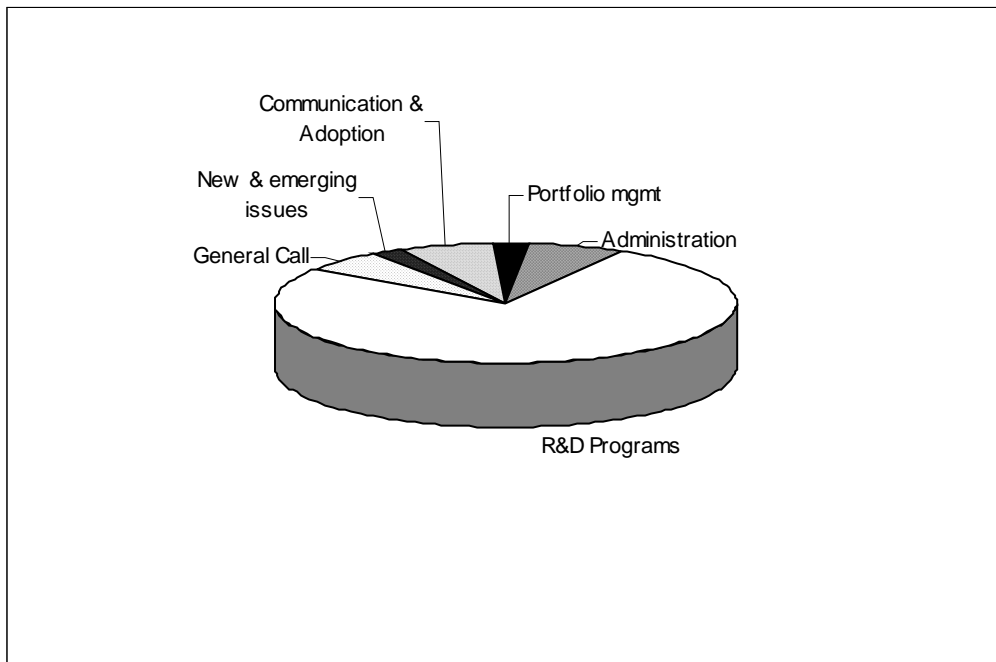
<b>INCOME</b>	<b>\$1,000's</b>	<b>%</b>
<i>Commonwealth appropriation</i>	11,863	59%
<i>Third party contributions (1)</i>	7,631	38%
<i>Interest &amp; Other income</i>	500	3%
<b>Total Income</b>	<b>19,994</b>	<b>100%</b>
<b>EXPENDITURE</b>		
<i>R&amp;D Funding</i>		
R&D Programs	15,698	76%
General Call	1,146	6%
Portfolio Management	560	3%
sub-total	17,404	85%
<i>Communication &amp; Adoption (2)</i>	1,325	6%
<i>Administration (3)</i>	1,350	7%
<i>New &amp; emerging issues</i>	500	2%
<b>Total Expenditure</b>	<b>20,579</b>	<b>100%</b>
<b>Operating Surplus</b>	<b>-585</b>	
<b>Accumulated results at beginning of reporting period</b>	<b>817</b>	
<b>Total Accumulated Results</b>	<b>232</b>	
<b>CAPITAL BUDGET (4)</b>	<b>120</b>	

**NOTES:**

1. Does not include other funds that may be derived from new partnerships established during the year.
2. Includes corporate communication activities. Additional communication activities are within R&D Funding budget item.
3. Includes payment of remuneration and other allowances for Directors. Funds have not been allocated to the Selection Committee.
4. In 2002-2003, the Corporation has a capital expenditure budget of \$120,000 and will be funded from internal reserves. The related depreciation expense has been included in Administration expenditure.
5. The Corporation in 2002-2003 will not be providing any funding to its Representative Organisations.

FIGURE 6

**Spread of expenditure across key budget categories**



## 8. Activities in detail for 2002-2003

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>8.1 Communication &amp; Adoption (contributing to all outputs)</b>					
Relationships	A,B/ Corporate Activity	<ul style="list-style-type: none"> <li>To build and sustain strategic alliances and networks that increase cooperation and leverage, enhance dialogue, inform policy making, enable shared ownership and act as communication pathways</li> </ul>	<ul style="list-style-type: none"> <li>Key influencers mapped (small subset of the larger relationship database), identified and appropriate engagement strategies developed</li> <li>Key influencers database populated</li> <li>Formalised Relationships developed with key networks</li> </ul>	25	0
Delivery	A,B/ Corporate Activity	<ul style="list-style-type: none"> <li>To deliver Land &amp; Water Australia research outputs to relevant target audiences in order to maximise the influence of Land &amp; Water Australia R&amp;D on policy and program development, and on-the-ground activities</li> <li>Increase in awareness of Land &amp; Water Australia's products among NRM managers</li> <li>Increase in hit and download rates from external users; Land &amp; Water Australia family; internal users.</li> <li>Corporate information and product supply push maintained</li> <li>Program information and product supply demand pull maintained</li> </ul>	<ul style="list-style-type: none"> <li>Availability of information online (Eg Program listing, Streamline, ARRIP, Innovation database)</li> <li>Consistent standard and content of Program websites including content, maintenance and web strategy</li> <li>Provision of advice/servicing of Program products including co-published titles; integrated products; media articles</li> <li>Successful integrated science product relevant to agreed target audience</li> <li>Increase in the number of R&amp;D projects and innovations that are commercialised</li> <li>Evidence that an increased commercialised effort has facilitated the adoption of R&amp;D results</li> </ul>	265	0

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
Promotion	A,B/ Corporate Activity	<ul style="list-style-type: none"> <li>To enhance Land &amp; Water Australia as the Commonwealth's pre-eminent purchaser, manager and broker of natural resource management R&amp;D.</li> <li>Increase in LWA recognition amongst key target audience</li> <li>Increase in numbers attending Land &amp; Water Australia-sponsored events</li> <li>Increase in audience satisfaction with Land &amp; Water Australia events and presentations</li> <li>Promotional profile increased in rural and regional Australia</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of promotional profile through media, arena products, and corporate products</li> </ul>	245	0
Monitoring & Evaluation	D/ Corporate Activity	<ul style="list-style-type: none"> <li>To measure, monitor and evaluate the effectiveness of Land &amp; Water Australia's total communication effort and to make adjustments where and when required</li> </ul>	<ul style="list-style-type: none"> <li>Increase in understanding of Land &amp; Water Australia's position and messages among all key stakeholder groups</li> </ul>	40	0
Resources and Systems Support	D/ Corporate Activity	<ul style="list-style-type: none"> <li>To ensure that everyone involved in communication of the research outputs of Land &amp; Water Australia Programs and the promotion of the Corporation itself are committed communicators; that the Team is appropriately resourced through appropriate staff numbers; Corporate systems are resourced to enable the agreed targeting approach; and, that there is optimal communication within and between elements of the Corporation.</li> </ul>	<ul style="list-style-type: none"> <li>Increase in recognition of 'invisible leadership' role of the Corporate Communication Team</li> <li>Increase in recognition of the role of communication in general in delivering Land &amp; Water Australia's mission</li> <li>Leadership in Information and Knowledge Management</li> <li>Strategic role in Program communication, and standards developed for communication planning</li> </ul>	750	0
<b>Sub-total</b>				<b>1,325</b>	<b>0</b>

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>8.2 Business Management (contributing to all outputs)</b>					
Administration	D/ Corporate Activity	<ul style="list-style-type: none"> <li>To meet all statutory obligations and accountability requirements in a comprehensive, timely and transparent manner.</li> <li>To manage the business operations of the Corporation in an efficient &amp; effective manner so that funds for R&amp;D are invested well.</li> </ul>	<ul style="list-style-type: none"> <li>Provision of the highest level of accountability of Corporation activities.</li> <li>Effective financial, human and project management support to LWA programs.</li> <li>Enhanced information and quality systems to meet the changing needs of LWA and to improve efficiency &amp; effectiveness of LWA processes.</li> </ul>	<b>1,250</b>	0
Business Development of R&D Activities	D/ Corporate Activity	<ul style="list-style-type: none"> <li>Business and commercial strategies have facilitated an increase in the revenue base and the level of investment on R&amp;D.</li> <li>Increase in the level of private investment in the development and commercialisation of R&amp;D projects and innovations.</li> </ul>	<ul style="list-style-type: none"> <li>Evidence that R&amp;D activities incorporate a strong business and commercial focus.</li> </ul>	<b>100</b>	0
<b>Sub-total</b>				<b>1,350</b>	0

