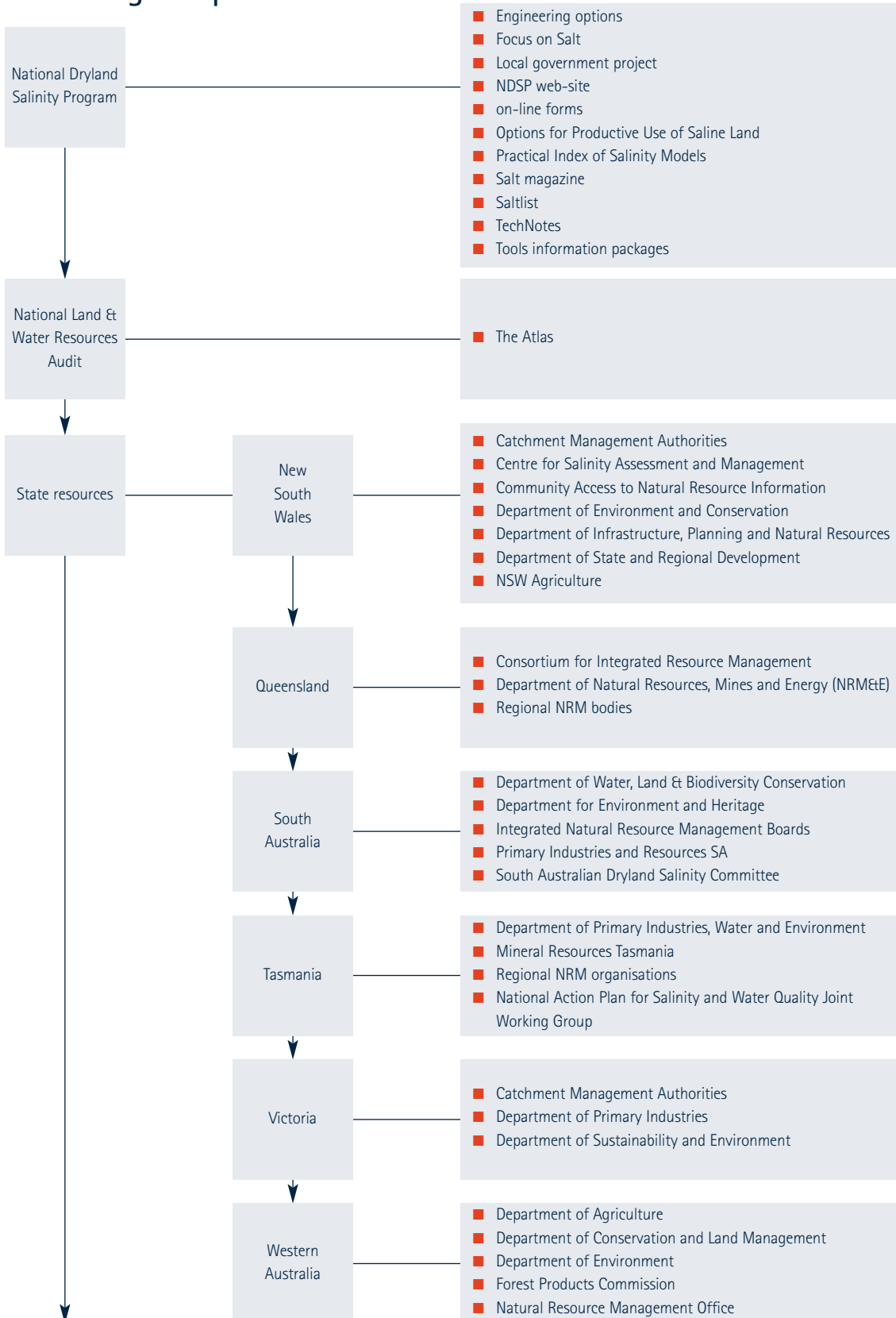


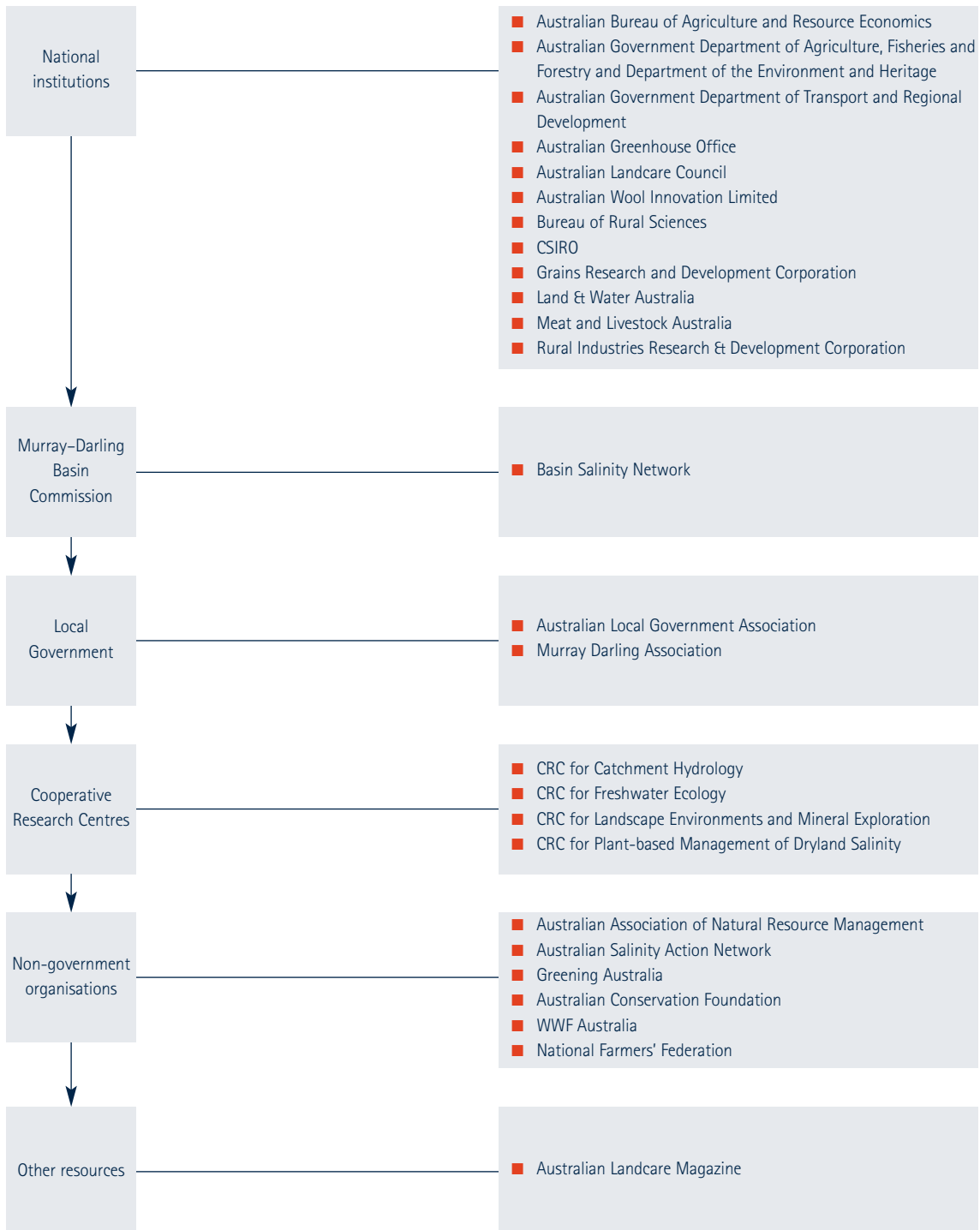
Roadmap

Where to get help?



Roadmap *continued*

Where to get help?



Where to get help

This chapter provides some direction on where to get help when it is required. It describes networks that you can join or tap into, databases, maps, web-sites, publications, contact lists and other useful information. Details are listed in alphabetical order within sections.

NATIONAL DRYLAND SALINITY PROGRAM

All NDSP information and resources are available on www.ndsp.gov.au.

Engineering options

A CD-ROM from the South Australian Dryland Salinity Committee's 2003 forum *To Drain or not to Drain* features:

- abstracts and PowerPoint presentations from the forum
- the 90 Mb NDSP *Engineering Options* decision support tool
- six fact sheets from that NDSP project
- abstracts and PowerPoint presentations from two papers delivered to the NDSP Technical Forum (*Evaluating the Impacts of Deep Drains on Crop Productivity and Environment and Engineering Options for Dryland Salinity Management*)
- a draft *Review of Engineering Options for Salinity Management* by the WA Water Resources Commission.

It is available from CanPrint Communications (freecall 1800 776 616).

Focus on Salt

Focus on Salt newsletter is produced three to four times a year for technical advisors, planners and researchers. The stories on projects and issues always have a contact listed, so you can follow up if needing additional information. Back issues may also be relevant, as many of the projects discussed operate over several years.

Local Government project

The *Local Government* project produced a CD-ROM for councils containing an information kit on dryland salinity and key contacts. Additional local government contacts are available on the CD-ROM¹ produced by the Murray Darling Association from the conference *National Local Government Salinity Summit – Community-based solutions*, held in Echuca-Moama in 2001.

NDSP web-site www.ndsp.gov.au

If you're looking for anything on dryland salinity management in Australia, then the NDSP web-site is a good place to start. The web-site has been updated to provide the best possible service to users with easy access to *Key Messages*, *Catchment and Property* level information and *Networking* resources.

On-line forum

