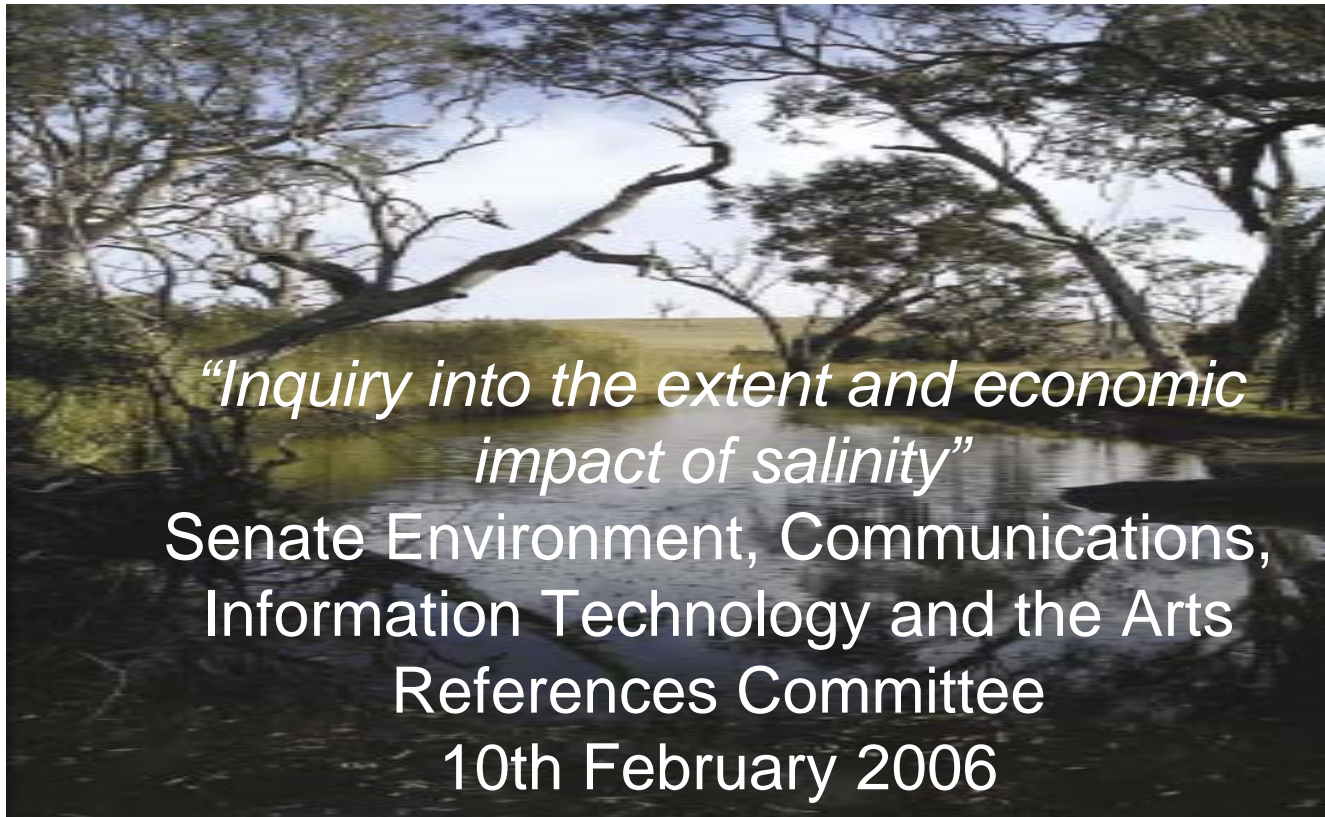




Lachlan Catchment Management Authority



“Inquiry into the extent and economic impact of salinity”

Senate Environment, Communications,
Information Technology and the Arts
References Committee
10th February 2006

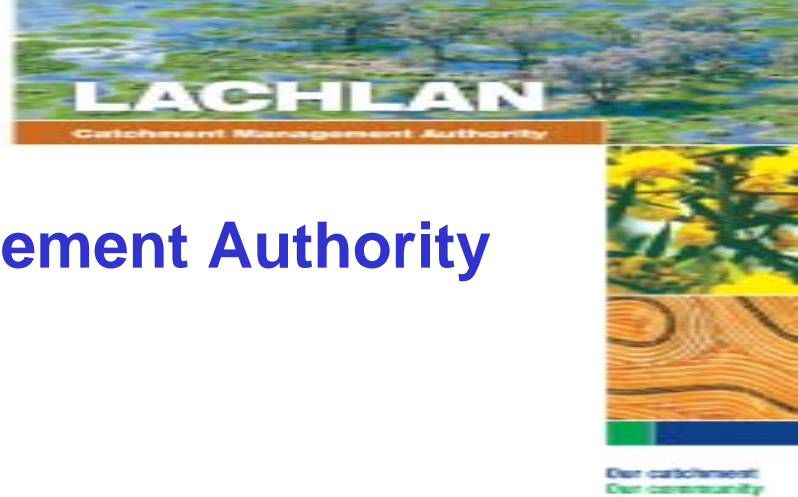


Our catchment
Our community

Lachlan Catchment Management Authority

Contents

- **Senate Environment, Communications, Information Technology and the Arts References Committee** *“Inquiry into the extent and economic impact of salinity”* Terms of Reference
- **Overview of CMA**
 - Drivers for CMAs
 - Generic Functions
- **Lachlan CMA Contribution to ToR 1**
 - *whether the goals of the National Action Plan for Salinity and Water Quality, NHT and NLP have been attained;*
- **Lachlan CMA Contribution to ToR 2**
 - *role of regional catchment management authorities play in the management of salinity*
- **Lachlan CMA Contribution to ToR 3**
 - *action taken as a result of the Science and Innovation Committee inquiry.*



Lachlan Catchment Management Authority

Committee Terms Of Reference

Assessment of federal programs that seek to reduce the extent of and economic impact of salinity

- (a) whether the goals of the National Action Plan for for Salinity and Water Quality, NHT and NLP have been attained;
- (b) role of regional catchment management authorities play in the management of salinity
- (c) action taken as a result of the Science and Innovation Committee inquire.