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 - 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>8.3. Research &amp; Development Activities</b>					
<b>8.3.1 Portfolio Management (contributing to all outputs)</b>					
Strategic planning	All/ Corporate Activity	<ul style="list-style-type: none"> <li>Continual improvement in LWA's capacity to identify, choose and implement activities that will enhance the long term performance of the Corporation.</li> </ul>	<ul style="list-style-type: none"> <li>Input to the Board evaluating the strategic directions of the corporation against changes in the external operating environment and new and emerging issues in science and natural resource management.</li> <li>Scoping exercises for potential new initiatives identified by the Board.</li> <li>Evidence that the investment framework provides the Board direction on the effective allocation of R&amp;D investment for the enhancement of natural resource management in Australia.</li> </ul>	150	0
Integration	All/ Corporate Activity	<ul style="list-style-type: none"> <li>Continual improvement in the capacity of LWA and its clients and funding partners to design, manage and deliver integrated R&amp;D for the enhancement of natural resource management in Australia.</li> </ul>	<ul style="list-style-type: none"> <li>Provision of advice and support for integrated R&amp;D products to programs and/or external clients.</li> <li>Development of a tool to promote knowledge sharing across programs.</li> <li>Up to three R&amp;D management workshops held and appropriate outcomes implemented.</li> </ul>	135	0

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
Science Leadership	All/ Corporate Activity	<ul style="list-style-type: none"> <li>The Corporation is fully aware of new and emerging scientific ideas and technologies related to natural resource management and their implications are reflected in the Corporation's investments.</li> <li>The Corporation is seen as a leader in innovation and R&amp;D management.</li> </ul>	<ul style="list-style-type: none"> <li>Methods of identification and analysis of emerging science and technology breakthroughs.</li> <li>Analyses of new and emerging science and technologies and their application to Land &amp; Water Australia.</li> <li>Analysis of innovation performance from the commencement of the corporation.</li> <li>R&amp;D investment processes clearly documented and promoted.</li> </ul>	100	0
Knowledge Management	All/ Corporate Activity	<ul style="list-style-type: none"> <li>Continual improvement in the capacity of LWA to effectively capture, create, transfer and use data, information and knowledge for the enhancement of natural resource management in Australia.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation and communication of the KM framework and at least one agreed initiative throughout the Corporation</li> <li>Update of the Innovations database to a total of about 150 innovations.</li> </ul>	75	0
Portfolio Evaluation	All/ Corporate Activity	<ul style="list-style-type: none"> <li>To evaluate and optimise LWA R&amp;D processes and systems to ensure efficient and effective R&amp;D investment and delivery of outcomes in natural resource management and policy.</li> <li>Land &amp; Water Australia performance is conducted effectively on an annual basis.</li> </ul>	<ul style="list-style-type: none"> <li>Evaluations conducted at relevant scales in accordance with corporate objectives.</li> </ul>	100	0
<b>Sub-total</b>				<b>560</b>	<b>0</b>

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>8.3.2 Industries Arena (Output 1)</b>					
New Industry Partnerships <i>(Jan 2001 - June 2003)</i>	A,B/ Special Purpose Projects	<ul style="list-style-type: none"> <li>Enhanced capacity for Australia's primary industries to manage natural resources sustainably</li> </ul>	<ul style="list-style-type: none"> <li>Assessment of the NRM training needs of significant primary industries.</li> <li>Assessment of NRM research needs of downstream primary production industries</li> </ul>	128	0
Land Water & Wool Initiative <i>(July 2001 - June 2006)</i>	A,B/ Outreach	<ul style="list-style-type: none"> <li>A comprehensive benchmark of Australian wool producers attitudes, practices and perceptions about NRM issues.</li> <li>Enhanced awareness of NRM as a key industry issue by wool producers and advisors.</li> <li>Direct engagement of wool producers in developing practical and profitable solutions to NRM farm management practices.</li> <li>Wool producers and advisors provided with practical tools and knowledge to address key NRM issues.</li> <li>Government and industry recognition that the wool industry is seriously addressing its environmental stewardship responsibilities.</li> <li>Comprehensive analysis of drivers which may impact on the wool industry over 50 years.</li> <li>Increased profile of AWI by wool producers through the roll-out of LWW in regional areas</li> <li>Increased awareness by wool producers of the activities of LWA.</li> </ul>	<ul style="list-style-type: none"> <li>Development and distribution of the first Wool producer LWW NRM Toolkit by December 2002.</li> <li>Completion and publication of the wool producer NRM benchmarking survey.</li> <li>Completion and publication of the Future Woolsapes Scoping study, and commence the implementation of the subprogram.</li> <li>Completion of the SGS Harvest Year project and incorporation of the main findings into the LWW Program and relevant subprograms.</li> <li>Launch of the SGSL Saltland Pastures Book to provide an initial text to managing Saline soils productively.</li> <li>Establishment of SGSL producer networks.</li> <li>Production of first set of river management guidelines produced specifically for wool producers.</li> <li>Establishment of research projects, research sites and producer driven demonstration sites across the portfolio of LWW subprograms to further enhance the engagement of producers in LWW.</li> <li>Development and publication of initial</li> </ul>	4,400	TBC

<b>ACTIVITY</b> <b>(duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT</b> [c] [d]	<b>KEY OUTCOMES</b> [a]	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003</b> <b>(\$1,000s)</b>	<b>THIRD PARTY FUNDS</b> <b>(\$1,000s) [b]</b>
			guidelines for: <ul style="list-style-type: none"> <li>- Managing native vegetation and biodiversity; and</li> <li>- Incentive packages for wool producers.</li> <li>• Completion of refinement of Pastoral Subprogram Implementation Plan and commence its roll-out.</li> <li>• Progressive implementation of the LWW Communication Plan covering all target audiences - producers, advisors, RDC's Government agencies etc. All communication outlets will be utilised including launches, print media, fact sheets, Toolkit, meetings, website, direct mail etc.</li> <li>•</li> </ul>		
Sustainable Grain & Grazing System <i>(July 2002-June 2007)</i>  <u><b>NEW PROGRAM</b></u>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>• Landscape scale change through the widespread adoption</li> <li>• on-farm of regenerative whole farm management practices</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation Plan and Prospectus</li> <li>• Commissioning of start-up projects</li> </ul>	248	TBC  AWI GRDC MLA

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
National Dryland Salinity Program <i>(July 1998-June 2003)</i>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>• Framework in place for appropriate resource allocation by governments and resource managers based on understanding of extent and impacts of dryland salinity, and policy and institutional options.</li> <li>• Increase in the perennial component of integrated farming systems.</li> <li>• Discernible increase in coordination among disparate dryland salinity research efforts.</li> <li>• Enhanced understanding by governments and resource managers of the environmental impact of salinity.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of the NDSP Phase II</li> <li>• Develop the framework for a future 'harvest year' for the NDSP including products and communication strategy</li> <li>• Develop products and packaging of communication products</li> <li>• Develop a framework for a strategic plan for a future third phase of a salinity program</li> </ul>	1,124	2,587  MDBC, AFFA, GRDC, RIRDC, State Agencies
Climate Variability Applications Program <i>(July 2002 - June 2006)</i>  <b><u>NEW PROGRAM</u></b>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>• Australian primary producers and resource managers are better equipped and motivated to respond more effectively to climate variability</li> </ul>	<ul style="list-style-type: none"> <li>• Seek partnership support.</li> <li>• New Climate Variability Applications Program established</li> <li>• Develop program plan and commence contracting program activities.</li> </ul>	0	TBC  Rural RDCs, AFFA, MDBC
<b>Sub-total</b>				<b>5,900</b>	<b>2,587</b>