The NDSP on-line forum, accessed from the web-site, provides an opportunity to explore salinity issues with colleagues and peers. Subscribers can initiate topics or participate in existing discussions, can be alerted to any responses to their post and can establish closed forums that are accessible only to nominated subscribers.

Options for Productive Use of Saline Land (OPUS)

The NDSP *OPUS* project investigated about 140 different innovations and enterprises built around the utilisation of saline land or water, and created a database containing a brief synopsis of each innovation. The database includes key contacts for further information and is easily accessible from the NDSP web-site.

Practical Index of Salinity Models (PRISM)

PRISM is a comprehensive collection of natural resource and salinity management modelling tools and frameworks, now available on CD-ROM as a single electronic resource. It is available from CanPrint Communications (freecall 1800 776 616).

Salt magazine

Salt magazine provides case study examples of dryland salinity management problems and solutions from across Australia. While it primarily targets farmers, many of the stories have a broader catchment dimension. Each story has a contact so you can follow up on further information. Recent editions feature short by-lines by researchers who bring the scientist's perspective to issues on the farm.

Saltlist

Saltlist is an e-mail-based network where about 600 subscribers share information about salinity research and management. You might like to join if you are a researcher, extension provider (government or private), in local government, a land manager, environmentalist, project officer, landcare group, policy advisor or educator.

The minimum level of participation is to read your e-mail from time to time. The facility has thrived because many people use it to:

- Promote events (field days, seminars, conferences, etc.)
- Alert others to new research, developments or discoveries
- Raise questions
- Contribute answers or references to these questions
- Engage in debate.

Saltlist is a moderated list, which means someone controls who is on it and the messages they can send, protecting participants from viruses, e-mail avalanches, irrelevant and unwanted messages. Subscribe by e-mailing majordomo@list.senet.com.au with the message <<subscribe saltlist>>.

TechNotes

NDSP *TechNotes* are fact sheets that represent a valuable summary of each project undertaken through the NDSP. They can be downloaded directly from the web-page.

