



3

Land salinity

## This Chapter

This chapter summarises investments supported by the NAP and the regional component of the Trust that have a major focus on the land salinity matter for target. The first section of the chapter summarises priority action investments approved to the 30 June 2004. It also provides a summary of the type of activities supported by these investments and progress in the achievements of these activities to the 31 March 2004.

The second section summarises regional investments having a major focus on land salinity from regional strategies based on accredited regional plans to 30 June 2004. This section details the specific land salinity targets and related management action targets from approved investments. It also provides a summary of the type of activities supported by these investments and progress in the achievements of these activities to the 31 March 2004.

## Sections

|            |   |           |
|------------|---|-----------|
| <b>3.1</b> | <b>Priority actions having a major focus on land salinity</b>     | <b>69</b> |
|            | Approvals and reported expenditure                                | 69        |
|            | Activities and achievements                                       | 71        |
|            | Achievements  | 74        |
| <b>3.2</b> | <b>Regional investments having a major focus on land salinity</b> | <b>76</b> |
|            | Approvals and reported expenditure                                | 76        |
|            | Activities and achievements                                       | 78        |
|            | Achievements  | 82        |
|            | Land salinity targets   | 83        |

## Glossary



**Table 3.1.1** Priority actions having a major focus on land salinity approved to June 2004\*

| State             | Region                                   | 2003-04 Approvals (\$) |                | Total Approvals to June 2004 (\$) |                  |
|-------------------|--|------------------------|----------------|-----------------------------------|------------------|
|                   |  | NAP                    | Trust          | NAP                               | Trust            |
| New South Wales   | Central West                             | 199,500                |                | 429,000                           | 320,000          |
|                   | Hawkesbury - Nepean                      |                        |                |                                   | 72,500           |
|                   | Hunter - Central Rivers                  |                        |                |                                   | 297,500          |
|                   | Lachlan                                  | 150,000                |                | 300,000                           | 320,000          |
|                   | Murray                                   | 450,000                |                | 619,000                           |                  |
|                   | Murrumbidgee                             | 152,300                |                | 5,315,900                         |                  |
|                   | State-wide                               | 662,100                |                | 1,280,200                         |                  |
| Queensland        | Burdekin                                 |                        |                | 1,108,950                         |                  |
| South Australia   | Eyre Peninsula                           |                        |                |                                   | 500,000          |
|                   | Mount Lofty Ranges                       |                        |                | 1,584,200                         |                  |
|                   | Northern and Yorke Agricultural District |                        |                | 481,660                           |                  |
|                   | SA Murray Darling Basin                  |                        |                | 3,800,000                         |                  |
| Tasmania          | South East                               |                        |                | 3,000,000                         |                  |
|                   | North Tasmania                           | 191,500                |                | 191,500                           |                  |
|                   | North West                               |                        | 190,900        |                                   | 190,900          |
| Victoria          | Tasmanian NAP Region                     |                        |                | 50,000                            |                  |
|                   | Corangamite                              |                        |                | 1,741,000                         |                  |
|                   | Goulburn Broken                          |                        |                | 5,374,350                         |                  |
|                   | Mallee                                   |                        |                | 1,050,000                         |                  |
|                   | North Central                            |                        |                | 1,987,000                         |                  |
|                   | North East                               |                        | 210,000        |                                   | 210,000          |
|                   | Port Phillip                             |                        |                |                                   | 60,000           |
|                   | Wimmera                                  |                        |                | 2,216,690                         |                  |
| Western Australia | South Coast                              | 350,620                |                | 350,620                           | 49,990           |
| <b>Total</b>      |  | <b>2,156,020</b>       | <b>400,900</b> | <b>30,880,070</b>                 | <b>2,020,890</b> |

\* Figures reflect Australian Government and State/Territory Government approvals for NAP and only Australian Government approvals for the Trust. State/Territory Government cash and in-kind funding for the Trust is not included.