<b>ACTIVITY</b> <b>(duration is in brackets)</b>	<b>PIERD ACT</b> <b>OBJECTS / LINES</b> <b>OF INVESTMENT</b> <b>[c] [d]</b>	<b>KEY OUTCOMES</b> <b>[a]</b>	<b>KEY OUTPUTS</b>	<b>LWA</b> <b>BUDGET</b> <b>2002 – 2003</b> <b>(\$1,000s)</b>	<b>THIRD</b> <b>PARTY</b> <b>FUNDS</b> <b>(\$1,000s) [b]</b>
<b>8.3.3 Rivers Arena (Output 2)</b>					
National Program for Sustainable Irrigation <i>(July 2003-June 2006)</i>  <b><u>NEW PROGRAM</u></b>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>National R&amp;D on sustainable irrigation effectively coordinated</li> <li>A vision of sustainable irrigation communities developed</li> </ul>	<ul style="list-style-type: none"> <li>New National Program for Sustainable Irrigation established</li> <li>Current knowledge on water use efficiency collated and widely promoted</li> <li>An understanding of what sustainable irrigations communities would constitute in a futures context.</li> </ul>	1,054	1,222  State agencies, irrigators, CSIRO
Northern Murray Darling Basin Program <i>(July 2002 June 2005)</i>  <b><u>NEW PROGRAM</u></b>	B/ Partnership Programs	<ul style="list-style-type: none"> <li>The key knowledge impediment to sustainable catchment management in the northern Murray Darling Basin, deep drainage, effectively researched across a range of scales from field to catchment</li> </ul>	<ul style="list-style-type: none"> <li>A partnership program for understanding deep drainage established</li> <li>Initial clarification of missing knowledge on deep drainage in verisols soils</li> <li>Sophisticated research design.</li> </ul>	50	TBC
National Rivers Consortium <i>(July 1999 - June 2005)</i>	B/ Partnership Programs	<ul style="list-style-type: none"> <li>To achieve continuous improvement in the management of Australia's rivers</li> </ul>	<ul style="list-style-type: none"> <li>River protection philosophy established and tools and guidelines developed for its implementation.</li> <li>River managers training and education program established to enhance skills and capacity.</li> <li>Research turned into practical river management solutions and communicating this to river managers.</li> <li>Catchment projects implemented at the regional level to demonstrate best practice restoration, riparian and catchment practice</li> <li>Key knowledge gaps resolved for riverine ecological and physical/chemical processes.</li> </ul>	1,210	848  CSIRO, MDBC, WRC

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
Riparian Lands R&D Program <i>(July 2000 - June 2005)</i>	B/ Partnership Programs	<ul style="list-style-type: none"> <li>Facilitate communities to implement, monitor and evaluate practices for ecologically sound, effective and economic management of riparian lands</li> <li>Address key knowledge gaps to inform development of best management practice guidelines for a range of end-users.</li> <li>Work with industry groups to demonstrate best riparian practice at key sites</li> <li>Produce high quality, innovative communication products based on sound science</li> </ul>	<ul style="list-style-type: none"> <li>Contracting of multi-disciplinary research groups, to undertake work on key knowledge gaps</li> <li>Develop projects to produce industry specific riparian management guidelines (SRDC; DRDC; GRDC)</li> <li>Produce a range of products to provide information and raise awareness about riparian management for a range of end-users (web, guidelines etc.)</li> </ul>	1,300	563  DRDC
River Contaminants R&D Program <i>(January 2000 - June 2005)</i>	B/ Partnership Programs	<ul style="list-style-type: none"> <li>To contribute to healthy river systems by reducing the ecological impact of river contaminants'</li> </ul>	<ul style="list-style-type: none"> <li>Program plan finalised and suite of projects implemented focussing on salinity, nutrients, sediments, ecosystem impacts and catchment interactions.</li> <li>River managers provided with the tools to effectively manage river contaminants across Australia</li> <li>Key knowledge gaps of riverine contaminant ecological and physical/chemical processes resolved.</li> <li>Community and industry groups communicated with to demonstrate management solutions to the ecological impacts of river contaminants.</li> </ul>	775	350  MDBC
<b>Sub-total</b>				<b>4,389</b>	<b>2,983</b>

<b>ACTIVITY</b> <b>(duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT</b> [c] [d]	<b>KEY OUTCOMES</b> [a]	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003</b> <b>(\$1,000s)</b>	<b>THIRD PARTY FUNDS</b> <b>(\$1,000s) [b]</b>
<b>8.3.4 Vegetation Arena (Output 3)</b>					
Native Vegetation R&D Program <i>(July 2000-June 2005)</i>	B/ Partnership Programs	<ul style="list-style-type: none"> <li>The use of practical methods by governments, catchment authorities, community groups and landholders to assess the status and condition of native vegetation, to make predictions about its long-term viability, and to consider thresholds in natural or human-induced landscape change that are likely to significantly affect condition and viability.</li> <li>Greater integration of sound native vegetation management into agricultural systems.</li> <li>Increased use of methodologies to retain and revegetate areas at a landscape scale, to identify the most appropriate size and spatial configuration of native vegetation and/or areas to be revegetated</li> </ul>	<ul style="list-style-type: none"> <li>A review of the effectiveness of programs and policies that integrate native vegetation into agricultural production systems.</li> <li>A national classification of the status of native vegetation</li> <li>Robust communication plan</li> <li>Publication of technical guidelines for native vegetation and biodiversity management</li> <li>Improved understanding of clearing thresholds and relevance to policy</li> <li>Principles for integrating native vegetation into agriculture</li> <li>A definitive report on the strengths and weaknesses of the focal species approach to landscape design</li> </ul>	1,786	1,946  CSIRO, MDBC State agencies
Joint-venture Agroforestry Program (Administered by RIRDC) <i>(July 1993 – June 2004)</i>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>An increased number of well designed agroforestry and farm forestry systems which optimise the positive impacts of trees integrated into farming systems.</li> <li>A greater proportion of medium to low rainfall agroforestry systems established using improved genetic material. The first batches of seed will become available from the work of the Australian Low Rainfall Tree Improvement Group.</li> <li>Continued improvement in the management of existing vegetation on farms for environmental and economic</li> </ul>	<ul style="list-style-type: none"> <li>A booklet on effective strategies for marketing farm tree products.</li> <li>Quarterly ANU Forestry Market Reports.</li> <li>A manual for farm forestry for trial establishment, a directory of trials in Australia, and updated edition of Trees for Saltland, and reports supporting growth modelling and matching trees with climate in Australia.</li> <li>A production of two more Agroforestry guidelines Tree, Soil &amp; Climate and Trees for Biodiversity.</li> <li>A manual for irrigated eucalypts</li> </ul>	400	TBC  RIRDC, FWPRDC, AFFA

<b>ACTIVITY</b> <b>(duration is in</b> <b>brackets)</b>	<b>PIERD ACT</b> <b>OBJECTS / LINES</b> <b>OF INVESTMENT</b> [c] [d]	<b>KEY OUTCOMES</b> [a]	<b>KEY OUTPUTS</b>	<b>LWA</b> <b>BUDGET</b> <b>2002 – 2003</b> <b>(\$1,000s)</b>	<b>THIRD</b> <b>PARTY</b> <b>FUNDS</b> <b>(\$1,000s) [b]</b>
		<p>benefit.</p> <ul style="list-style-type: none"> <li>• A greater number of Australian farms contributing to natural resource management objectives through the integration of trees on farmland.</li> <li>• Continue to increase awareness of the potential of agroforestry systems to provide biomass resources for energy production.</li> </ul>	<p>incorporating salinity impacts, and a report on fast-growing eucalypt plantations in northern Victoria.</p> <ul style="list-style-type: none"> <li>• Publication of: Trees for Shelter: A guide to using windbreaks on Australian farms.</li> <li>• A manual on the silviculture of rainforest timbers.</li> <li>• Reports and brochures on a range of wood properties and products from several projects.</li> <li>• A silvicultural decision support system for farm forestry including a whole-farm and regional agroforestry decision making system.</li> <li>• A report on 'Best bet' products from agroforestry biomass.</li> <li>• The first of the Integration Series booklets (the first of which is Trees and Riparian Zone Management) which synthesise research supported by JVAP, LWA and MDBC.</li> <li>• A 'Workbook' series book on farm forestry aimed at children in the 8 – 12 year old age group.</li> </ul>		
<b>Sub-total</b>				<b>2,186</b>	<b>1,946</b>