TECH NOTE 001 – Structural adjustment in agriculture and capacity to implement catchment plans

Project Team: Read Sturgess and Associates; Neil Barr, Victorian Department of Sustainability & Environment

TECH NOTE 002 – Predicting the combined environmental impact of catchment management regimes on dryland salinity

Project Manager: Lu Zhang, CSIRO

TECH NOTE 003 – Appraisal of infrastructure assets under threat

Project Team: Mike Young, CSIRO/Dames and Moore with RECC/PPK

TECH NOTE 004 – Technical assessment of desalination technologies in Australia

Project Manager: Geoff Moyle, URS Australia

TECH NOTE 005 – Evaluating the efficacy of engineering options

Project Manager: Chris McAuley and Martin Robinson, Sinclair Knight Merz

TECH NOTE 006 – Risk and restoration potential for remnant vegetation in salinising landscapes

Project Manager: Richard Hobbs, Murdoch University

TECH NOTE 007 – Biogeochemical and physical processes in saline soils and potential reversibility

Project Manager: Rob Fitzpatrick, CSIRO

TECH NOTE 008 – Understanding the recruitment biology of vegetation communities on saline soils

Project Manager: Michelle Carey, Murdoch University

TECH NOTE 009 – Determining the costs of dryland salinity in the Murray–Darling Basin

Project Team: Dr Suzanne Wilson, Wilson Land Management Services and Richard Ivey, Ivey ATP

TECH NOTE 010 – Generation and delivery of salt and water to streams on a catchment scale

Project Manager: Hamish Cresswell, CSIRO

TECH NOTES 011 – Evaluating the impacts of deep drains on crop productivity and the environment

Project Manager: Tom Hatton, CSIRO

TECH NOTE 012 – Catchment classification for salinity management

Project Team Leader: Glen Walker, CSIRO

TECH NOTES 013 – Developing a national evaluation framework for dryland salinity management

Project Manager: Jane Coram, Bureau of Rural Sciences

TECH NOTES 014 – Delineation of potential salinity hazard in Queensland cropping lands

Project Manager: Ian Gordon, Qld Dept of Natural Resources

TECH NOTES 015 – Water table change in Western Slopes cropping areas of NSW

Project Manager: Richard Cresswell, Bureau of Rural Sciences

TECH NOTES 016 – Enhancing institutional support for managing dryland salinity

Project Manager: Greg Hayes, Virtual Consulting Group

TECH NOTE 017 – Assessment of a system to predict the loss of aquatic biodiversity from changes in salinity

Project Manager: Ben Kefford, RMIT University

TECH NOTE 018 – Farming systems with lower recharge for Western Australia

Project Manager: Jon Warren, Western Australian Department of Agriculture

TECH NOTE 019 – Million Hectares for the Future

Project Team: Jon Warren, Western Australian Department of Agriculture; Jay Cummins, Primary Industries and Resources South Australia

TECH NOTE 020 – Options for the Productive Use of Salinity (OPUS)

Project Team: Stephanie Bolt, Parsons Brinckerhoff (formerly PPK)

TECH NOTE 021 – Simple device for monitoring deep drainage

Project Manager: Paul Hutchinson, CSIRO

TECH NOTE 022 – Tools to Investigate and Plan for Improved Management of Dryland Salinity in the Murray–Darling Basin

Project Team: Darrel Brewin, Darrel Brewin and Associates; Stephanie Bolt, Parsons Brinckerhoff (formerly PPK) and Phil Dyson, Phil Dyson and Associates

TECH NOTE 23 – Enhancing the capacity of Local Government to contribute to the management of dryland salinity

Project Manager: Trevor Budge, Research, Planning and Design Group

TECH NOTE 24 – FLOWTUBE rapid catchment appraisal model

Project Manager: Christopher Clarke, Murdoch University

Tools information packages

The *Tools information packages* provide key contacts for dryland salinity management. The *Salinity Information Package* contains over 40 information sheets, which provide a step-by-step framework to understand the complex relationships between salinity, socio-economics, land systems and management options. *Regional Information Packages* have been structured on the *Groundwater Flow Systems Framework* to provide regional stakeholders with access to the best scientific information about their groundwater flow systems.

NATIONAL LAND & WATER RESOURCES AUDIT

The Atlas

The Australian Government Department of the Environment and Heritage (www.deh.gov.au/atlas) manages the *Australian Natural Resources Atlas* (the Atlas) on behalf of the National Land and Water Resources Audit (www.nlwra.gov.au), an internet-based 'one-stop-shop' for information on Australia's natural resources. The Atlas provides summary data and information at National, State and regional scales and the full *Australian Dryland Salinity Assessment 2000* report.

Audit Phase II (2002–07) will build on existing data, maps and information. Its Strategic Plan2 is available via the web-site.

STATE RESOURCES

New South Wales

Catchment Management Authorities (CMA)

The catchment blueprints are advisory "whole-of-government" plans for integrated catchment management that will guide the long term management of natural resources in NSW for the next 10 years. Prepared by catchment management boards, the Hunter Catchment Management Trust, the Coffs River and Wollondilly Catchment Management Committees and the Hawkesbury Nepean Local Government Advisory Group, the blueprints set overarching priorities for investment in natural resource management, consistent with NSW and Commonwealth Government policy.