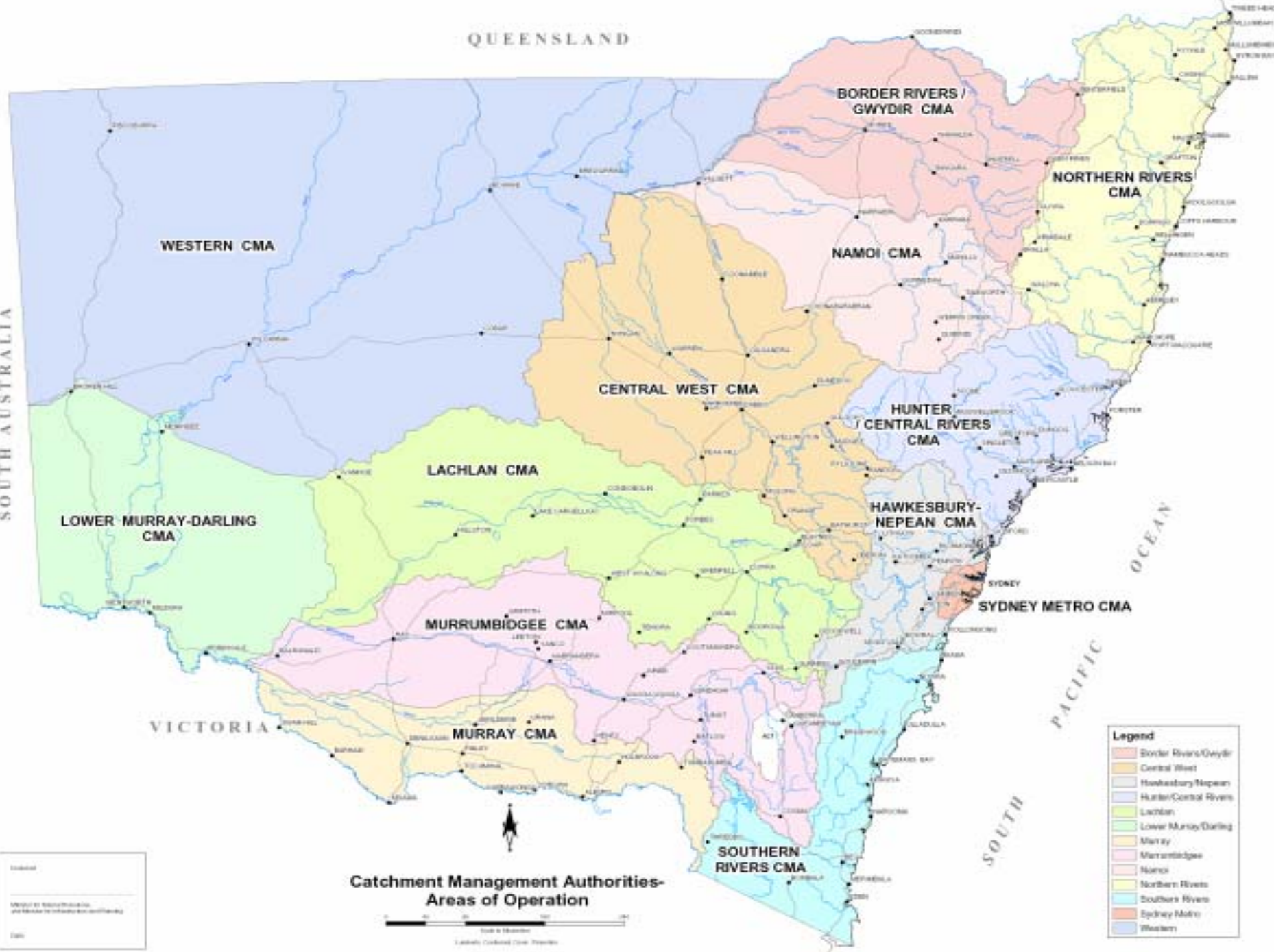
Lachlan Catchment Management Authority

Overview of CMA

- Drivers for CMAs
- Generic Functions

QUEENSLAND

SOUTH AUSTRALIA



WESTERN CMA

BORDER RIVERS / Gwydir CMA

NORTHERN RIVERS CMA

NAMOI CMA

CENTRAL WEST CMA

HUNTER / CENTRAL RIVERS CMA

LACHLAN CMA

LOWER MURRAY-DARLING CMA

HAWKESBURY-NEPEAN CMA

MURRUMBIDGEE CMA

SYDNEY METRO CMA

VICTORIA

MURRAY CMA

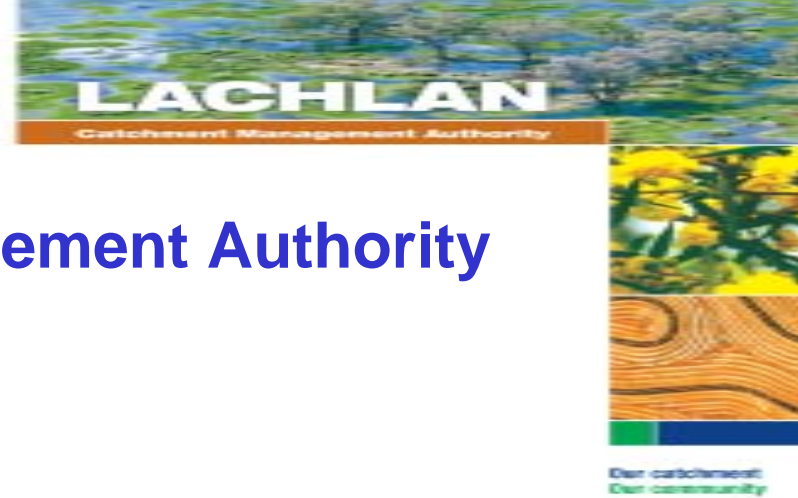
SOUTHERN RIVERS CMA

- Legend**
- Border Rivers/Gwydir
 - Central West
 - Hawkesbury-Nepean
 - Hunter/Central Rivers
 - Lachlan
 - Lower Murray-Darling
 - Murray
 - Murrumbidgee
 - Namoi
 - Northern Rivers
 - Southern Rivers
 - Sydney Metro
 - Western

Catchment Management Authorities- Areas of Operation



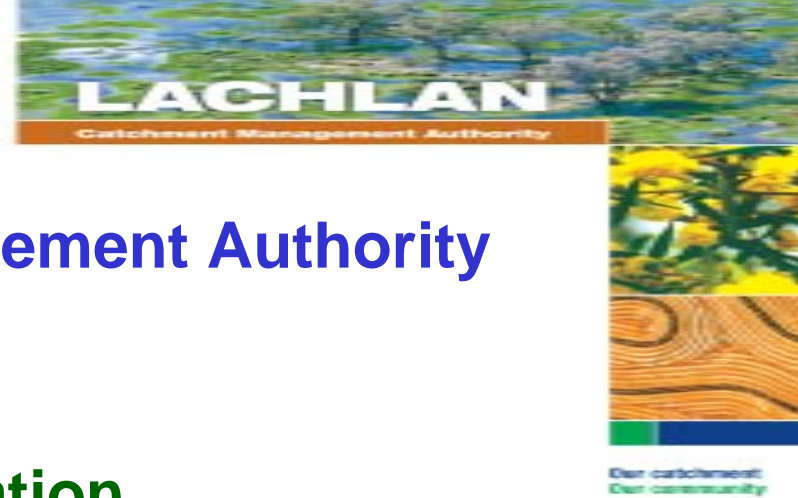
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 Murray-Darling Basin Authority
 and Murray-Darling Basin Commission
 2007



Lachlan Catchment Management Authority

Drivers for establishing CMAs

- Wentworth Group Report
- Catchment Management Authorities Act 2003
- Native Vegetation Conservation Act
- Australian Government Funding via National Action Plan for Water Quality and Salinity and National Heritage Trust.
- Broader reforms on Service Delivery

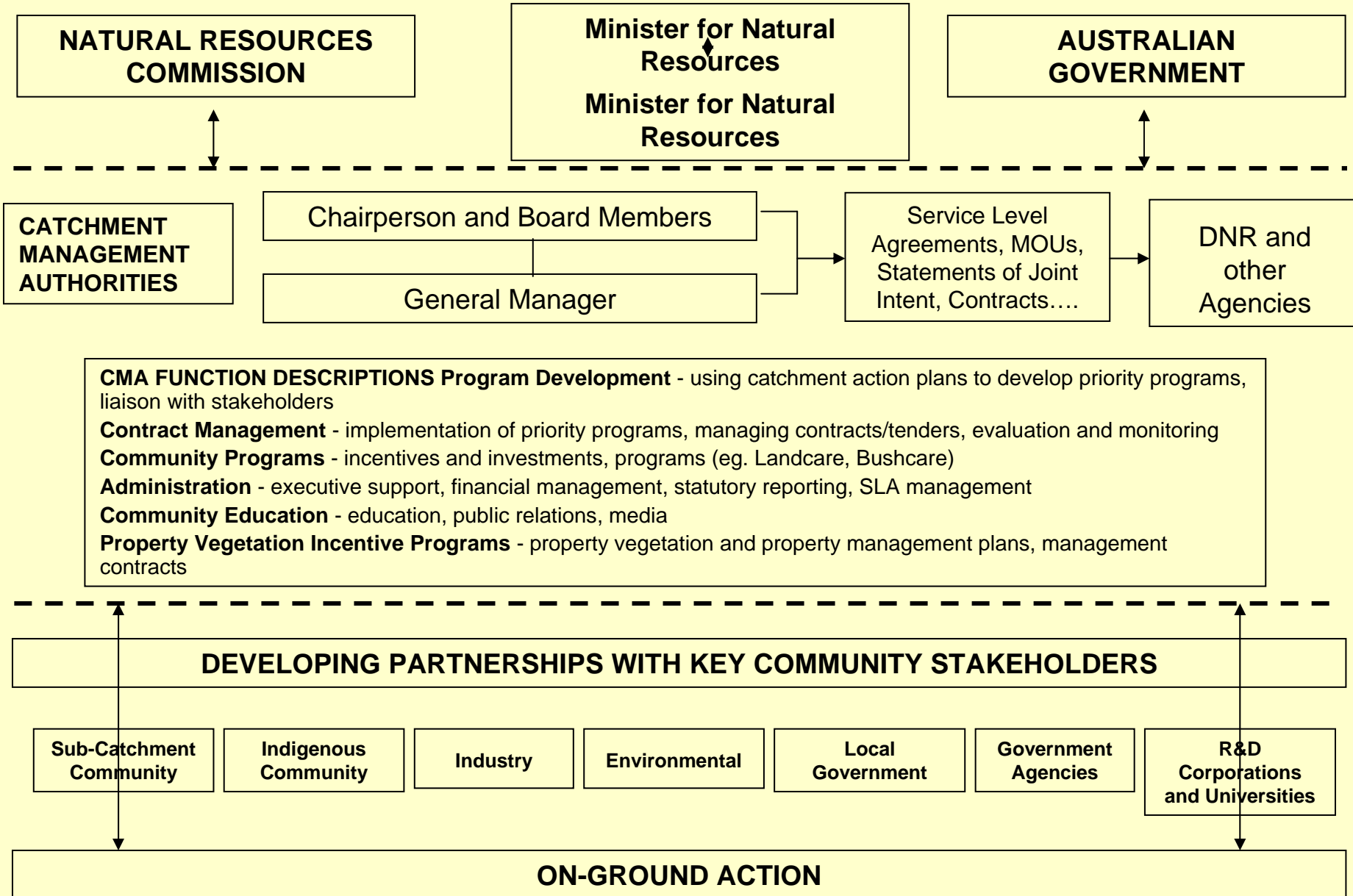


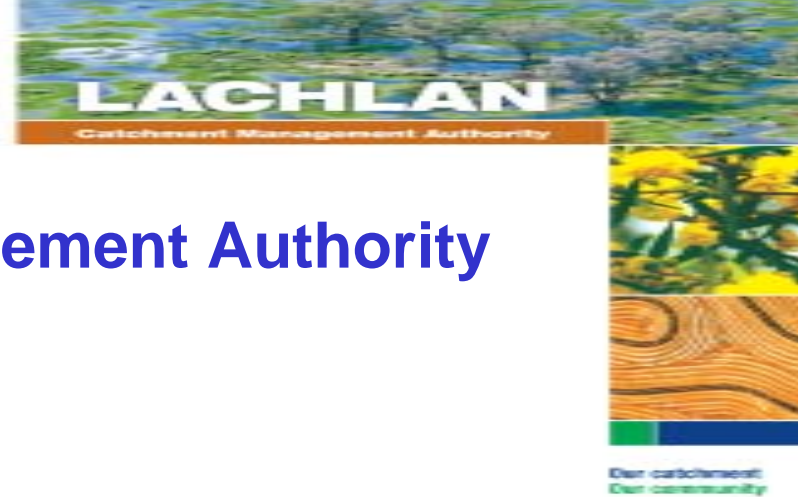
Lachlan Catchment Management Authority

Board Structure and representation

- CMA Chair
- CMA Board (governing) Members (6 people)
- CMA Board will report directly to the Minister
- CMA Board is selected on merit not representation of any particular interest group
- CMA General Manager

Catchment Management Authority relationship with NSW Government and the Community

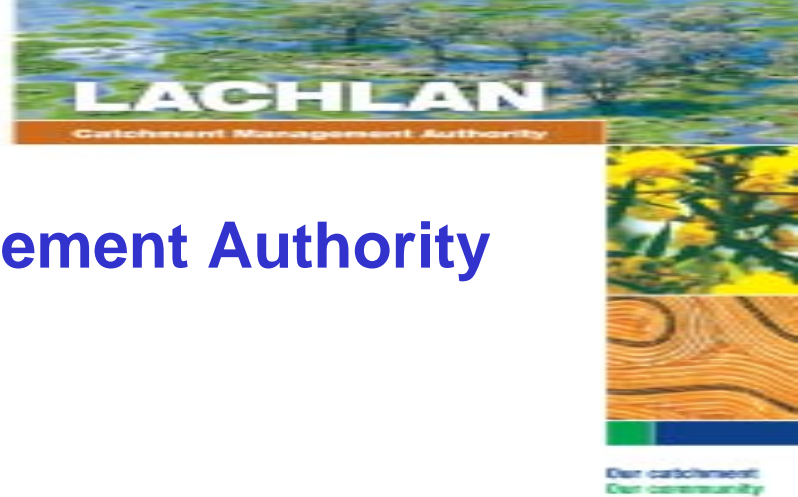




Lachlan Catchment Management Authority

Corporate Governance Model

- Responsible directly to the Minister for Natural Resources
- Heavily audited by Natural Resources Commission re achievements of Statewide Targets
- Heavily audited by Australian Government in terms of value for expenditure.
- Accountable to Lachlan Community