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>8.3.5 Future Landscapes Arena (Output 4)</b>					
Future Landscapes <i>(July 2002 - June 2007)</i>  <b><u>NEW PROGRAM</u></b>	A,B/ Partnership Programs	<ul style="list-style-type: none"> <li>• Australian investment in NRM informed by the future as well as the past</li> <li>• Design interests for future sustainable landscapes being adapted</li> </ul>	<ul style="list-style-type: none"> <li>• Scenarios for future R&amp;D</li> <li>• Vision of sustainable landscapes clearly articulated</li> <li>• Principles for redesign of agriculture</li> <li>• Design criteria for future sustainable landscapes</li> </ul>	554	299
<b>Sub-total</b>				<b>554</b>	<b>299</b>
<b>8.3.6 Cross-cutting Activities (Output 5)</b>					
General Call for Innovative R&D Projects <i>(Ongoing Projects and Projects to commence 2003-2004)</i>	B/ General Call	<ul style="list-style-type: none"> <li>• Emerging issues and critical gaps addressed.</li> <li>• Increased innovation in NRM policy initiatives.</li> <li>• Improved scientific capacity to address emerging issues.</li> </ul>	<ul style="list-style-type: none"> <li>• Emerging issues and innovative approaches annually identified and funded.</li> <li>• Reviews of new issues and techniques.</li> </ul>	400	0
Human Capacity Building <i>(Ongoing Projects and Projects to commence 2003)</i>	C/ Human Capacity Building	<ul style="list-style-type: none"> <li>• 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</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of post-graduates scholarships, travelling and visiting fellowships, and community fellowships.</li> <li>• National R&amp;D capacity enhanced through new young scientists in NRM.</li> </ul>	746	100 Community Fellowships
Integration Framework & Products <i>(July 2002-June 2006)</i>  <b><u>NEW PROGRAM</u></b>	A,B,C,D/ Programs funded without partners	<ul style="list-style-type: none"> <li>• To improve the impact and relevance of LWAs R&amp;D outputs to Australian rural industries and communities through fostering capacity to integrate knowledge across research areas and translate science into practice.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal requirements of Integration Framework for LWA defined.</li> <li>• Development of a Business Plan for LWA investment in Integration Framework and Products, July 2003-June 2006.</li> </ul>	290	0

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
Social and Institutional Research Program <i>(July 1999-June 2004)</i>	B/ Programs funded without partners	<ul style="list-style-type: none"> <li>Enhanced knowledge of social and institutional factors to enable more integrated natural resource management research, policy and practice.</li> <li>Innovative research products and services that integrate biophysical, social, institutional and facilitate continuous improvement in natural resource management.</li> <li>Community and stakeholder debate on scenarios and pathways for natural resource use and management that will lead to societal changes in perceptions, learning, management and institutions.</li> <li>Enhanced and demand driven R&amp;D capacity available to LWA and the community for integrated NRM.</li> </ul>	<ul style="list-style-type: none"> <li>A high quality and accessible social and institutional knowledge base for improved NRM.</li> <li>Models for achieving best practice in NRM policy, legislation and institutions.</li> <li>Targeted communication packages and new models and knowledge for extension/adoption.</li> <li>Enhanced stakeholder and partner networks for social and institutional research and collaborative activities.</li> </ul>	795	480
Ord-Bonaparte Program <i>(July 2001-June 2003)</i>	A,B/ Regional Initiatives	<ul style="list-style-type: none"> <li>To develop effective tools, methods and strategies to underpin the sustainable use of natural resources at catchment and regional levels across northern Australia.</li> <li>Resource development decisions based on improved understanding of land, water &amp; marine systems and their interactions.</li> <li>Enhanced capacity for regional stakeholders to participate in NRM.</li> </ul>	<ul style="list-style-type: none"> <li>Spatial database for the Ord-Bonaparte Region containing the key regional data sets</li> <li>Hardware, software and data standards for the further development and maintenance of spatial information for the Ord-Bonaparte Region</li> <li>Pilot integration projects developed with regional stakeholders.</li> <li>Assessment of the impact and influence of the OBP initiative and recommendations for ongoing progress in the region.</li> <li>Recommendations to assist the planning and implementation of future similar R&amp;D initiatives elsewhere in Australia.</li> <li>Atlas of GIS coverage for the East Kimberley rangelands.</li> </ul>	1,584	1,242  CSIRO, AFFA, WA state agencies (AgWest, WRC), Regional Bodies (KLC,SWEK)

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
			<ul style="list-style-type: none"> <li>• Land Unit map for the East Kimberley rangelands</li> <li>• Rangeland monitoring program utilising remotely sensed and field based data.</li> <li>• Hydrological response unit map of the Ord River Irrigation Area (ORIA)</li> <li>• Integrated ground water and surface water monitoring system to record ground water discharge, surface flows, sediment, nutrient and pesticide flows</li> <li>• Understanding of the dynamic relationship between the surface water, ground water, applied nutrients and soils in the ORIA.</li> <li>• Risk assessment for pesticides used in the ORIA.</li> <li>• Calibrated tool for understanding the impact of irrigation and drainage operations on water quality within and downstream of the ORIA</li> <li>• Time series of water quality parameters from sites in the Ord estuary, to characterise the current system state, underpin nutrient budgets, and support model development and calibration.</li> <li>• Data to characterise sediment composition, the role of sediments in nutrient cycling, and the relative contribution of organic matter from terrestrial and marine sources.</li> <li>• Quantitative wet and dry season budgets for salt, carbon and nutrients in the lower Ord river and estuary.</li> <li>• Integrated hydrodynamic and biogeochemical models of the lower Ord</li> </ul>		

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
			<p>river and estuary systems and their response to flows and loads.</p> <ul style="list-style-type: none"> <li>• Model predictions for agreed management scenarios for water allocation and land use.</li> <li>• Documentation of ethnoecological/ethnoeconomic knowledge with Aboriginal Traditional Owners in the upper Ord catchment</li> <li>• Identification of data management and access requirements and ways to share Aboriginal and non-Aboriginal knowledge and information</li> <li>• Planning networks and capacity needs analysis and training workshops to develop capacity of Aboriginal people for community planning.</li> </ul>		
<b>Sub-total</b>				<b>3,815</b>	<b>3,768</b>

<b>ACTIVITY (duration is in brackets)</b>	<b>PIERD ACT OBJECTS / LINES OF INVESTMENT [c] [d]</b>	<b>KEY OUTCOMES [a]</b>	<b>KEY OUTPUTS</b>	<b>LWA BUDGET 2002 – 2003 (\$1,000s)</b>	<b>THIRD PARTY FUNDS (\$1,000s) [b]</b>
<b>New &amp; emerging issues</b>	Various		New & emerging issues identified and scoped for future R&D investment.	500	0
<b>OVERALL TOTAL</b>					
				<b>20,579</b>	<b>11,583</b>

**Notes:**

- Most outcomes will likely be realised after the completion of the R&D Activities
- Based on firm cash and in-kind commitments at April 2002. These amounts may increase as further partnership contributions are negotiated at program and project levels.
- Major partnership organisations are included.
- Includes the PIERD Act objects as detailed at Page 3 of the AOP
- As per the investment framework, the lines of investment are as follows:

**Partnership programs**

Provides focus to an R&D area whereby a set of partners can together fund a larger program of R&D where there are similar or overlapping interests.

**Programs funded without partners**

Provides an integrated set of investments, which can be highly focused on LWA-specific outcomes and priorities.

**Special purpose projects**

Projects that are funded outside of programs by LWA, with or without partners, that receive high priority and which are necessarily highly focused on a particular issue or innovation.

**General Call for Innovative R&D Projects**

With a program structure for R&D, it is likely that some very good ideas may not attract attention. The General Call does not prescribe objectives or outcomes so that good ideas are 'freely' encouraged. Calling against specific priorities may be considered.

**Regional Initiatives**

Effectively addresses regional issues that are common throughout Australia and provides opportunity to extend outputs from LWA to other regions.