Border Rivers/Gwydir	(02) 6764 5906; Adrian.Harte@dipnr.nsw.gov.au
Central West	(02) 6393 4322; Kate.Lorimer-Ward@dipnr.nsw.gov.au
Hawkesbury-Nepean	(02) 4828 6702; Bernie.Bugden@dipnr.nsw.gov.au
Hunter/Central Rivers	(02) 4930 1030; g.evans@hcmt.org.au
Lachlan	(02) 6341 9311; Peter.Sparkes@dipnr.nsw.gov.au
Lower Murray Darling	(03) 5881 9205; Kaye.Dalton@dipnr.nsw.gov.au
Murray	(03) 5881 9205; Kaye.Dalton@dipnr.nsw.gov.au
Murrumbidgee	(02) 6923 0439; John.Searson@dipnr.nsw.gov.au
Namoi	(02) 6764 5915; Tony.Page@dipnr.nsw.gov.au
Northern Rivers	(02) 6640 2183; Michael.Pitt@dipnr.nsw.gov.au
Southern Rivers	(02) 4224 9606; Noel.Kesby@dipnr.nsw.gov.au
Sydney Metro	(02) 9895 7536; Peter.Dixon@dipnr.nsw.gov.au
Western	(02) 6883 3046; Daryl.Green@dipnr.nsw.gov.au

Centre for Salinity Assessment and Management (CSAM)

CSAM (www.agric.usyd.edu.au/csam/index.html) has been established within the University of Sydney, conducting research into generic aspects of salinity such as mapping and assessment techniques, as well as focusing on aspects of dryland, irrigation and urban salinity. The education program aims to teach the causes of soil and water salinity and options for management and will provide education resources for both secondary and tertiary education sectors.

Community Access to Natural Resource Information (CANRI)

The CANRI web-site, www.canri.nsw.gov.au, combines environmental information from NSW Government agencies and other organisations tailored for community-based local and regional environmental management. It is the first program of its kind to offer integrated access to maps and other data held at various internet sites by a diverse group of natural resource agencies and other stakeholders.

Department of Environment and Conservation

The *National Parks and Wildlife Service* (NPWS) (tel: (02) 9585 6444; www.nationalparks.nsw.gov.au) is part of the *Department of Environment and Conservation* – the main government conservation agency in New South Wales. NPWS is conducting projects on Aboriginal heritage and salinity and the impacts of salinity on biodiversity.

Department of Infrastructure, Planning and Natural Resources (DIPNR)

DIPNR (tel: (02) 9762 8044; www.dipnr.nsw.gov.au) coordinates land use and transport planning, infrastructure development and natural resource management. The DIPNR web-site contains information on types of salinity, as well as the causes, impacts and management options in both rural and urban areas. It contains information on the NSW Salinity Strategy, with a number of downloadable research reports and an extensive reference list.

Department of State and Regional Development

DSRD (tel: (02) 9228 3111; www.business.nsw.gov.au) has developed a Salinity Business Development Program to encourage and assist businesses to take advantage of opportunities arising from productive uses of salt-affected land and water. Information about the program and potential business opportunities arising from salinity in fields such as agriculture, forestry, aquaculture and salt harvesting is available on the web-site. The report *A Solution to Urban Salinity* is on the web-site – search for salinity.

NSW Agriculture

NSW Agriculture (tel: (02) 6391 3100; www.agric.nsw.gov.au/reader/salinity) is involved in agricultural research, advisory services, education and regulation and provides practical farm production solutions for profitable agriculture and a better environment. The web-site contains information on some of the measures that have been implemented to manage both dryland and irrigation salinity.

A Strategic Framework for Salinity Research and Development in NSW, a *Register of Existing Salinity R&D Projects* and *NSW Salinity R&D Investment Portfolio* are all available from the web-site.

Queensland

Consortium for Integrated Resource Management (CIRM)

CIRM (tel: (07) 3896 9471; www.cirm.org.au) aims to facilitate collaborative research across and beyond its consortium of seven organisations – three government departments (DPI&F, EPA and NRM&E), three universities (Griffith, University of Queensland and Central Queensland University) and CSIRO.

Department of Natural Resources, Mines and Energy (NRM&E)

NRM&E (tel: (07) 3896 9645; www.nrm.qld.gov.au) plays a critical role in the stewardship of Queensland's natural resources. The department manages and allocates the State's land, water, mineral and petroleum resources, and manages native vegetation and the control of pest plants and animals. The web-site www.nrm.qld.gov.au/salinity has salinity fact sheets, hazard maps and information about the National Action Plan for Salinity and Water Quality.

Regional NRM Bodies

Fifteen Community-based NRM bodies have been established in Queensland. Each NRM group is currently developing a natural resource management plan that aims to achieve the best and most effective NRM results for their region. These plans and associated investment strategies will be loaded on to a Queensland Whole-of-Government web site to be released in April.

The NRM bodies are:

Burdekin Dry Tropics Board	(07) 4724 3544; kim@burdekindrytropics.org.au
Burnett-Mary Regional Group	(07) 4132 8324; deborah.scott@burnettmarynrm.org.au
Cape York	(07) 4046 6767; bruce.rampton@env.qld.gov.au
Condamine Alliance	(07) 4620 0101; kathryngalea@netspace.net.au
Desert Channels	(07) 4658 0600; leanne.kohler@nrm.qld.gov.au
FNQ NRM Ltd	(07) 4061 6477; nrmboard@znet.net.au
Fitzroy Basin Association	(07) 4921 2843; s.m.Christensen@cqu.edu.au
Mackay Whitsunday	(07) 4957 9526; julia@mwnrm.org.au
Northern Gulf	(07) 4031 3432; mitchell@cypda.com.au
Old Murray Darling Committee	(07) 4637 6276; g.penton@landcare.org.au
SEQ Inc	(07) 3211 4404; adrian@nrmseq.com
SEQ Western Catchments	(07) 3816 9713; operations@seqwcq.com.au
Southern Gulf Catchments	(07) 4749 4805; ccurry@southerngulfcatchments.com.au
South West NRM	(07) 4654 7382; exec.officer@southwestnrm.org.au
Torres Strait	(07) 4069 1446; victor.mcgrath@icc.qld.gov.au

South Australia

Department of Water, Land & Biodiversity Conservation (DWLBC)

DWLBC (tel: (08) 8463 6800; www.dwlbc.sa.gov.au) is the lead agency with responsibility for the Natural Resources Management Bill 2003, the River Murray Act and the Upper South East Dryland Salinity & Flood Management (USE DS&FM) Act. It also provides executive support to the SA Dryland Salinity Committee (tel: (08) 8303 9345). The DWLBC web-site gives access to information on dryland salinity and how it is being addressed in SA – go to *Natural Resources* then *Soil*. It carries numerous fact sheets that are also available on the SA DSC web-site (www.saltcontrols.com).