Lachlan Catchment Management Authority

ToR1

“Goals of the National Action Plan for for Salinity and Water Quality, NHT and NLP (specific to Lachlan Catchment Management Authority)”;

- **targets and standards for natural resource management**, particularly for salinity and water quality;
 - Achieved by the the successful development and implementation of planning and business systems that comply with the Natural Resources Commission (NRC) Standards and Targets.
 - Annual NRC Audit

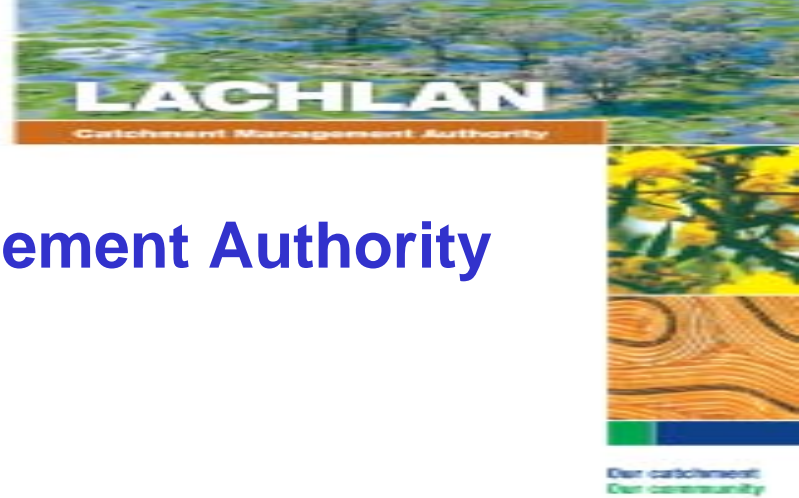


Lachlan Catchment Management Authority



Our catchment
Our community

- **integrated catchment / regional management plans** developed by the community and accredited jointly by the relevant Parties,.....
 - Catchment Blueprint jointly accredited in 2002.
 - Rolling three year investment strategies jointly accredited annually,
 - Catchment Action Plan due for submission in March 2006. Extensive consultation with community , local government, industry groups and aboriginal community.
- **capacity building for communities** and landholders to assist them to develop and implement integrated catchment / regional plans, together with the provision of technical and scientific support and engineering innovations
 - 85% of NAP budget to on grounds works
 - 15% to extension, education and technical support.
 - Majority of staff dedicated to landholders and community groups in implementation of Catchment Action Plan outcomes

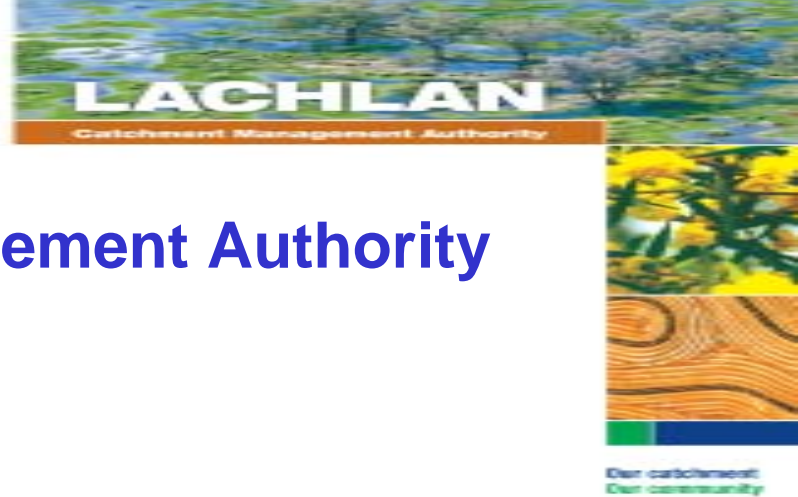


Lachlan Catchment Management Authority

ToR 2

“role of regional catchment management authorities play in the management of salinity”

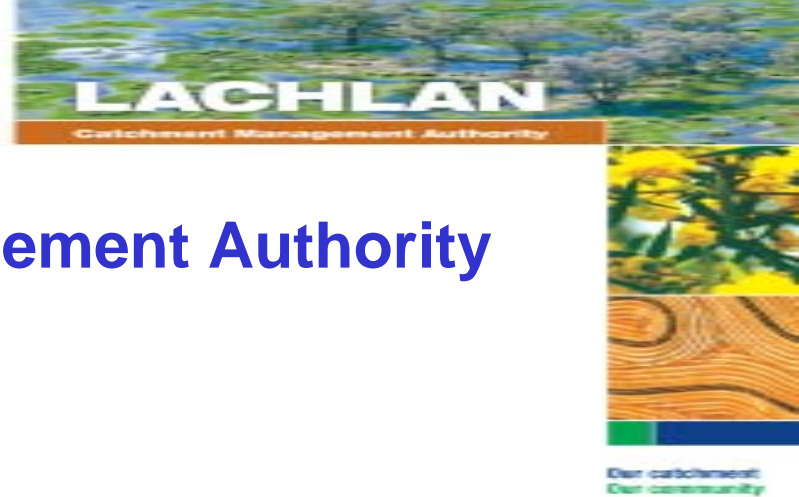
Lachlan CMA Business



Lachlan Catchment Management Authority

Catchment Statistics

- **Area:** The Lachlan catchment covers 84,700 km² , which is 12% of the State.
- **Population:** Population of more than 100,000 people
- **Production:** Lachlan catchment produces approx. 14% of NSW agricultural production
- **Geography:** The Lachlan River begins near Gunning and terminates in the Great Cumbung Swamp 1450km to the west.
- **Aboriginal representation:** The Lachlan catchment falls predominantly in the Wiradjuri Aboriginal tribal area, with 13 Local Aboriginal Land Councils and 8 Nations represented
- **Wyangala Dam:** The main dam regulating the Lachlan River is Wyangala Dam with a capacity of 1,220,000 megalitres and is located at the junction of the Lachlan and Abercrombie Rivers
- **River slope:** The last 10km of the Lachlan River drops only 10cm before entering the Cumbung Swamp
- **Effluent streams:** The Lachlan Catchment has a number of effluent steams along its lower section including Willandra, Merrowie and Middle Creeks. These effluent streams flow intermittently from the Lachlan River delivering water a further 160-180 kilometres west of the main channel.

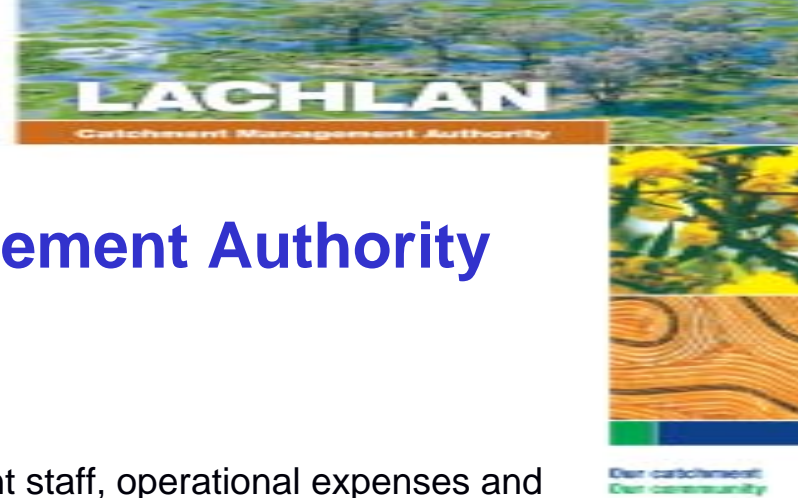


Lachlan Catchment Management Authority

Catchment Statistics

Landscape: The landscape of the Lachlan catchment varies markedly from east to west. The tablelands are characterised by fast to moderately flowing streams with sandy and pebbly beds, steep, densely vegetated ranges to extensively cleared grazing lands. The slopes are characterised by undulating to hilly cleared lands, graduating to flatter areas, with some pockets of remnant vegetation. The plains areas are characterised by flat topography and the occasional rocky range outcrop.

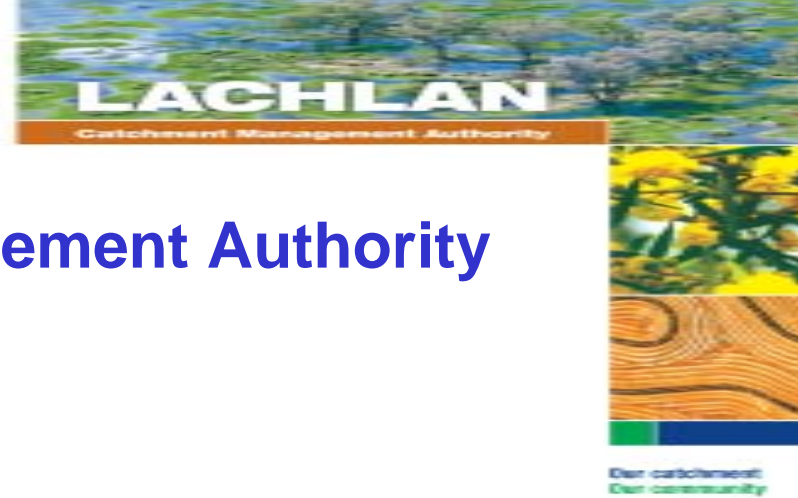
Soils: The soil types throughout the catchment vary from very robust, durable soils to very fragile, naturally acidic and sodic soils. This variability mean different management of the soils needs to occur depending on location



Lachlan Catchment Management Authority

Overview -

- Recurrent Budget of \$3.20 M for salaries for 24 permanent staff, operational expenses and accommodation etc.
- A decentralised structure (10 Service Centres)
- DNR provides CMAs with corporate support (HR, Payroll, IT etc) via a Service Level Agreement
- The Lachlan CMA has annual budget consisting of funding from the following sources:
 - Recurrent(salaries and operating)
 - National Action Plan for Water Quality and Salinity
 - National Heritage Trust
 - Land and Water Management Plan
 - State Sustainability Fund
- **The Lachlan CMA has, to date, leveraged approximately \$16 million investment from non government sources which is approximately 55% of on grounds work expenditure**