**Table 3.1.2** Reported expenditure for priority actions having a major focus on land salinity

| State           | Region                  | Budgeted Activity Expenditure (\$) |         |                   |         | Reported Activity Expenditure (\$) |        |                   |        |
|-----------------|-------------------------|------------------------------------|---------|-------------------|---------|------------------------------------|--------|-------------------|--------|
|                 |                         | July 03 - March 04                 |         | Total to March 04 |         | July 03 - March 04                 |        | Total to March 04 |        |
|                 |                         | NAP                                | Trust   | NAP               | Trust   | NAP                                | Trust  | NAP               | Trust  |
| New South Wales | Central West            | 195,250                            | 226,000 | 416,000           | 226,000 | 197,208                            | 71,600 | 197,208           | 71,600 |
|                 | Hawkesbury - Nepean     |                                    | 37,500  |                   | 37,500  |                                    |        |                   |        |
|                 | Hunter - Central Rivers |                                    | 93,000  |                   | 93,000  |                                    | 21,462 |                   | 21,462 |
|                 | Lachlan                 | 150,000                            | 226,000 | 300,000           | 226,000 | 122,689                            | 71,600 | 136,901           | 71,600 |
|                 | Murray                  | 270,000                            |         | 415,000           |         | 171,695                            |        | 236,265           |        |
|                 | Murrumbidgee            | 196,150                            |         | 5,199,750         |         | 1,760,375                          |        | 1,760,375         |        |
|                 | State-wide              | 284,250                            |         | 672,600           |         | 364,321                            |        | 388,435           |        |
| Queensland      | Burdekin                | 1,108,950                          |         | 1,108,950         |         | 156,800                            |        | 156,800           |        |

| State             | Region                                   | Budgeted Activity Expenditure (\$) |           |                   |           | Reported Activity Expenditure (\$) |         |                   |         |
|-------------------|--|------------------------------------|-----------|-------------------|-----------|------------------------------------|---------|-------------------|---------|
|                   |  | July 03 - March 04                 |           | Total to March 04 |           | July 03 - March 04                 |         | Total to March 04 |         |
|                   |  | NAP                                | Trust     | NAP               | Trust     | NAP                                | Trust   | NAP               | Trust   |
| South Australia   | Eyre Peninsula                           |                                    | 375,000   |                   | 375,000   |                                    | 121,205 |                   | 121,205 |
|                   | Mount Lofty Ranges                       | 199,450                            |           | 945,800           |           | 273,300                            |         | 1,021,250         |         |
|                   | Northern and Yorke Agricultural District | 61,659                             |           | 271,659           |           |                                    |         | 150,538           |         |
|                   | SA Murray Darling Basin                  | 100,000                            |           | 360,000           |           |                                    |         | 800,000           |         |
|                   | South East                               |                                    |           | 700,000           |           | 440,408                            |         | 783,461           |         |
| Tasmania          | North Tasmania                           | 191,500                            |           | 191,500           |           |                                    |         |                   |         |
|                   | North West                               |                                    | 190,900   |                   | 190,900   |                                    |         |                   |         |
|                   | Tasmanian NAP Region                     | 50,000                             |           | 50,000            |           | 50,000                             |         | 50,000            |         |
| Victoria          | Corangamite                              |                                    |           | 1,741,000         |           | 303,109                            |         | 1,377,584         |         |
|                   | Goulburn Broken                          |                                    |           | 5,374,350         |           |                                    |         | 5,374,350         |         |
|                   | Mallee                                   |                                    |           | 1,050,000         |           | 538,304                            |         | 663,583           |         |
|                   | North Central                            |                                    |           | 1,987,000         |           |                                    |         | 1,987,000         |         |
|                   | North East                               |                                    | 210,000   |                   | 210,000   |                                    | 75,801  |                   | 75,801  |
|                   | Port Phillip                             |                                    |           |                   | 60,000    |                                    | 45,000  |                   | 45,000  |
|                   | Wimmera                                  |                                    |           | 2,216,689         |           | 751,656                            |         | 1,794,630         |         |
| Western Australia | South Coast                              |                                    | 24,990    |                   | 49,990    |                                    | 32,284  |                   | 32,284  |
| Total             |  | 2,807,209                          | 1,383,390 | 23,000,298        | 1,468,390 | 5,129,864                          | 438,952 | 16,878,380        | 438,952 |