The Centre for Natural Resource Management (tel: (08) 8303 9703) undertakes research-related roles, including oversight of the South Australian R&D component of the National Action Plan for Salinity and Water Quality. It facilitates and encourages collaboration amongst researchers and supports regional delivery of improved on-ground outcomes. The Centre identifies and negotiates supplementary funding sources for NRM research, from both the public and private sectors, with the aim of leveraging NAP research funding.

Department for Environment and Heritage (DEH)

DEH (tel: (08) 8204 9000; www.environment.sa.gov.au) has a particular interest in the impact of salt-affected land and water on biodiversity. It provides technical support to the wetlands conservation component of the USE DS&FM Program and its biodiversity trading model. The Environment Protection Authority (EPA) presents the State of the Environment Report for SA, outlining the current state or condition of South Australia's environment, the pressures on it and trends over time.

Integrated Natural Resource Management (INRM) Boards

Community based INRM groups have been established in eight regions covering the entire State. Each INRM group has developed or is currently developing a natural resource management plan that aims to achieve the best and most effective NRM results for their

region. These plans, and associated investment strategies, where they have been developed, can be accessed at www.nrm.sa.gov.au.

The NRM regions are:

Aboriginal Lands	(08) 8260 0266; jhammat@alt.sa.gov.au
Eyre Peninsula	(08) 8680 2653; wnacrisp@bigpond.com
Kangaroo Island	(08) 8553 3136; richards@kin.net.au
Mt Lofty Ranges & Greater Adelaide	(08) 8391 7501; Burston.Jim@saugov.sa.gov.au
Murray–Darling Basin	(08) 8532 1432; mdbinrm@lm.net.au
Northern and Yorke Agricultural District	(08) 8842 6253; Stanley.trudie@saugov.sa.gov.au
Rangelands	(08) 8648 5194; white.andrew2@saugov.sa.gov.au
South East	(08) 8723 1057; senrcc@lcrdb.com

Primary Industries and Resources SA (PIRSA)

SA Research & Development Institute (SARDI) (tel: (08) 8303 9577; www.sardi.sa.gov.au) undertakes research into pastures, soils and sustainable resources including their relationship to dryland salinity. SARDI is a major participant in the CRC for Plant-based Management of Dryland Salinity with research undertaken at the Waite Institute and at Struan.

Rural Solutions SA (tel: (08) 8568 6418; www.pir.sa.gov.au), the service provider arm of PIRSA, is actively involved in salinity management through the SALTSMART Program (Salinity Management Action Response Team). The SALTSMART team undertakes:

- Regional and catchment planning for salinity management within INRM (see www.saltcontrols.com)
- Implementation of catchment plans using a multi-disciplinary skills base
- Salinity mapping and monitoring
- Salinity research
- Identifying new opportunities and formulating investment strategies
- Catchment and groundwater modelling
- Training and education programs.

South Australian Dryland Salinity Committee (SA DSC)

The SA DSC (tel: (08) 8303 9345; www.saltcontrols.com) oversees implementation and periodic review of the *SA Dryland Salinity Strategy*. This strategy can be found on the web-site www.saltcontrols.com that also features updates on State salinity projects such as Salt Mapping, the USE DS&FM Program, Sustainable Grazing on Saline Lands, individual catchment salinity plans, and numerous fact sheets.

Tasmania

Department of Primary Industries Water and Environment (DPIWE)

DPIWE (tel: (03) 6233 8011; www.dpiwe.tas.gov.au) is the lead agency for salinity management in Tasmania, being responsible at State level for the National Action Plan (NAP) for Salinity and Water Quality, and supporting Regional NRM Committees and the NAP Working Group.

It also facilitates dryland salinity management through industry development, natural resource management, land information services, environmental protection, policy development and the conservation of natural heritage and other salinity prevention and management activities.

Mineral Resources Tasmania

Mineral Resources Tasmania (tel: (03) 6233 8377; www.mrt.tas.gov.au) provides essential information for land management (geological, groundwater geophysical data and information) and salinity project support.

Regional NRM organisations

These organisations are responsible for the development and implementation of regional NRM plans in Tasmania:

NRM North (03) 6336 5219; www.nrmtas.com.au

NRM South (03) 6234 2248; www.nrmtas.com.au

NRM NW (03) 6431 7186; www.nrmtas.com.au

The National Action Plan for Salinity and Water Quality Joint Working Group

This is a joint committee of the Northern and Southern regions that develop and deliver strategies to address specific salinity and water quality issues in the Tasmanian NAP region.

It can be contacted through the NRM North or NRM South regional organizations (www.naptas.com.au).

Victoria

Catchment Management Authorities (CMA)

Victoria has an integrated catchment management system established under the *Catchment and Land Protection Act 1994* (the CaLP Act). Under the CaLP Act, Victoria is divided into 10 catchment regions and a Catchment Management Authority established for each.

CMA Boards are responsible for the development of strategic direction for land and water management. They set priorities, evaluate the effectiveness of outcomes, monitor the external and internal environment and identify opportunities.

Implementation Committees are the conduits for local community input, and are responsible for development of detailed work programs and oversight of on-ground program delivery for specific issues or sub-catchments.

CMA staff oversee development and implementation of programs and liaise with the community, government and other catchment-focused organisations.