Lachlan Catchment Management Authority

- **CMA Chair**

- Rob Gledhill

- **CMA Board**

- Peter Laird

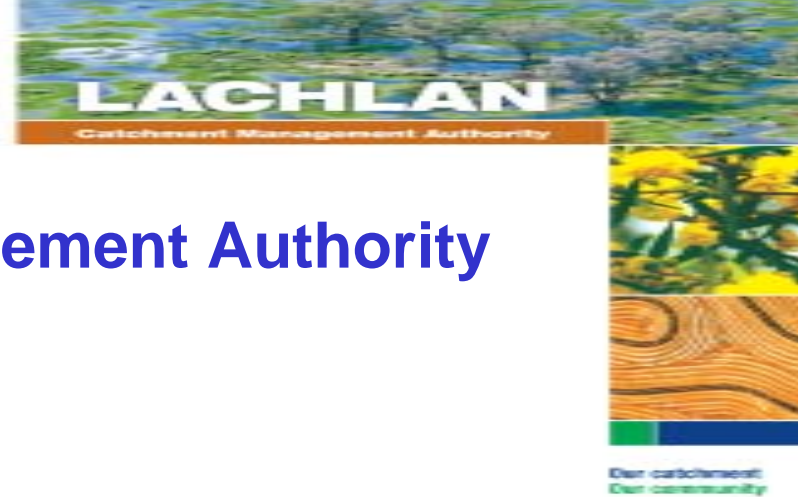
John Sutherland

- Mary Ewing

Dennis Moxey

- Mary Goodacre

David Marsh

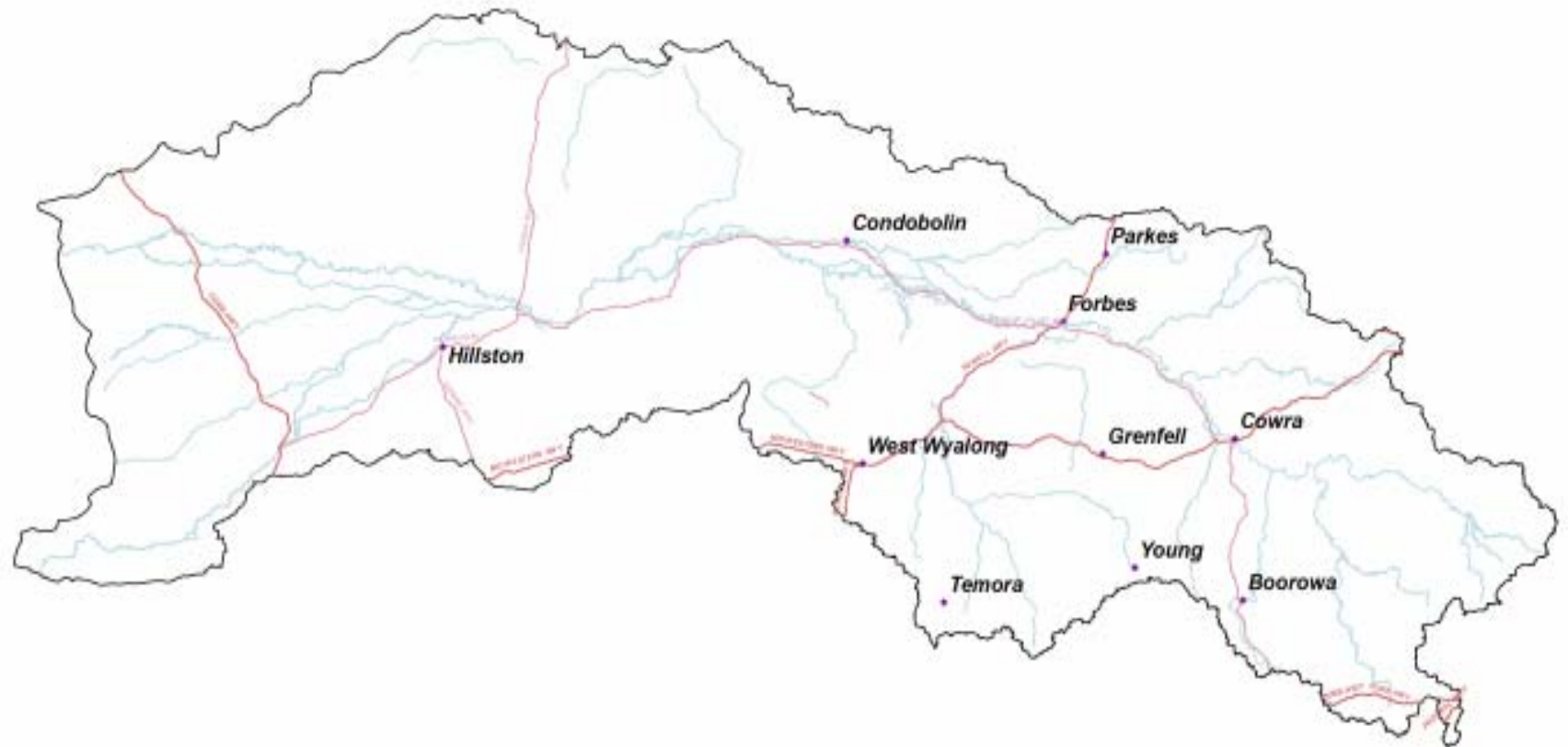


Lachlan Catchment Management Authority

Service Delivery Centres

- **10 service centres strategically located throughout the catchment. Forbes is the central office, Cowra is a major office while the rest are usually maintained by approx two staff members**
- Forbes - Central Office
- Cowra
- Boorowa/Crookwell
- Young
- Parkes
- Grenfell
- West Wyalong
- Temora
- Condobolin
- Hillston

Lachlan Catchment Management Authority Office Locations





Lachlan Catchment Management Authority

Budget - Source



Our catchment
Our community

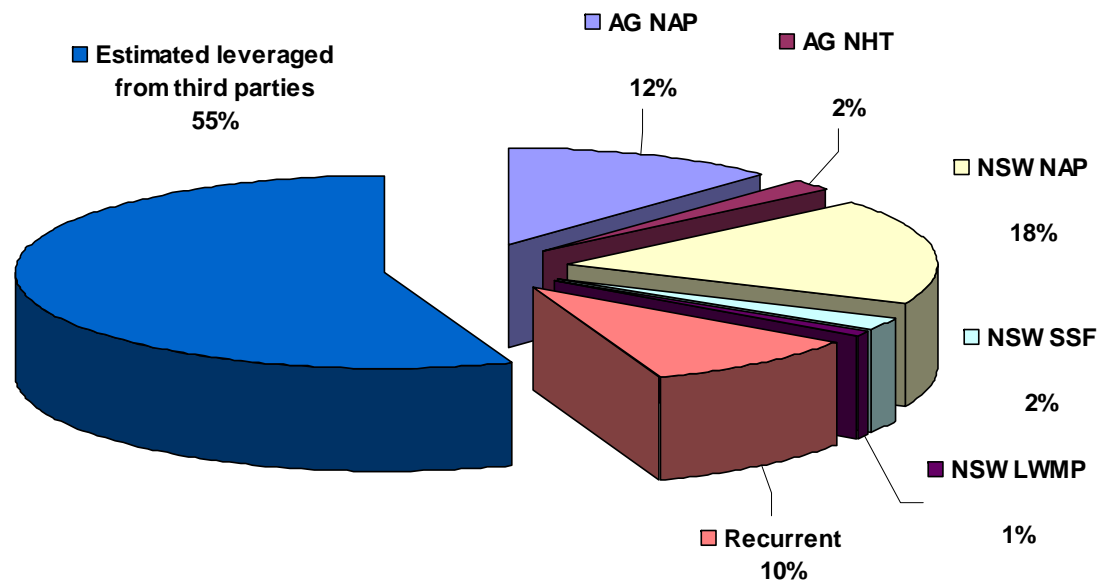
Source of funds	\$	Comments
Aust. Govt. National Action Plan	3,875,000	Total Aust Govt funds 4,535,000
Aust. Govt. National Heritage Trust	660,000	
NSW National Action Plan	5,744,000	Total NSW Govt funds 6,719,000
NSW State Sustainability Fund	700,000	
NSW Land and Water Management Plan	275,000	
Recurrent Salaries and Operating	3,200,000	
Estimated leverage from third parties	16,000,000	Includes individual landholder contributions plus inputs from various investors such as Lachlan Valley Water, State Water, Dept of Environment and Conservation, Greening Australia, Transgrid, Boorowa Shire Council, Lake Cowal Foundation, Barrick Australia Ltd, Bland Creek Catchment Committee.
Total	\$30,454,000	
The vast majority of CMA expenditure is for on ground works.		



Lachlan Catchment Management Authority

Budget - Source

Lachlan Catchment Management Authority
Program Source of Funds
2005/06





Lachlan Catchment Management Authority

Our Programs

Corporate, Policy and Strategic Services

- This program provides the community with the institutional and policy support that it requires. Items include our **decentralised office structure, the administration of our Board and staff and the administration of all our community programs** (specifically the Investment funding). It provides the business protocols and processes that ensures that the LCMA is managed in an efficient and accountable manner and that its resources are allocated to achieve maximum benefit.

Vegetation and Biodiversity

- This program improves the quality and extent of native vegetation, both woody and non woody, within the catchment

Water and Aquatic Ecosystems

- This program directly improves water quality and protects aquatic ecosystems.

Sustainable Landuse

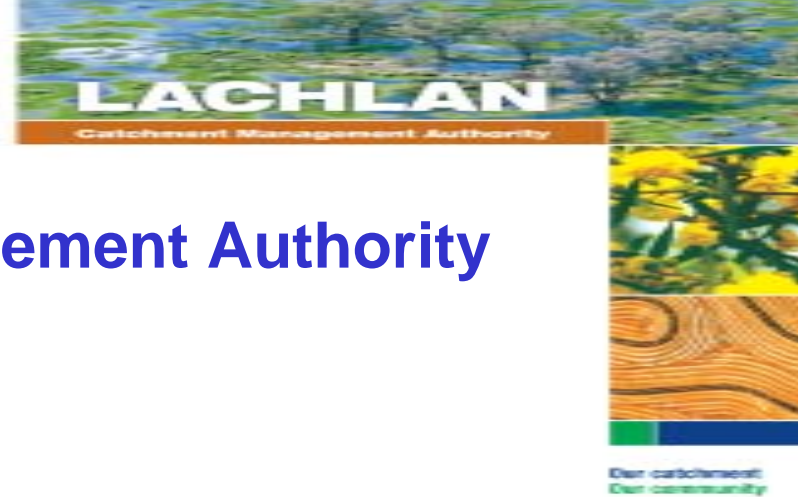
- This program describes the LCMA's initiatives to improve practice in the agricultural areas of **cropping, grazing and irrigation management**

Community

- This program covers the LCMA activities in regard to strengthening its relationship with its key stakeholder groups.