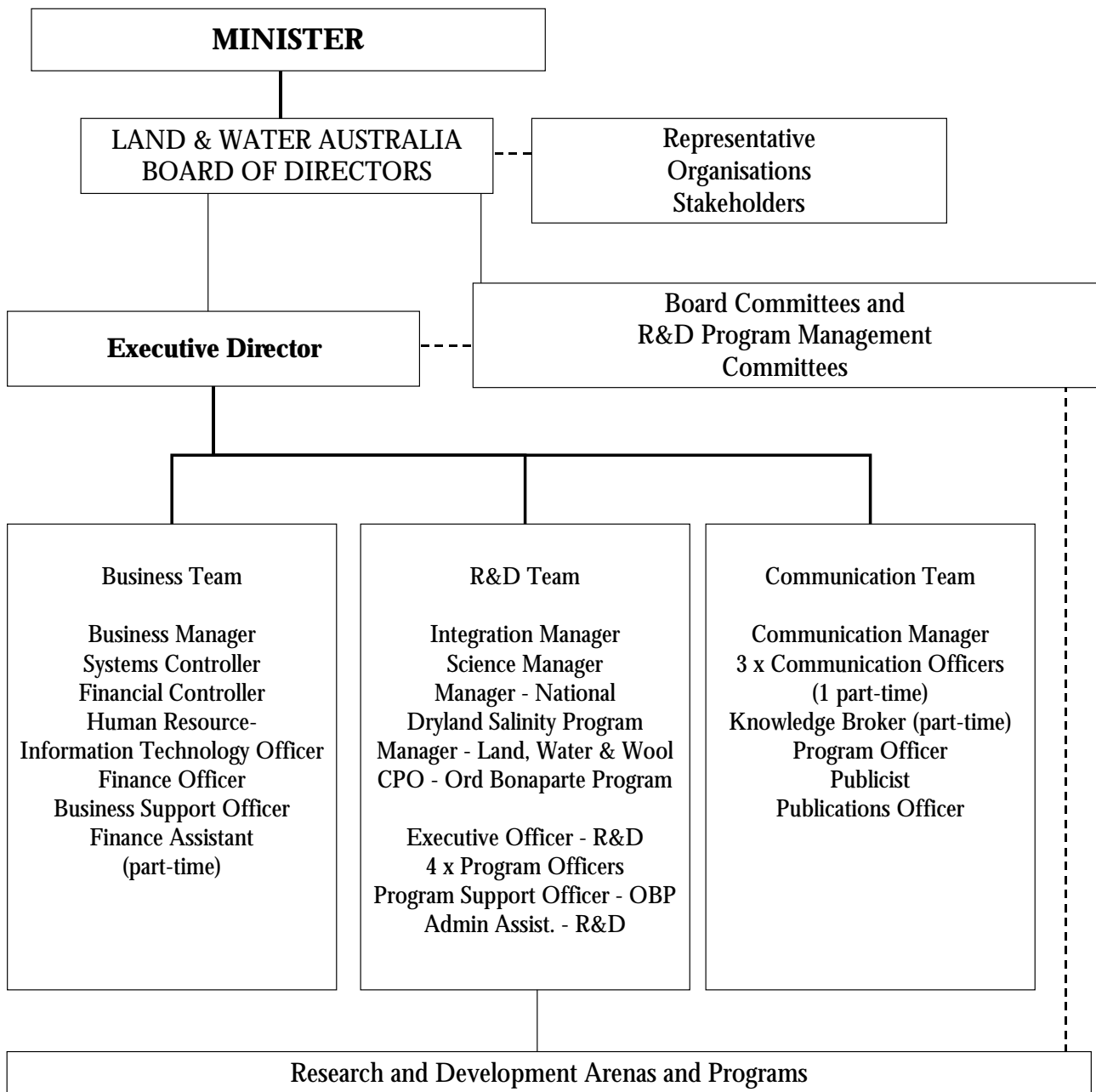
**Human Capacity Building**

Fellowship and Scholarship support helps to ensure a continuing supply of able researchers in NRM. This line of investment could be extended in the future to encompass funding for post-doctorates and other research capacity.

**Outreach**

Where LWA does not make a direct financial contribution and recovers its costs due to its expertise in managing R&D. Allows extension of LWA influence without high level of budget commitment. The Land, Water and Wool program is an example of outreach.

## Appendix A: Management Structure



## Appendix B: Glossary of Terms

AFFA	Agriculture, Fisheries and Forestry – Australia
AgWest	Agriculture Western Australia
AOP	Annual Operational Plan
ARRIP	Australian Rural Research in Progress
CAC Act	<i>Commonwealth Authorities and Companies Act 1997</i>
COAG	Council of Australian Governments
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DRDC	Dairy Research Development Corporation
EA	Environment Australia
FWPRDC	Forest and Wood Products R&D Corporation
GRDC	Grains R&D Corporation
LWA	Land & Water Australia
MDBC	Murray-Darling Basin Commission
MLA	Meat & Livestock Australia
NDSP	National Dryland Salinity R,D&E Program
NHT	Natural Heritage Trust
NRM	Natural Resource Management
PIERD Act	<i>Primary Industries &amp; Energy Research &amp; Development Act 1989</i>
R&D	Research and Development
SRDC	Sugar Research and Development Corporation
SWEK	Shire of Wyndham-East Kimberley
WRC	WA Waters and Rivers Commission

## Appendix C: Portfolio Budget Statement

### Land & Water Australia

#### Section 1: Overview and revenue summary

##### *Overview*

Land & Water Australia (LWA) (formerly and legally the Land and Water Resources Research and Development Corporation) is a statutory corporation established under the provisions of the *Primary Industries and Energy Research and Development* (PIERD) Act of 1989, within the Commonwealth Agriculture, Fisheries and Forestry portfolio.

Land & Water Australia is specifically responsible for research and development (R&D) aimed at the productive and sustainable management of the land, water and vegetation resources underpinning Australia's primary industries and regional communities. LWA does not fund general atmospheric or marine research or research on urban issues.

As a Commonwealth Authority, the Corporation has a particular charter to foster national collaboration in order to improve the efficiency and effectiveness of this R&D effort. The Corporation emphasises the establishment of national research programs, most of which are supported jointly by several partner organisations, which bring together resource managers and researchers to identify priorities and to ensure that research findings are adopted and implemented. The R&D Plan takes an integrated approach to program design and implementation and to the development of packages of information relevant to decision-makers.

A Board of nine Directors governs the Corporation. The Board develops policy, evaluates the Corporation's performance and creates committees/working groups to work on specific activities. The term appointment of six Directors of the Board will conclude at 30 June 2002. The Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry will appoint incoming Directors for a three year period. The Corporation staff carry out the day-to-day work involved in establishing R&D programs and in developing, implementing, supporting, communicating and reviewing R&D work. Land & Water Australia is only one of several organisations involved in this endeavour. Responsibilities in natural resource management, whether for legislation, policy, programs or onground works, are distributed across all levels of government, community-based groups such as catchment committees and Landcare groups, rural industries and individual landholders.

##### *Total Revenue*

Total appropriations and other revenue for the Corporation in the 2002-2003 Budget is \$20.0 million. Of this, \$11.9 million is from government appropriation and \$8.1 million from collaborative partners and other income.

Table 1.1 below shows the total revenue applicable to Land & Water Australia for 2002-03.

TABLE 1.1

**Total Revenue (\$'000)\***

<b>Outcome</b>	<b>Monies from industry levies</b>	<b>Commonwealth contribution</b>	<b>Monies from other sources</b>	<b>Total revenue</b>
Knowledge, understanding and informed debate to inspire innovation and action in sustainable natural resource management.	0	11,863	8,131	19,994

\*Land & Water Australia receives a direct administered appropriation from the Government.

***Departmental Equity Injections and Loans***

The Land & Water Australia will not receive an equity injection or departmental loan during 2002-03.