Corangamite (03) 5232 9100; www.ccma.vic.gov.au

East Gippsland (03) 5153 0462; www.egcma.vic.gov.au

Glenelg-Hopkins (03) 5571 2526; www.glenelg-hopkins.vic.gov.au

Goulburn-Broken (03) 5822 2288; www.gbcma.vic.gov.au

Mallee (03) 5051 4377; www.malleecma.vic.gov.au

North Central (03) 5448 7124; www.nccma.vic.gov.au

North East (02) 6043 7600; www.necma.vic.gov.au

Port Phillip & Westernport (03) 9785 0183; www.ppwcm.vic.gov.au

West Gippsland (03) 5175 7800; www.wgcma.vic.gov.au

Wimmera (03) 5382 1544; www.wcma.vic.gov.au

Department of Primary Industries (DPI)

DPI's Agriculture Division (tel: 136 186, e-mail: customer.service@dpi.vic.gov.au; www.dpi.vic.gov.au) is concerned with improving the profitability and market competitiveness of agricultural industries while ensuring that such operations remain sustainable and environmentally responsible. The Department aims to achieve this through research, industry development and extension activities. The web-site has extensive information on salinity – go to *Agriculture Et Food* and then *Soil and Water*.

Primary Industries Research Victoria (PIRVic) is the R&D division within DPI with capabilities in specific fields of science including: plant production sciences, landscape systems and soil and water sciences. PIRVic centres undertaking dryland salinity R&D are:

- Bendigo Centre (tel: (03) 5430 4444; www.dpi.vic.gov.au/clpr) specialising in natural resource management including salinity and land capability
- Rutherglen Centre (tel: (02) 6030 4500; www.dpi.vic.gov.au/rutherglen) with expertise in modelling, farming systems and landscapes for production and environmental gains
- Hamilton Centre (tel: (03) 5573 0900; www.dpi.vic.gov.au) developing and evaluating annual and perennial plant species and livestock systems for recharge and discharge management.

Department of Sustainability and Environment (DSE)

DSE (tel: 136 186, e-mail: customer.service@dse.vic.gov.au; www.dse.vic.gov.au) is responsible for managing Victoria's natural and built environments and for providing a policy focus on sustainability. Its responsibilities include catchment management; conservation, recreation and public land stewardship; water sector development and services; forests and fire management; sustainability policy and programs; sustainable cities and regions; biodiversity; heritage; parks and Crown land; land information; greenhouse and sustainable energy policy.

The NAP/NHT office is located in the DSE at Epsom in Bendigo (tel: (03) 5430 4432, e-mail: NAP.NHT@dse.vic.gov.au).

Western Australia

Department of Agriculture (DAWA)

DAWA (tel: (08) 9368 3333; www.agric.wa.gov.au) is responsible for policy, research and information provision on dryland salinity affecting agricultural areas and rural towns. Main project areas include engineering water management, chemical and sediment export, land use assessment and farming systems including sustainable grazing on saline lands. The web-site has a large number of reports and fact sheets dealing with salinity – go to *Land Water + Environment*. The State branches of the Natural Heritage Trust and National Landcare Program are located within the South Perth head office.

Department of Conservation and Land Management (CALM)

CALM (tel: (08) 9334 0333; www.calm.wa.gov.au) deals with conservation of ecosystems, oil mallee research, wetlands, biodiversity and other issues. The web-site has many reports on these issues – search for *salinity*.

Department of Environment

This department (tel: (08) 9278 0300; www.environment.wa.gov.au) brings together the former Department of Environmental Protection (DEP) and the Water and Rivers Commission (WRC).

WA's key regulatory body, it manages water quality, particularly for irrigation water and stream flows, and administers the Salinity Investment Framework. The web-site has salinity information under the following headings:

- Dealing with Salinity in Wheatbelt Valleys
- Engineering Evaluation Initiative
- Salinity and Land Use Impacts Series
- Salinity Engineering Newsletter.

Forest Products Commission (FPC)

FPC (tel: (08) 9475 8888; www.fpc.wa.gov.au) is WA's trading enterprise for plantation management and commercial production from renewable timber resources. It manages tree-planting programs, sometimes in association with private landholders (e.g. the Infinitree Program which aims to increase tree planting rates to 20,000 ha per annum, partly with the aim of addressing salinity). FPC has a dedicated research program which has identified tree and shrub species with the ability to withstand defined salt levels.

Natural Resource Management Office

This aims to co-ordinate State Government activities across agencies in the natural resource management field. It is located at the Department of Agriculture (tel: (08) 9368 3164) and has close links to the regional NRM groups which are recognised for funding applications through the Natural Heritage Trust, National Action Plan for Salinity and Water Quality and the National Landcare Program. The regional groups are (from north to south):

- Rangelands NRM Coordinating Group (08) 9455 5477;
kelvin.baldock@greenbase.com.au
- Northern Agricultural Catchments (08) 9954 3354; www.calci.org Council (NACC)
- Avon Catchment Council (ACC) (08) 9690 2251; www.avonicm.org.au
- Swan Catchment Council (SCC) (08) 9374 3309; www.wrc.wa.gov.au/swanavon
- South West Catchments Council (SWCC) (08) 9780 6168; swcc@agric.wa.gov.au
- South Coast Regional Initiative (08) 9892 8537; Planning Team (SCRIPT)
www.script.asn.au

NATIONAL INSTITUTIONS

Australian Bureau of Agriculture and Resource Economics (ABARE)

ABARE (tel: (02) 6272 2000) provides quarterly forecasts for the full range of export commodities. Its recent research on the economics of salinity control and related policy issues has made an important contribution to the development of the Murray–Darling Basin Salinity Strategy (www.abareconomics.com/research/landwater/salinity.html). ABARE has also provided insights into the problem of salinity control that will be considered in regional plans being developed under the National Action Plan for Salinity and Water Quality.



Australian Government Departments of Agriculture, Fisheries and Forestry (DAFF) and Department of the Environment and Heritage (DEH)

DAFF and DEH jointly administer the National Action Plan for Salinity and Water Quality (NAP). The web-site (www.napswq.gov.au/index.html) provides information on the history of the NAP and lists current events. Fact sheets, reports, maps, discussion papers and media releases can be accessed. Links are provided to a range of useful web-sites and an e-mail subscription service is available.