Our catchment
Our community



Lachlan Catchment Management Authority

Our Goals

Goal 1 - To provide leadership in Natural Resource Management

- This KRA includes work that the LCMA conducts to provide an appropriate regulatory and policy environment to encourage better natural resource management. It includes providing advice and direction to the community on relevant NRM policy and regulatory issues and equally providing advice to the various levels of government.

Goal 2 - To improve the management of Natural Resources within the Lachlan Catchment via the provision of information products, education, training and technical support

- This KRA that provides the community with the capacity, in terms of **motivation, information and skills**, to implement programs in conjunction with the LCMA.

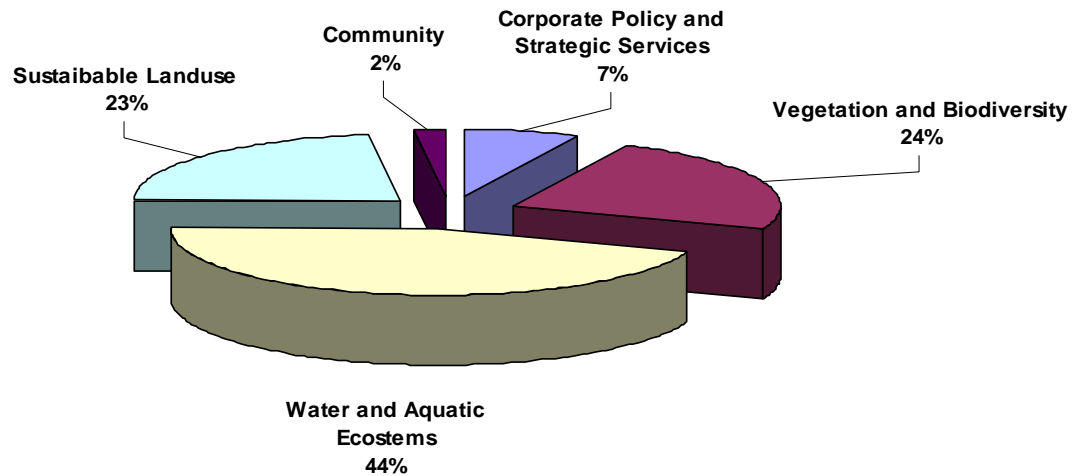
Goal 3 - To improve the management of Natural Resources within the Lachlan Catchment via the strategic allocation of investment

- This KRA that provides the community with the financial resources to implement agreed programs in conjunction with the LCMA.



Lachlan Catchment Management Authority

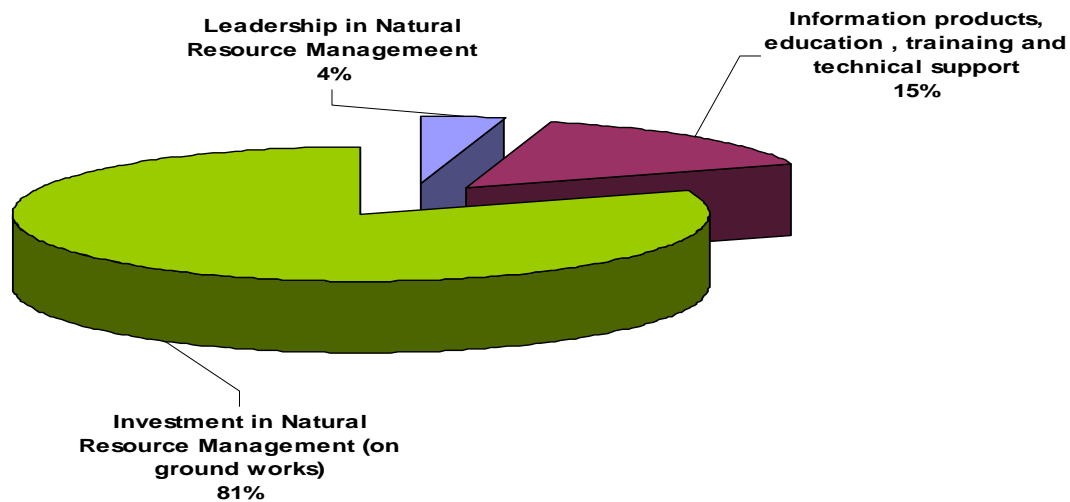
Budget - Expenditure by LCMA Program Area

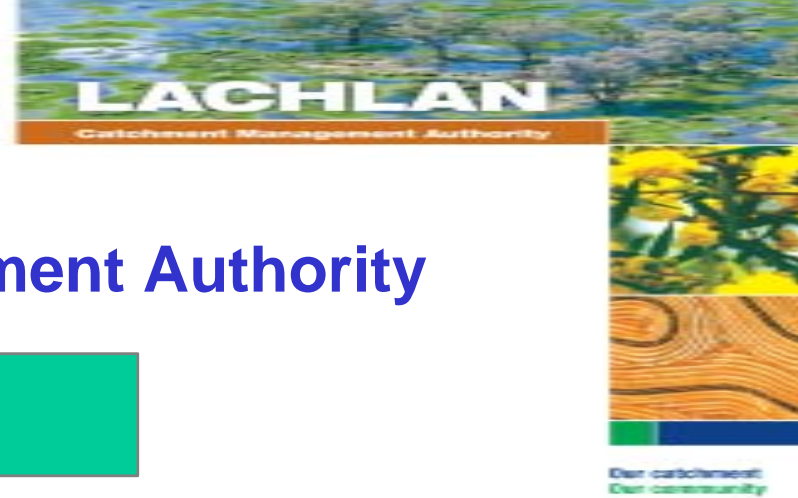




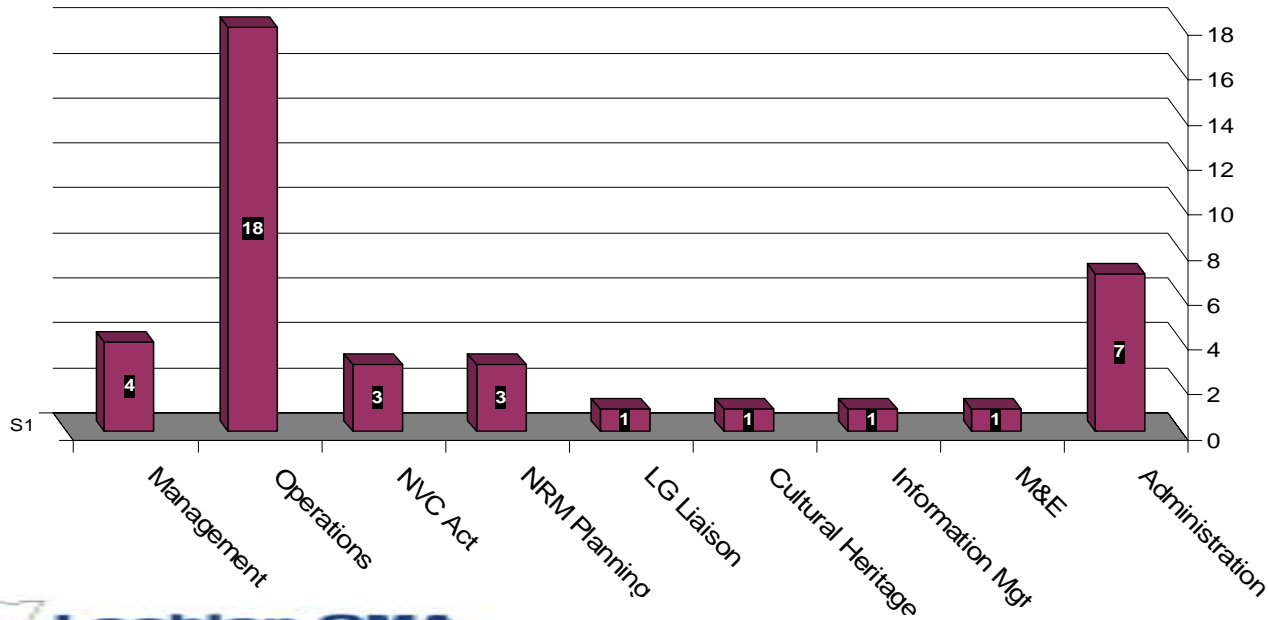
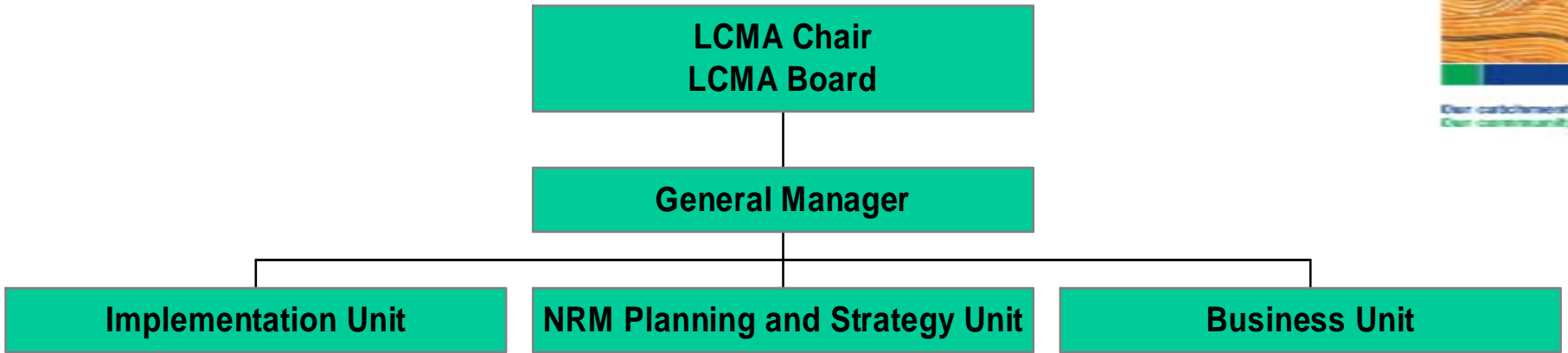
Lachlan Catchment Management Authority