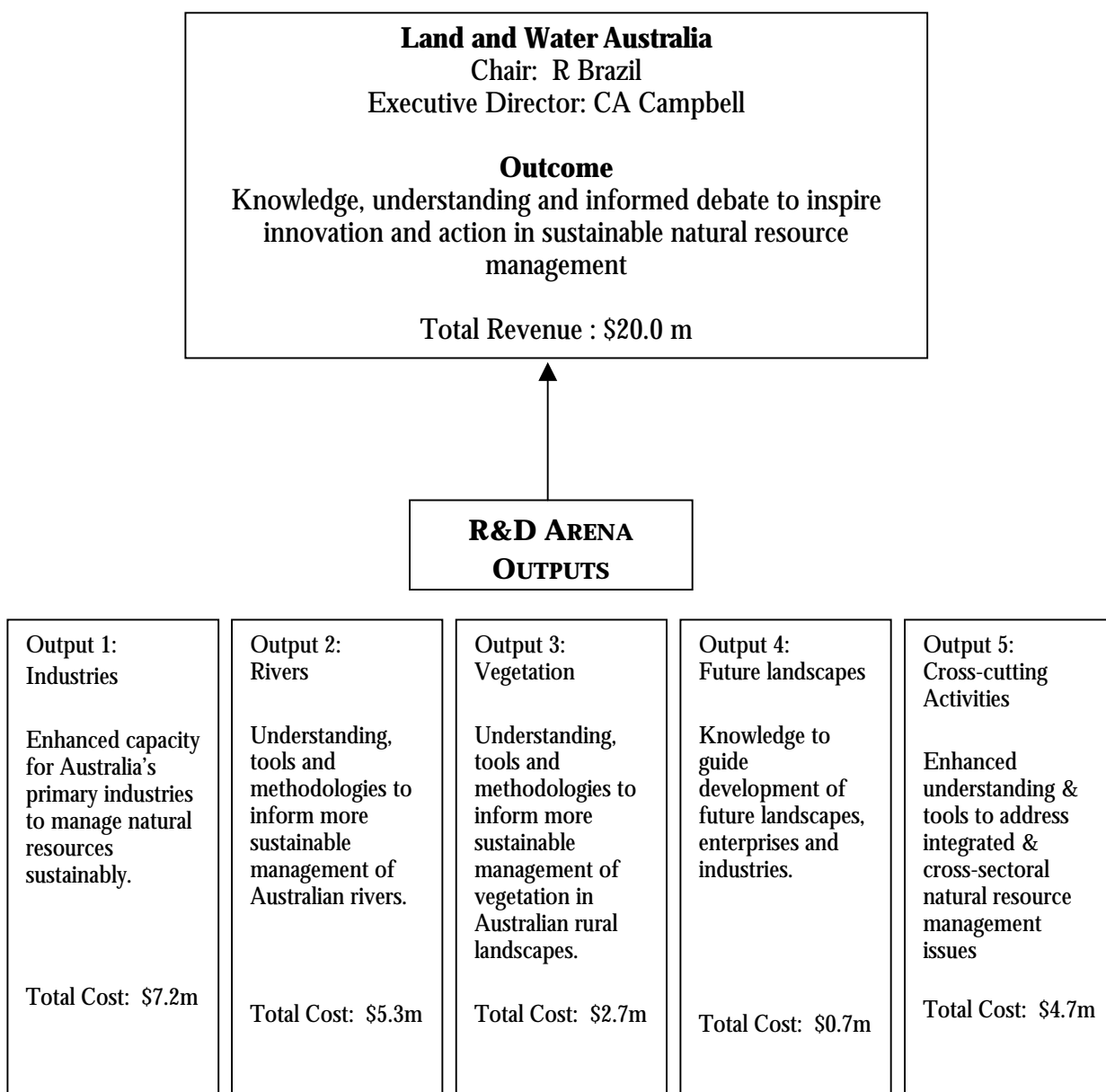
## Section 2: Outcome and Outputs Information

### Outcome and Outputs

The map below shows the relationship between the Outcome and the contributing Outputs for Land & Water Australia. Financial details for the Outcome by Outputs appears in Table 2.1 (Total Resources for Outcome) while non-financial information for the Outcome appears in Table 2.2 (Performance Information for Outcome).

MAP 2.1

### Outcome and Outputs



## ***Changes to Outcomes and Outputs***

There are no changes to report.

### ***Outcome – Description***

Land & Water Australia works towards one outcome, reflected in the Corporation's mission statement. The total R&D investments of the Corporation across its research portfolio are directed towards this outcome. The outcome is as follows:

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

### ***Outcome – Resourcing***

TABLE 2.1

#### **Total resource for Outcome (\$'000)**

	Estimated actual 2001-02 \$'000	Budget estimate 2002-03 \$'000
<b>Agency resources</b>		
Output 1 Sustainable Industries	7,956	7,208
Output 2 River Landscapes	3,341	5,362
Output 3 Vegetation	2,396	2,671
Output 4 Future Landscapes & Compatible Industries	581	677
Output 5 Cross-cutting activities (Note 1)	10,703	4,661
<b>Total resourcing for Outcome 1</b>	<b>24,977</b>	<b>20,579</b>
	2001-02	2002-03
<b>Average staffing level (number)</b>	<b>27</b>	<b>28</b>

Note 1: The 2001-2002 year includes the National Land & Water Resources Audit

## ***Outcome – Contribution of Outputs***

The five outputs relate to the R&D areas of investment relating to industries, rivers, vegetation, future landscapes and cross-cutting activities.

TABLE 2.2

### **Performance Information for Outcome**

<b>Effectiveness – Overall achievement of the Outcome</b>	
<b>LEADERSHIP:</b> To be, and be seen to be, at the forefront of Australian thinking on sustainable natural resource management.	Stakeholder feedback through surveys. The extent to which R&D funded by Land & Water Australia puts issues on the national agenda.
<b>INFLUENCE:</b> To maximise the impact of the Corporation's investments, at onground policy and institutional levels in improving the sustainability of natural resource management.	Adoption of Land & Water Australia-funded R&D, measured through analyses and surveys of adoption rates. The ratio of total R&D effort in Land & Water Australia's programs to the core Land & Water Australia investment.
<b>RELEVANCE:</b> To ensure that the Corporation targets investment to where it can make a real difference, by meeting critical natural resource policy and management needs	The degree of alignment of Land & Water Australia-funded R&D effort with issues identified by key stakeholders and natural resource management experts as critical national priorities. Stakeholder feedback through surveys
<b>RETURN ON INVESTMENT:</b> To maximise the return on public funding invested through the Corporation.	The average benefit:cost ratio across the R&D and communication effort funded by the Corporation, with a target average of at least ten to one.
<b>ACCOUNTABILITY</b> To meet all statutory obligations and accountability requirements in a comprehensive, timely and transparent manner.	Independent and internal audit reports; feedback from AFFA and ANAO; the timeliness of compliance.

## ***Contribution of Outputs to Outcome***

Land & Water Australia has a planning & management framework that describes the different contributions that the Corporation Board and various management units play in this process. The R&D Plan describes the various portfolio management, business and communication functions to facilitate the translation of outputs to outcomes.

The core business of the Corporation is the establishment, brokering and management of national research programs. These programs are supported by partner organisations, and aim to bring together resource managers and researchers to jointly identify priorities and ensure that research findings are adopted and implemented. Further development of these programs and their efficient management will remain core business for Land & Water Australia in 2002-2003.

TABLE 2.3

**Performance Information for Outputs**

<b>Performance Information for Outputs</b>	
<b>Program</b>	<b>Common Performance Targets</b>
<b>Output 1 – Sustainable Industries</b>	
New Industry Partnerships	<p>Assessment of the natural resource management (NRM) training needs of significant primary industries.</p> <p>Assessment of NRM research needs of downstream primary production industries</p>
Land Water & Wool (LWW)	<p>Development and distribution of the first Wool producer LWW NRM Toolkit by December 2002.</p> <p>Completion and publication of the wool producer NRM benchmarking survey.</p> <p>Completion and publication of the Future Woolscales Scoping study, and commence the implementation of the subprogram.</p> <p>Completion of the Sustainable Grazing Systems Harvest Year project and incorporation of the main findings into the LWW Program and relevant subprograms.</p> <p>Launch of the Sustainable Grazing for Saline Lands (SGSL) Saltland Pastures Book to provide an initial text to managing Saline soils productively.</p> <p>Establishment of SGSL producer networks.</p> <p>Production of first set of river management guidelines produced specifically for wool producers.</p> <p>Establishment of research projects, research sites and producer driven demonstration sites across the portfolio of LWW subprograms to further enhance the engagement of producers in LWW.</p> <p>Development and publication of initial guidelines for: Managing native vegetation and biodiversity; and Incentive packages for wool producers.</p> <p>Completion of refinement of Pastoral Subprogram Implementation Plan and commence its roll-out.</p> <p>Progressive implementation of the LWW Communication Plan covering all target audiences - producers, advisors, R&amp;D Corporations, Government agencies etc. All communication outlets will be utilised including launches, print media, fact sheets, Toolkit, meetings, website, direct mail etc.</p>
Sustainable Grain & Grazing System_	<p>Implementation Plan and Prospectus</p> <p>Commissioning of start-up projects</p>
National Dryland Salinity Program (NDSP)	<p>Evaluation of the NDSP Phase II</p> <p>Develop the framework for a future 'harvest year' for the NDSP including products and communication strategy</p> <p>Develop products and packaging of communication products</p> <p>Develop a framework for a strategic plan for a future third phase of a salinity program</p>
Climate Variability Applications Program	<p>Seek partnership support.</p> <p>New Climate Variability Applications Program established</p> <p>Develop program plan and commence contracting program activities.</p>