Australian Government Department of Transport and Regional Services (DOTARS)

The DOTARS web-site (www.dotars.gov.au) lists dryland salinity among a range of environmental issues affecting regional Australia. Its corporate plan acknowledges 'the increasing importance of environment issues, particularly salinity and global warming, and the need to factor environmental impacts into decision making.'

Australian Greenhouse Office (AGO)

The AGO's web-site (www.greenhouse.gov.au) provides information on the implications of climate change on agriculture and other industries. A range of fact sheets and other publications can be downloaded from the web-site.

Australian Landcare Council (ALC)

The ALC (tel: (02) 6295 8199; www.daff.gov.au and search for landcare) is the Australian Government's key advisory body on landcare policy. It provides advice on issues relevant to the sustainable management of natural resources including salinity, sustainable agriculture, catchment management, greenhouse and weed management.

Australian Wool Innovation (AWI) Limited

AWI Limited (tel: (02) 9299 5155; www.wool.com.au) is a fully independent public company owned by Australian woolgrowers. Almost 25 per cent of wool producers say that salinity is an on-farm issue. A five-year research partnership between AWI and Land & Water Australia aims to find productive and sustainable solutions to salinity and other natural resource management issues for wool producers. Part of the program involves new research on maximising farm returns through the Land, Water and Wool *Sustainable Grazing on Saline Lands (SGSL) sub-program*. Further information can be found at www.landwaterwool.gov.au. *Beyond the Bale* is AWI's free bi-monthly newspaper providing project and technical information for woolgrowers, including updates on research, trials, farmer activities and case studies.

Bureau of Rural Sciences (BRS)

The BRS (tel: (02) 6272 4282; www.daff.gov.au then following the link under the specialist areas menu) is the scientific bureau within the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). BRS provides nationally focused scientific advice to support evidence-based policy development and decision-making by government. The Bureau's Salinity Risk Management Sciences Program provides data on land condition to support the NAP. Multi-disciplinary research techniques, including airborne geophysical survey techniques, are used to develop models to predict the outcomes of various salinity management scenarios.

CSIRO

CSIRO Forestry & Forest Products (tel: (02) 6281 8211; www.ffp.csiro.au) researches forestry, wood and paper sciences. Some of this research is relevant to recharge management and productive use of saline land.

CSIRO Land and Water (tel: (02) 6246 5700; www.clw.csiro.au) and its partners seek to develop innovative solutions to Australia's land and water management challenges. Land and Water's skill base includes expertise in hydrology, hydrogeology, soil science, biology, ecology, atmospheric science, remote sensing, physics, chemistry, economics and social science.

CSIRO Plant Industry (tel: (02) 6246 4911; www.pi.csiro.au) applies strategic research in the plant sciences to promote profitable and sustainable agri-food, fibre and horticultural industries, develop novel plant products and improve natural resource management.

CSIRO Sustainable Ecosystems (tel: (02) 6242 1600; www.cse.csiro.au) focuses on research to underpin the sustainable development of rural and regional Australia.

These Divisions of CSIRO are active and important participants in research currently conducted by the CRC for Plant-based Management of Dryland Salinity.

Grains Research and Development Corporation (GRDC)

GRDC (tel: (02) 6272 5525; www.grdc.com.au) is responsible for planning, investing and overseeing research and development, and delivering improvements in production, sustainability and profitability across the Australian grains industry. Information on dryland salinity on the web-site is organised into topics of interest relevant to growers, researchers and consumers. GRDC's quarterly newsletter *Groundcover* brings grain growers some research information on salinity management.

Land & Water Australia (LWA)

LWA (tel: (02) 6263 6000; www.lwa.gov.au) invests in more than 20 R&D programs in five arenas: sustainable primary industries; rivers; vegetation; future landscapes; and cross-cutting activities. The NDSP is one of these R&D programs, but many others are relevant to salinity and its impacts. LWA has a comprehensive database of stakeholders in dryland salinity management, used by NDSP to distribute *Salt* magazine and *Focus on Salt*.

Meat and Livestock Australia (MLA)

MLA (tel: (02) 9463 9333; www.mla.com.au) provides research and development, market information and marketing to benefit the red meat industry. MLA's *Sustainable Grazing Systems (SGS)* program developed *The Professional Producer's Guide* that incorporates a comprehensive collection of best farming practices including management of soil, water resources and pastures. Also from SGS is *Tips & Tools*, practical and easy to follow information sheets on a range of topics including pastures and grazing management, and natural resource management. A monthly newsletter *Feedback*, sometimes profiles grazing issues related to salinity.

Rural Industries Research & Development Corporation (RIRDC)

RIRDC (tel: (02) 6272 4539; www.rirdc.gov.au) manages and funds research and translates results into practical outcomes for industry development. Salinity risk and management issues are investigated under the *Resilient Agricultural Systems Research Program* that aims to foster the development of agri-business systems that have sufficient diversity, integration, flexibility and robustness to be resilient enough to respond opportunistically to change. Fact sheets and a range of free research publications are available from the web-site. RIRDC is also a major partner in the Joint Venture Agroforestry Program (JVAP).

The JVAP (www.rirdc.gov.au/programs/aft.htm) has the following key roles:

- Initiating, coordinating and communicating agroforestry research and development
- Assisting in the removal of policy and institutional impediments
- Assisting in the development of new tree-based industries
- Designing large-scale commercial agroforestry systems in lower rainfall areas to address environmental issues.

JVAP communicates research via its Agroforestry Guideline Series, a Manual Series (which includes *Trees, water and salt: an Australian guide to using trees for healthy catchments and productive farms*), the Master TreeGrower training program and Research Reports & Updates, Short Reports and Newsletters.