Budget - Expenditure by LCMA Goal





Lachlan Catchment Management Authority

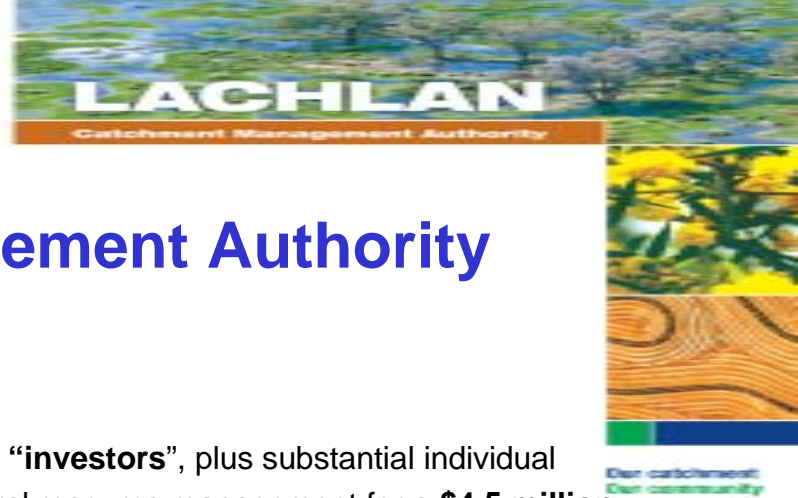


Lachlan Catchment Management Authority

Implementation Unit	Policy, Planning and Strategy Unit	Business Unit
Provide and/or facilitate training (capacity building) in improved natural resource management	Native Vegetation Conservation Act <ul style="list-style-type: none"> • PVPs for Investment, • PVPs for continuing use, • PVPs for consent to clear, 	Corporate Services
Work with community to develop both large scale works and individual projects	Lachlan Catchment Action Plan (LCAP) to provide <ul style="list-style-type: none"> • a vision for the catchment, • a strategic document for investment • Allocation of LCMA and broader government resources. • Integrate (NRM components) for planning 	Natural Resource Investment
Facilitate on ground works	Cultural Heritage.	Manage NAP/NHT expenditure and contracts
Extension and technical advice	Information Management	Explore new investment tools such as g Carbon credits, Resource auctions etc
Provide financial assistance for catchment activities	Monitoring and Evaluation	
Link research to onground action	Local Government Liaison	
	Water Resource Management	



Our catchment
Our community



Lachlan Catchment Management Authority

Achievements to date

- Establishment of **six “flagship” projects** featuring **8 different “investors”**, plus substantial individual landholder contributions. In 2005, **\$10 million** invested in natural resource management for a **\$4.5 million** LCMA contribution.
- Outstanding program delivery of on ground works with **800** projects with individual landholders which will achieve **7,700 ha** of remnant vegetation voluntary protected, **1,128 ha** of native revegetation, **404 kms** of protected riparian vegetation, **32,000 ha** of perennial pasture enhanced and managed to reduce salinity and soil erosion, **168 (on over 180,000 ha)** conventional farming machines converted to allow for less aggressive tillage practices and **53** properties enhanced with more efficient water use systems.
- **Catchment Action Plan, Investment Strategy, Annual Implementation Plan** submitted and **approved** (where applicable) within required timeframes and with appropriate community engagement.
- **Stakeholder engagement** evidenced by establishment of regular forums with Aboriginal Community, Local Government and Landcare as well as ongoing programs with relevant Industry groups such as Lachlan Valley Water
- **Marketing** as evidenced by fortnightly segment on ABC radio, regular print media releases, CMA “Partners in Production” forum, Introductory Print media feature.
- Implementation of **PVPs. 28** current landholder applications
- Corporate Services . Specifically development of Business Systems, budget development budget reporting, program reporting, Annual Report etc)

Lachlan Catchment Management Authority Flagship Project Areas

Lake Brewster
 * 3 year project
 * Nationally listed wetland area
 * Main aim is to improve water quality through the construction of a 800 ha functioning artificial wetland
 * Major partners - State Water, Lachlan Valley Water
 * LCMA contribution = \$2,500,000
 * Total project value = \$5,000,000

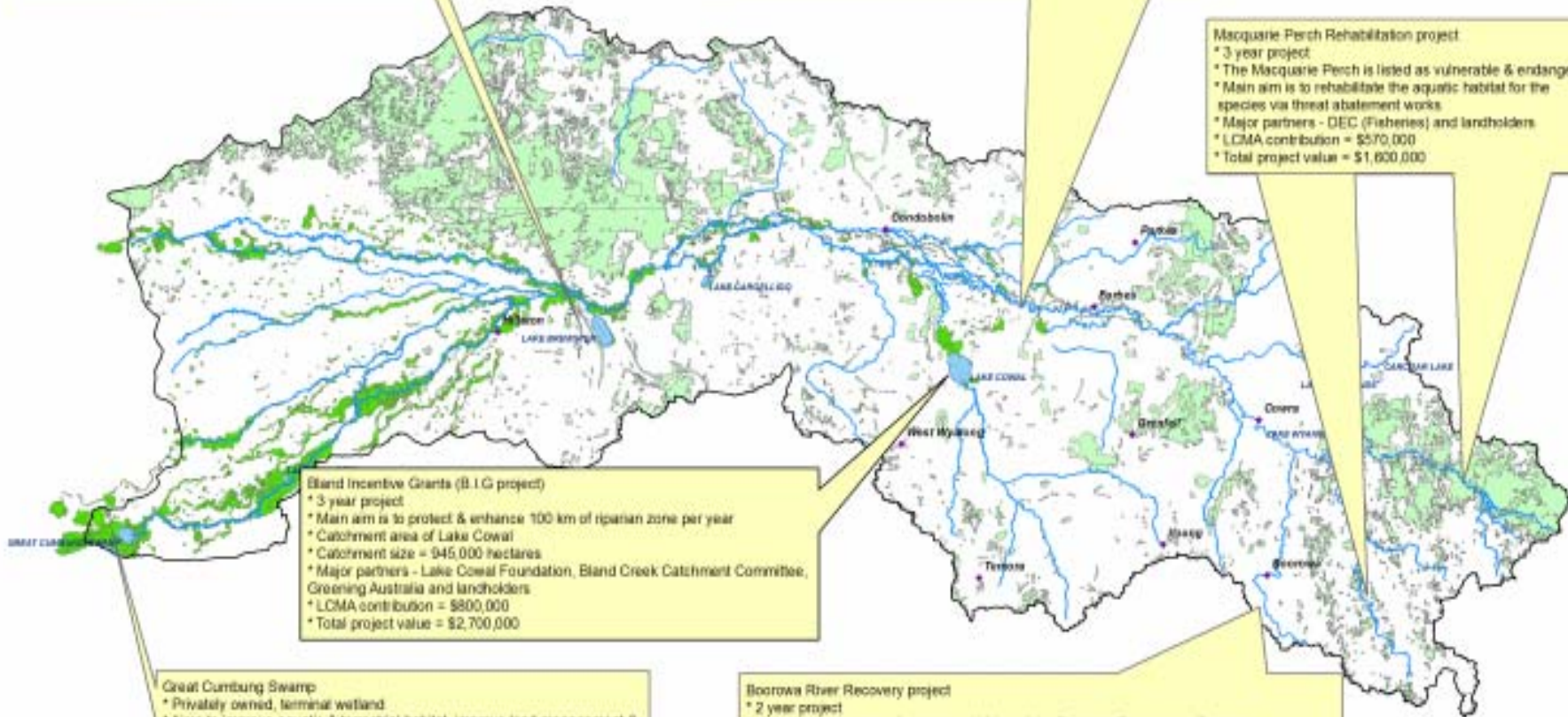
Jemalong Land & Water Management Plan
 * 10 year plan as part of their corporate irrigation licence
 * Main aims are to improve water quality & irrigation practices within the district
 * LCMA administers \$500,000 of funding per year
 * The plan is being implemented by Jemalong Irrigation Limited

Macquarie Perch Rehabilitation project
 * 3 year project
 * The Macquarie Perch is listed as vulnerable & endangered
 * Main aim is to rehabilitate the aquatic habitat for the species via threat abatement works
 * Major partners - DEC (Fisheries) and landholders
 * LCMA contribution = \$570,000
 * Total project value = \$1,600,000

Bland Incentive Grants (B.I.G) project
 * 3 year project
 * Main aim is to protect & enhance 100 km of riparian zone per year
 * Catchment area of Lake Cowal
 * Catchment size = 945,000 hectares
 * Major partners - Lake Cowal Foundation, Bland Creek Catchment Committee, Greening Australia and landholders
 * LCMA contribution = \$800,000
 * Total project value = \$2,700,000

Great Cumbung Swamp
 * Privately owned, terminal wetland
 * Aims to improve aquatic & terrestrial habitat, improve land management & improve the hydraulic distribution of the water flow
 * Major partners - Teynam Pastoral Co & landholders
 * LCMA contribution = \$415,000 (Strategic Reserve funding)
 * Total project value = \$1,100,000

Boorowa River Recovery project
 * 2 year project
 * Main aim is to protect & enhance 100 km of the Boorowa River above Boorowa
 * The Boorowa River is the main contributor of sediments & nutrients into the Lachlan River
 * Major partners - Greening Australia (Rivers to Recovery project), Transgrid and landholders
 * LCMA contribution = \$600,000
 * Total project value = \$1,800,000






Lachlan Catchment Management Authority Land Management Achievement Report Round Two Incentive Program June 2005 - January 2006




Round 2 Funding
 Priority Subcatchments: Upper Lachlan / Lachlan Slopes
 * Number of Projects = 95
 * \$963,000 LCMA Contribution
 * Total value of projects - \$1,900,000

Yearly Targets
 * 1800 ha perennial pastures established
 * 3105 ha of native vegetation managed to reduce salinity impacts
 * Revegetation of 500 ha of saline land
 * 8000 ha managed under desirable grazing systems
 * 780 ha of native vegetation
 * 280 ha of saline sites reclaimed