<b>Performance Information for Outputs</b>	
<b>Program</b>	<b>Common Performance Targets</b>
<b>Output 2 – River Landscapes</b>	
National Program for Sustainable Irrigation	New National Program for Sustainable Irrigation established Current knowledge on water use efficiency collated and widely promoted An understanding of what sustainable irrigation communities would constitute in a futures context.
Northern Murray Darling Basin Program	A partnership program for understanding deep drainage established Initial clarification of missing knowledge on deep drainage in vertisol soils Sophisticated research design.
National Rivers Consortium	River protection philosophy established and tools and guidelines developed for its implementation. River managers training and education program established to enhance skills and capacity. Research turned into practical river management solutions and communicating this to river managers. Catchment projects implemented at the regional level to demonstrate best practice restoration, riparian and catchment practice Key knowledge gaps resolved for riverine ecological and physical/chemical processes.
Riparian Lands R&D Program	Contracting of multi-disciplinary research groups, to undertake work on key knowledge gaps Develop projects to produce industry specific riparian management guidelines (specifically for the sugar, dairy and grains industries) Produce a range of products to provide information and raise awareness about riparian management for a range of end-users (web, guidelines etc.)
River Contaminants R&D Program	Program plan finalised and suite of projects implemented focussing on salinity, nutrients, sediments, ecosystem impacts and catchment interactions. River managers provided with the tools to effectively manage river contaminants across Australia Key knowledge gaps of riverine contaminant ecological and physical/chemical processes resolved. Community and industry groups communicated with to demonstrate management solutions to the ecological impacts of river contaminants.
<b>Output 3 – Vegetation</b>	
Native Vegetation R&D Program	A review of the effectiveness of programs and policies that integrate native vegetation into agricultural production systems. A national classification of the status of native vegetation Robust communication plan Publication of technical guidelines for native vegetation and biodiversity management Improved understanding of clearing thresholds and relevance to policy Principles for integrating native vegetation into agriculture A definitive report on the strengths and weaknesses of the focal species approach to landscape design
Joint-venture Agroforestry Program	A booklet on effective strategies for marketing farm tree products. Quarterly ANU Forestry Market Reports. A manual for farm forestry for trial establishment, a directory of trials in

<b>Performance Information for Outputs</b>	
<b>Program</b>	<b>Common Performance Targets</b>
(JVAP) (Administered by RIRDC)	<p>Australia, and updated edition of Trees for Saltland, and reports supporting growth modelling and matching trees with climate in Australia.</p> <p>A production of two more Agroforestry guidelines Tree, Soil &amp; Climate and Trees for Biodiversity.</p> <p>A manual for irrigated eucalypts incorporating salinity impacts, and a report on fast-growing eucalypt plantations in northern Victoria.</p> <p>Publication of: Trees for Shelter: A guide to using windbreaks on Australian farms.</p> <p>A manual on the silviculture of rainforest timbers.</p> <p>Reports and brochures on a range of wood properties and products from several projects.</p> <p>A silvicultural decision support system for farm forestry including a whole-farm and regional agroforestry decision making system.</p> <p>A report on 'Best bet' products from agroforestry biomass.</p> <p>The first of the Integration Series booklets (the first of which is Trees and Riparian Zone Management) which synthesise research supported by JVAP, LWA and MDBC.</p> <p>A 'Workbook' series book on farm forestry aimed at children in the 8 – 12 year old age group.</p>
<b>Output 4 – Future Landscapes &amp; Compatible Industries</b>	
Future Landscapes	<p>Scenarios for future R&amp;D</p> <p>Vision of sustainable landscapes clearly articulated</p> <p>Principles for redesign of agriculture</p> <p>Design criteria for future sustainable landscapes</p>
<b>Output 5 – Cross-cutting Activities</b>	
General Call for Innovative R&D Projects)	<p>Emerging issues and innovative approaches annually identified and funded.</p> <p>Reviews of new issues and techniques.</p>
Human Capacity Building	<p>Provision of post-graduates scholarships, travelling and visiting fellowships, and community fellowships.</p> <p>National R&amp;D capacity enhanced through new young scientists in NRM.</p>
Integration Framework & Products	<p>Minimal requirements of Integration Framework for LWA defined.</p> <p>Development of a Business Plan for LWA investment in Integration Framework and Products, July 2003-June 2006.</p>
Social and Institutional Research Program	<p>A high quality and accessible social and institutional knowledge base for improved NRM.</p> <p>Models for achieving best practice in NRM policy, legislation and institutions.</p> <p>Targeted communication packages and new models and knowledge for extension/ adoption.</p> <p>Enhanced stakeholder and partner networks for social and institutional research and collaborative activities.</p>
Ord-Bonaparte Program	<p>Spatial database for the Ord-Bonaparte Region containing the key regional data sets</p> <p>Hardware, software and data standards for the further development and maintenance of spatial information for the Ord-Bonaparte Region</p>

<b>Performance Information for Outputs</b>	
<b>Program</b>	<b>Common Performance Targets</b>
	<p>Pilot integration projects developed with regional stakeholders.</p> <p>Assessment of the impact and influence of the OBP initiative and recommendations for ongoing progress in the region.</p> <p>Recommendations to assist the planning and implementation of future similar R&amp;D initiatives elsewhere in Australia.</p> <p>Atlas of GIS coverage for the East Kimberley rangelands.</p> <p>Land Unit map for the East Kimberley rangelands</p> <p>Rangeland monitoring program utilising remotely sensed and field based data.</p> <p>Hydrological response unit map of the Ord River Irrigation Area (ORIA)</p> <p>Integrated ground water and surface water monitoring system to record ground water discharge, surface flows, sediment, nutrient and pesticide flows</p> <p>Understanding of the dynamic relationship between the surface water, ground water, applied nutrients and soils in the ORIA.</p> <p>Risk assessment for pesticides used in the ORIA.</p> <p>Calibrated tool for understanding the impact of irrigation and drainage operations on water quality within and downstream of the ORIA</p> <p>Time series of water quality parameters from sites in the Ord estuary, to characterise the current system state, underpin nutrient budgets, and support model development and calibration.</p> <p>Data to characterise sediment composition, the role of sediments in nutrient cycling, and the relative contribution of organic matter from terrestrial and marine sources.</p> <p>Quantitative wet and dry season budgets for salt, carbon and nutrients in the lower Ord river and estuary.</p> <p>Integrated hydrodynamic and biogeochemical models of the lower Ord river and estuary systems and their response to flows and loads.</p> <p>Model predictions for agreed management scenarios for water allocation and land use.</p> <p>Documentation of ethnoecological/ethnoeconomic knowledge with Aboriginal Traditional Owners in the upper Ord catchment</p> <p>Identification of data management and access requirements and ways to share Aboriginal and non-Aboriginal knowledge and information</p> <p>Planning networks and capacity needs analysis and training workshops to develop capacity of Aboriginal people for community planning.</p>

## ***Evaluations***

In evaluating its performance at a corporate level, the Corporation is interested not just in R&D outputs and their impacts, but the sum total of its activities in management and communication as well as R&D investment, and also how these outputs were achieved.

The Corporation has in place an evaluation strategy that assesses performance at the corporate, program and project scales. A range of monitoring systems will be put in place during the 2002-2003 year to provide a consistent, accurate and cost-effective reporting framework. Any lessons arising from this reporting framework will be built into improving portfolio management and continuous improvement in the organisation.