MURRAY-DARLING BASIN COMMISSION

The Murray-Darling Basin Commission (tel: (02) 6279 0100; www.mdbc.gov.au) has a charter 'to promote and co-ordinate effective planning and management for the equitable, efficient and sustainable use of water, land and environmental resources of the Murray-Darling Basin'. *The Basin Salinity Management Strategy 2001-2015* guides communities and governments in working together to control salinity and protect key natural resource values within their catchments, consistent with principles of the *Integrated Catchment Management Policy Statement*. It establishes targets for the river salinity of each tributary valley and the Murray-Darling system itself, that reflect the shared responsibility for action both between valley communities and between States.

Many MDBC publications and reports can be downloaded from the web-site (go to *Publications*) or ordered on-line.

Basin Salinity Network

Basin Salinity Network (www.ndsp.gov.au/salinity/tools/) links people across the Murray-Darling Basin who require support for local and regional salinity planning or can offer experienced salinity management advice. The aim is to develop stronger links so that people can gain access to information, technical advice and support. Members of the network come from a broad range of backgrounds.

LOCAL GOVERNMENT

Australian Local Government Association (ALGA)

ALGA (tel: (02) 6122 9400; www.alga.asn.au) is a federation of associations in each of Australia's six States and two Territories. It is a member of the Council of Australian Governments, alongside the Commonwealth, States and Territories, as well as numerous ministerial councils and intergovernmental committees. Local government is also an active partner in a range of national strategies for environmental management. Information on ALGA and its role in dryland salinity management can be found at its web-site.

Murray Darling Association (MDA)

The MDA (tel: (08) 8226 0582; www.mda.asn.au) has developed a Dryland Salinity Project as a pilot project to provide local government with data and information on the impact of salinity. This encourages local government to undertake salinity risk assessment and provides management tools.

COOPERATIVE RESEARCH CENTRES

CRC for Catchment Hydrology

This CRC (tel: (03) 9905 2704; www.catchment.crc.org.au) provides land and water managers with capability to predict, in an operating environment of high climatic variability, the hydrologic impacts of catchment management. It runs six multi-disciplinary research programs:

- Predicting catchment behaviour
- Land use impacts on rivers
- Sustainable water allocation
- Urban stormwater quality
- Climate variability
- River restoration.

CRC for Freshwater Ecology

The CRC for Freshwater Ecology (tel: (02) 6201 5168; www.environmentdirectory.com.au) is a national research centre specialising in temperate river and wetland ecology. The CRC develops ecological understanding to improve and protect Australia's inland waterways by collaborative research, education, resource management, policy advice and community liaison.

CRC for Landscape Environments and Mineral Exploration (CRC LEME)

CRC LEME (tel: (08) 6436 8695; <http://leme.anu.edu.au>) has four core research programs:

- Regolith geoscience
- Mineral exploration in areas of cover
- Environmental applications of regolith geoscience
- Salinity mapping and hazard assessment.

CRC for Plant-based Management of Dryland Salinity

This CRC (tel: (08) 6488 8559; www.crcsalinity.com) focuses on developing profitable and sustainable farming systems to manage both recharge and discharge. The CRC brings together research effort from six State government agencies, three universities and CSIRO to address these issues through seven research programs:

- Education
- Function of natural ecosystems
- New and improved plant species
- New farming systems
- Economic and social assessment
- Animal systems
- Biodiversity.

These research programs are outlined in the strategic report *Research Portfolio 2002/3*³ that can be found at the web-site.

NON-GOVERNMENT ORGANISATIONS

Australian Association of Natural Resource Management (AANRM)

AANRM (tel: (02) 6247 4137; www.soil-water.org.au) is a network of groups and individuals with a common interest in natural resource management including salinity. It publishes a journal and maintains a web-site.

Australian Salinity Action Network (ASAN)

ASAN (www.asan.net.au) seeks to coordinate and share information between all stakeholders involved in addressing the impact of salinity. It provides members with:

- Networking
- Information sharing
- Advisory services and problem solving
- Promotion of technologies
- Trialing and testing salinity initiatives
- An advocacy group for emerging industries
- Community education and awareness raising campaigns
- Salinity-based research

Greening Australia

Greening Australia (tel: (02) 6281 8585; www.greeningaustralia.org.au) is a national organisation with a network of over 300 staff in 80 locations. Many of these are involved in on-ground and strategic dryland salinity management planning and management at regional, State and National levels. The national web-site is a good source of information and contacts.

Greening Australia has an initiative called *Changing lives + Landscapes* that aims to achieve river and landscape repairs worth \$10 million. It will use its regional networks to bring farmers, indigenous communities and scientists together to tackle land and water degradation. Land & Water Australia, CSIRO and the CRC for Freshwater Ecology will provide the scientific back-up for public participation programs.

Australian Conservation Foundation (ACF)

The ACF (tel: (03) 9345 1111; www.acfonline.org.au) has an alliance with leading winemaker Southcorp Ltd to raise awareness of salinity. An output of this alliance is a community information kit *Salt: Nature in the Balance* that can be ordered on-line. The ACF has campaigned for a national policy and investment response to salinity, including biodiversity conservation and commitment of necessary funding.

WWF Australia

WWF Australia (tel: 1800 032 551; www.wwf.org.au), formerly known as World Wildlife Fund and World Wide Fund For Nature, works to help protect and sustain biologically diverse environments via on-ground field projects and seeks to influence policy formulation.

National Farmers' Federation (NFF)

The NFF (tel: (02) 6273 3855; www.nff.org.au) is the peak lobby group for Australian farmers and farmer organisations.

OTHER RESOURCES

Australian Landcare Magazine

Australian Landcare Magazine is published quarterly and features regular articles from LWA (including the NDSP), MDBC, RIRDC and AANRM. Selected articles are available at www.australianlandcaremagazine.com.au.