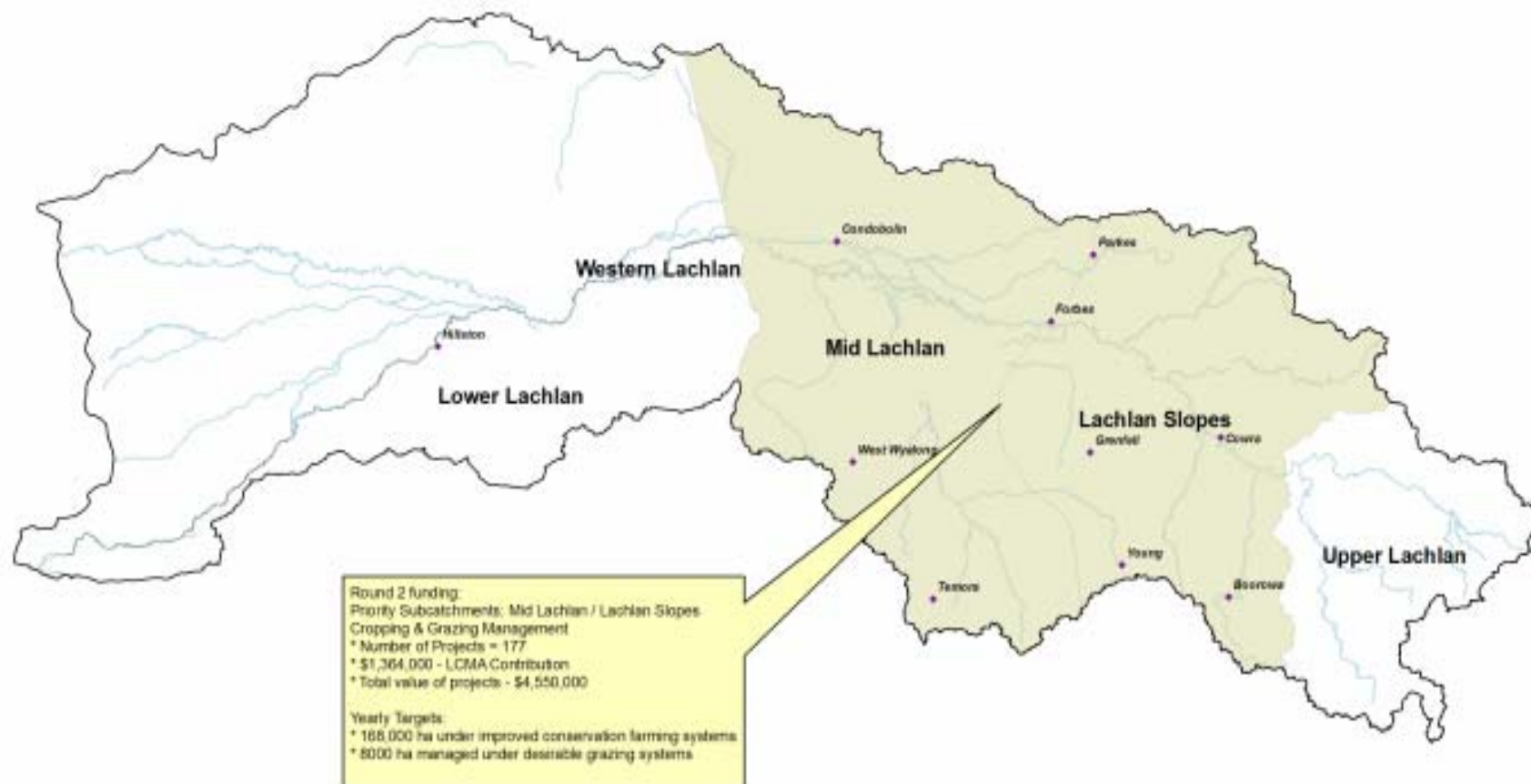
Legend

-  Main River System
-  Subregion Boundary
-  Mapped Saline Sites



Author: B. Audet
 Date: 19/01/2006
 Source: 

Lachlan Catchment Management Authority Land Management Achievement Report Round Two Incentive Program June 2005 - January 2006



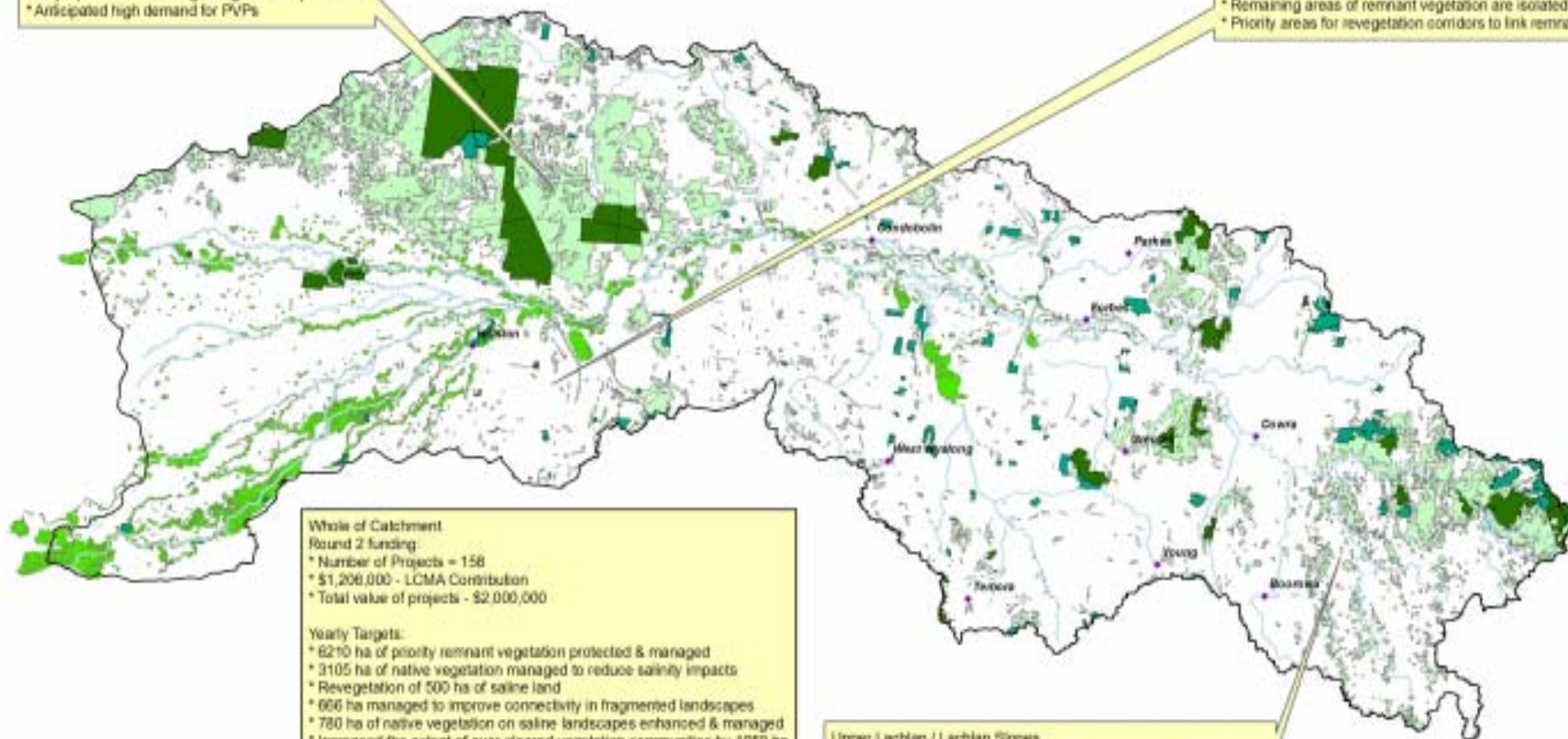
Lachlan Catchment Management Authority Vegetation Management Achievement Report Round Two Incentive Program June 2005 - January 2006

Western Lachlan

- * Large areas of remnant native vegetation
- * Major pressure - clearing for agricultural production
- * Anticipated high demand for PVPs

Mid Lachlan / Lower Lachlan

- * Significant clearing for agriculture has occurred
- * Remaining areas of remnant vegetation are isolated
- * Priority areas for revegetation corridors to link remnants



**Whole of Catchment
Round 2 funding:**

- * Number of Projects - 158
- * \$1,208,000 - LCMA Contribution
- * Total value of projects - \$2,000,000

Yearly Targets:

- * 6210 ha of priority remnant vegetation protected & managed
- * 3105 ha of native vegetation managed to reduce salinity impacts
- * Revegetation of 500 ha of saline land
- * 666 ha managed to improve connectivity in fragmented landscapes
- * 780 ha of native vegetation on saline landscapes enhanced & managed
- * Increased the extent of over-cleared vegetation communities by 1950 ha