## Section 3: Budgeted Financial Statements

TABLE 3.1

### Budgeted Statement of Financial Performance (for the period ended 30 June)

	Estimated actual 2001-02 \$'000	Budget estimate 2002-03 \$'000	Forward estimate 2003-04 \$'000	Forward estimate 2004-05 \$'000	Forward estimate 2005-06 \$'000
<b>Revenues from ordinary activities</b>					
Revenue from government	11,586	11,863	12,173	12,488	12,488
Sales of goods and services	14,794	7,631	7,305	5,700	3,000
Interest	250	250	250	250	250
Dividends	-	-	-	-	-
Net gains from sales of assets	-	-	-	-	-
Other	300	250	250	250	250
<b>Total revenues from ordinary activities</b>	<b>26,930</b>	<b>19,994</b>	<b>19,978</b>	<b>18,688</b>	<b>15,988</b>
<b>Expenses from ordinary activities (excluding borrowing costs expense)</b>					
Employees	3,951	2,881	2,813	2,629	2,113
Suppliers	3,951	2,881	2,813	2,629	2,113
Grants	20,038	14,611	14,267	13,332	10,714
Depreciation and amortisation	282	206	201	188	151
Write down of assets	-	-	-	-	-
Net losses from sales of assets	-	-	-	-	-
Other	-	-	-	-	-
<b>Total expenses from ordinary activities (excluding borrowing costs expense)</b>	<b>28,222</b>	<b>20,579</b>	<b>20,094</b>	<b>18,778</b>	<b>15,091</b>
Borrowing cost expense	-	-	-	-	-
<b>Net surplus or deficit from ordinary activities</b>	<b>-1,292</b>	<b>-585</b>	<b>-116</b>	<b>-90</b>	<b>897</b>
Gain or loss on extraordinary items	-	-	-	-	-
<b>Net surplus or deficit</b>	<b>-1,292</b>	<b>-585</b>	<b>-116</b>	<b>-90</b>	<b>897</b>
Capital use charge	-	-	-	-	-
<b>Net surplus or deficit after capital use charge</b>	<b>-1,292</b>	<b>-585</b>	<b>-116</b>	<b>-90</b>	<b>897</b>

TABLE 3.2

**Budgeted Statement of Financial Position (as at 30 June)**

	Estimated actual 2001-02 \$'000	Budget estimate 2002-03 \$'000	Forward estimate 2003-04 \$'000	Forward estimate 2004-05 \$'000	Forward estimate 2005-06 \$'000
<b>ASSETS</b>					
<b>Financial assets</b>					
Cash	235	546	481	119	1,007
Receivables	535	480	430	430	430
Investments	1,312	571	667	694	700
Accrued revenues	-	-	-	-	-
Other	15	15	15	15	15
<b>Total financial assets</b>	<b>2,097</b>	<b>1,612</b>	<b>1,593</b>	<b>1,258</b>	<b>2,152</b>
<b>Non-financial assets</b>					
Land and buildings	-	-	-	-	-
Infrastructure, plant and equipment	300	223	149	398	395
Inventories	-	-	-	-	-
Intangibles	150	127	104	100	106
Other	-	-	-	-	-
<b>Total non-financial assets</b>	<b>450</b>	<b>350</b>	<b>253</b>	<b>498</b>	<b>501</b>
<b>Total assets</b>	<b>2,547</b>	<b>1,962</b>	<b>1,846</b>	<b>1,756</b>	<b>2,653</b>
<b>LIABILITIES</b>					
<b>Debt</b>					
Loans	-	-	-	-	-
Leases	-	-	-	-	-
Deposits	-	-	-	-	-
Overdrafts	-	-	-	-	-
Other	-	-	-	-	-
<b>Total debt</b>	-	-	-	-	-
<b>Provisions and payables</b>					
Employees	360	360	360	360	360
Suppliers	400	400	400	400	400
Grants	500	500	500	500	500
Other	-	-	-	-	-
<b>Total provisions and payables</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>
<b>Total liabilities</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>	<b>1,260</b>
<b>EQUITY</b>					
Capital	-	-	-	-	-
Reserves	-	-	-	-	-
Accumulated surpluses or deficits	1,287	702	586	496	1,393
<b>Total equity</b>	<b>1,287</b>	<b>702</b>	<b>586</b>	<b>496</b>	<b>1,393</b>
<b>Total liabilities and equity</b>	<b>2,547</b>	<b>1,962</b>	<b>1,846</b>	<b>1,756</b>	<b>2,653</b>
<b>Current liabilities</b>	-	-	-	-	-
<b>Non-current liabilities</b>	1,260	1,260	1,260	1,260	1,260
<b>Current assets</b>	2,097	1,612	1,593	1,258	2,152
<b>Non-current assets</b>	450	350	253	498	501

TABLE 3.3

**Budgeted Statement of Cash Flows (for the period ended 30 June)**

	Estimated actual 2001-02 S'000	Budget estimate 2002-03 S'000	Forward estimate 2003-04 S'000	Forward estimate 2004-05 S'000	Forward estimate 2005-06 S'000
<b>OPERATING ACTIVITIES</b>					
<b>Cash received</b>					
Revenue from government	11,586	11,863	12,173	12,488	12,488
Sales of goods and services	12,581	7,631	7,305	5,700	3,000
Interest	250	250	250	250	250
Other	300	250	250	250	250
<b>Total cash received</b>	<b>24,717</b>	<b>19,994</b>	<b>19,978</b>	<b>18,688</b>	<b>15,988</b>
<b>Cash used</b>					
Employees	3,951	2,881	2,813	2,629	2,113
Suppliers	3,951	2,881	2,813	2,629	2,113
Grants	20,038	14,611	14,267	13,332	10,714
Interest	-	-	-	-	-
Other	-	-	-	-	-
<b>Total cash used</b>	<b>27,940</b>	<b>20,373</b>	<b>19,893</b>	<b>18,590</b>	<b>14,940</b>
<b>Net cash from operating activities</b>	<b>-3,223</b>	<b>-379</b>	<b>85</b>	<b>98</b>	<b>1,048</b>
<b>INVESTING ACTIVITIES</b>					
<b>Cash received</b>					
Proceeds from sales of property, plant and equipment					
Repayments of loans made					
Other		800			
<b>Total cash received</b>	<b>-</b>	<b>800</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Cash used</b>					
Purchase of property, plant and equipment	69	110	150	460	160
Loans made					
Other					
<b>Total cash used</b>	<b>69</b>	<b>110</b>	<b>150</b>	<b>460</b>	<b>160</b>
<b>Net cash from investing activities</b>	<b>-69</b>	<b>690</b>	<b>-150</b>	<b>-460</b>	<b>-160</b>
<b>FINANCIAL ACTIVITIES</b>					
<b>Cash received</b>					
Proceeds from issuing equity instruments					
Proceeds from debt					
Other					
<b>Total cash received</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Cash used</b>					
Repayments of debt					
Capital use and dividends paid					
Other					
<b>Total cash used</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net cash from financing activities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net increase in cash held</b>	<b>-3,292</b>	<b>311</b>	<b>-65</b>	<b>-362</b>	<b>888</b>
Cash at the beginning of the reporting period	3,527	235	546	481	119
Cash at the end of the reporting period	<b>235</b>	<b>546</b>	<b>481</b>	<b>119</b>	<b>1,007</b>

TABLE 3.4

**Departmental Capital Budget Statement**

	Estimated actual 2001-02 \$'000	Budget estimate 2002-03 \$'000	Forward estimate 2003-04 \$'000	Forward estimate 2004-05 \$'000	Forward estimate 2005-06 \$'000
<b>PURCHASE OF NON CURRENT ASSETS</b>					
Funded by capital appropriation					
Funded internally by					
Departmental resources	69	110	150	460	160

TABLE 3.5

**Departmental Non-financial Assets - Summary of Movement  
(Budget year 2002-03)**

	Land \$'000	Buildings \$'000	Total Land and Buildings \$'000	Other Intangibles Infrastructure Plant and Equipment \$'000	Total \$'000
Carrying amount at the start of year	-	-	-	293	446
Additions	-	-	-	60	110
Disposals	-	-	-	-	-
Revaluation increments	-	-	-	-	-
Recoverable amount write-downs	-	-	-	-	-
Depreciation/amortisation expense	-	-	-	130	206
Write-off of assets	-	-	-	-	-
Carrying amount at the end of year	-	-	-	223	350
<b>Total additions</b>					
Self funded	-	-	-	60	110
Appropriations	-	-	-	-	-
<b>Total</b>	-	-	-	<b>60</b>	<b>110</b>