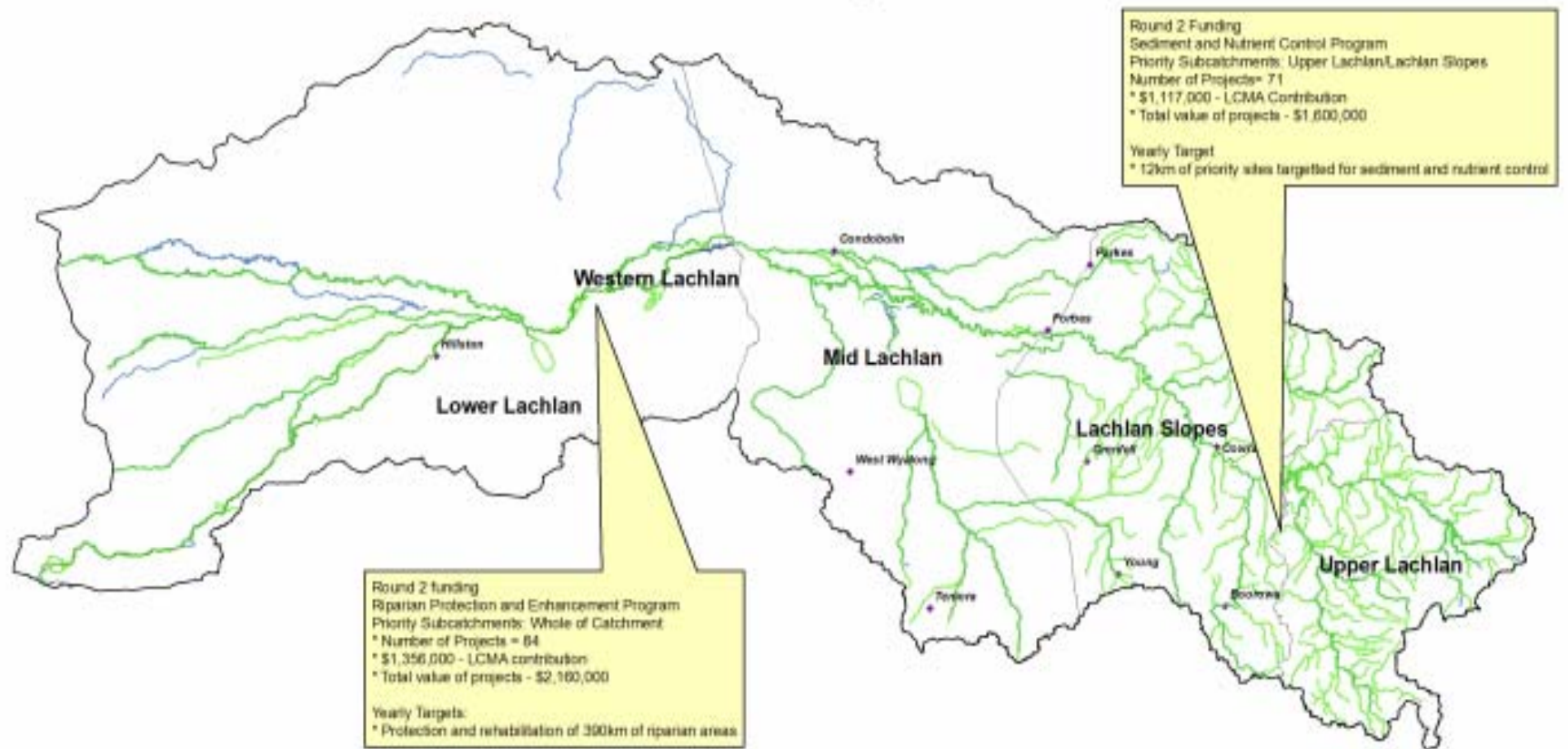
Upper Lachlan / Lachlan Slopes

- * Significant clearing of recharge zones has occurred
- * High salinity hazard
- * Priority areas for salinity interception plantings to reduce recharge



Legend

- Stateforests
- National Parks
- Wetland Vegetation
- General Vegetation

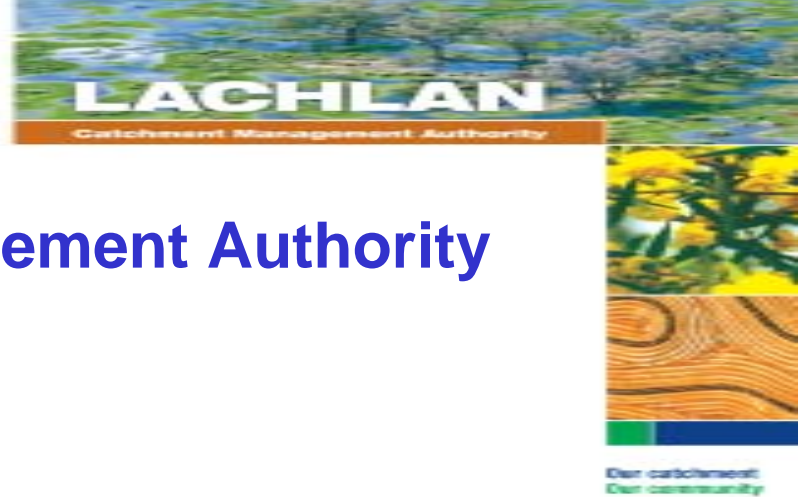
Lachlan Catchment Management Authority Riparian Vegetation Management Achievement Report Round Two Incentive Program June 2005 - January 2006



Legend

-  Riparian Vegetation (Massey Report)
-  Main River System





Lachlan Catchment Management Authority

Future Strategies/Challenges

- Continue to improve on the solid base of the existing investment program;
- Concentrate on large-scale on ground projects;
- Develop a Catchment Information System to provide integrated natural resource management information to the community, local government, industry groups, government and other relevant stakeholders.
- Expand Investment program into new areas, eg water use efficiencies etc;
- Develop Environmental Water Trust;
- Continue to develop Business Systems, performance reporting and monitoring and evaluation systems;
- Explore opportunities in market based investments;
- “bed down” the Native Vegetation Management Act;
- Continue to “grow” as an organisation by cementing the CMAs place as a one “stop shop” for improved natural resource management in the community;



Lachlan Catchment Management Authority

ToR 3

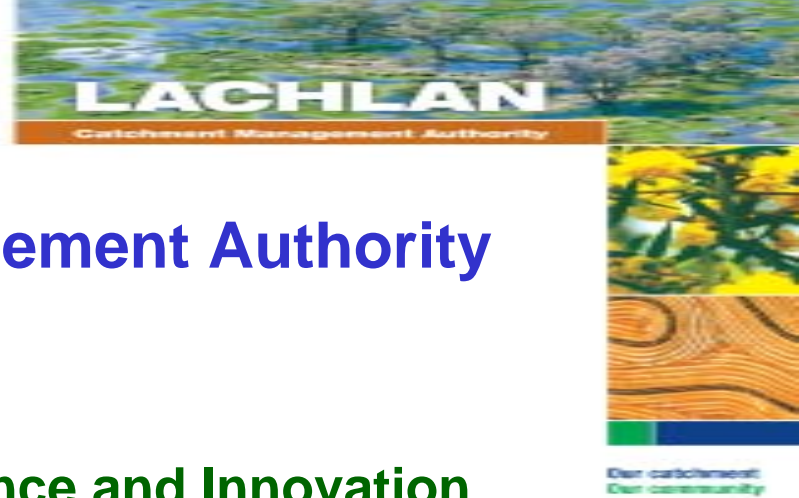
“action taken as a result of the Science and Innovation Committee inquiry”.

28 Actions/Recommendations can be summarised into 6 main area

- Integration of salinity R&D into regional planning and investment.
- Prioritisation of R&D
- Extension of R&D Outcomes
- Provision of extension services
 - security of employment
 - career opportunities
 - private sector extension
- Public sector investment in salinity R&D.
- Information management



Our catchment
Our community

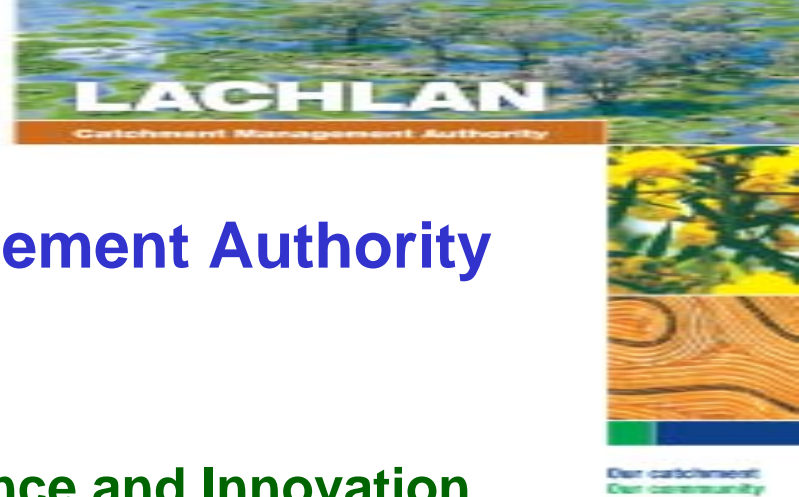


Lachlan Catchment Management Authority

ToR 3

“action taken as a result of the Science and Innovation Committee inquiry”.

- 28 Actions/Recommendations can be summarised into 6 main areas.
- Lachlan CMA response to each area (based on our experiences)
 - Integration of salinity R&D into regional planning and investment.
 - Reasonably good. Reasonable strong alliances with State and Australian Government Agencies. Recently entering into partnerships with Industry R&D organisations, Possibility to improve partnerships with other R&B Institutions.
 - Requirement to comply with Natural Resource Commission Standards and Targets.



Lachlan Catchment Management Authority

ToR 3

“action taken as a result of the Science and Innovation Committee inquiry”.

28 Actions/Recommendations can be summarised into 6 main area

- Prioritisation of R&D
 - limited at this stage. Possibility of improvement with the development of Catchment Action Plans which will priorities actions and investment.
- Extension of R&D Outcomes
 - very limited. Room for significant improvement . Recommendation of regional conferences to extend, and engage regional communities in NRM R&D has not occurred to our knowledge.



Lachlan Catchment Management Authority

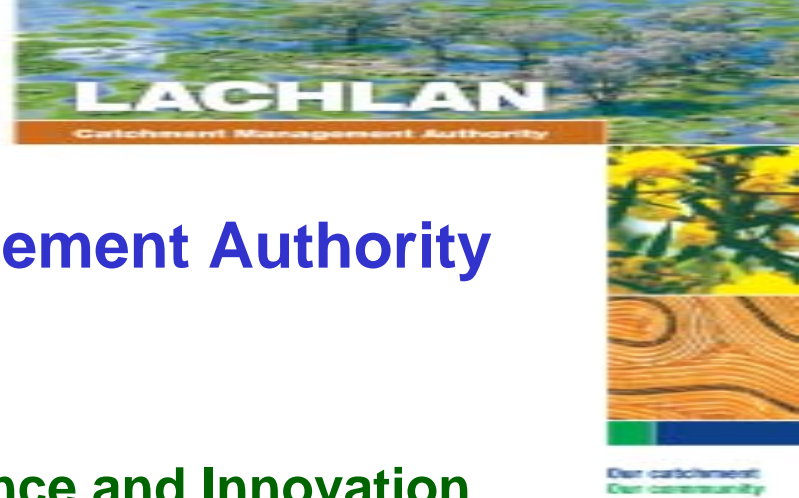
ToR 3

“action taken as a result of the Science and Innovation Committee inquiry”.

- Provision of extension services (security of employment, career opportunities and private sector extension)
 - Security of employment for externally funded staff is still an issues and an impediment to employment in regional centres.
 - Reasonable engagement of private sector extension in salinity through industry agronomists training and cooperation.



Our catchment
Our community



Lachlan Catchment Management Authority

ToR 3

“action taken as a result of the Science and Innovation Committee inquiry”.

28 Actions/Recommendations can be summarised into 5 main area

- Public sector investment in salinity R&D.
 - not able to comment
- Information management
 - Seen as a major opportunity for CMAs to provide one stop shop front of NRM advice to regional communities
 - Development of Catchment Information Management System seem as major initiative for Lachlan CMA in 2006.