## Activities and achievements

### Funded activities

Funding for the types of priority action activities having a major focus on land salinity supported by the NAP and the regional component of the Trust, is shown in Table 3.1.3.

**Table 3.1.3** Types of activities supported by priority actions having a major focus on land salinity

| Activity Type        | Budgeted Activity Expenditure (\$) |           |                   |           | Reported Activity Expenditure (\$) |         |                   |         |
|----------------------|------------------------------------|-----------|-------------------|-----------|------------------------------------|---------|-------------------|---------|
|                      | July 03 - March 04                 |           | Total to March 04 |           | July 03 - March 04                 |         | Total to March 04 |         |
|                      | NAP                                | Trust     | NAP               | Trust     | NAP                                | Trust   | NAP               | Trust   |
| Resource assessment  | 1,479,500                          | 667,890   | 2,110,250         | 692,890   | 409,147                            | 175,484 | 1,223,359         | 175,484 |
| Planning             |                                    | 37,500    |                   | 37,500    |                                    |         |                   |         |
| Capacity building    | 629,450                            | 93,000    | 2,838,800         | 93,000    | 825,980                            | 21,462  | 1,978,569         | 21,462  |
| On-ground activities | 698,259                            | 585,000   | 18,051,248        | 645,000   | 3,894,738                          | 242,006 | 13,676,452        | 242,006 |
| Total                | 2,807,209                          | 1,383,390 | 23,000,298        | 1,468,390 | 5,129,864                          | 438,952 | 16,878,380        | 438,952 |

Funding for priority action activities having a major focus on land salinity supported by the NAP and the regional component of the Trust are described in Table 3.1.4.

**Table 3.1.4** Funding for priority action activities having a major focus on land salinity

| Region                  | Activity Title  | Budgeted Activity Expenditure (\$) |         |                     |           | Reported Activity Expenditure (\$) |        |                     |           |
|-------------------------|---|------------------------------------|---------|---------------------|-----------|------------------------------------|--------|---------------------|-----------|
|                         |   | July 03 - March 04                 |         | Total to March 2004 |           | July 03 - March 04                 |        | Total to March 2004 |           |
|                         |   | NAP                                | Trust   | NAP                 | Trust     | NAP                                | Trust  | NAP                 | Trust     |
| <b>New South Wales</b>  |   |                                    |         |                     |           |                                    |        |                     |           |
| Central West            | Central West Salinity Recharge Identification and Investigations Project  |                                    | 226,000 |                     | 226,000   |                                    | 71,600 |                     | 71,600    |
|                         | Cudgong and Upper Macquarie Salinity Prioritisation and Strategic Direction   | 195,250                            |         |                     | 416,000   | 197,208                            |        |                     | 197,208   |
| Hawkesbury - Nepean     | Hawkesbury Lower Nepean Salinity Investigations and Management Options 2  |                                    | 37,500  |                     | 37,500    |                                    |        |                     |           |
| Hunter - Central Rivers | Best Practice Salinity Management in the Hunter Catchment   |                                    | 93,000  |                     | 93,000    |                                    | 21,462 |                     | 21,462    |
| Lachlan                 | Groundwater Monitoring and Trend Analysis and Management Improvement in the Lachlan Valley  | 150,000                            |         |                     | 300,000   | 122,689                            |        |                     | 136,901   |
|                         | Lachlan Salinity Recharge Identification and Investigations Project   |                                    | 226,000 |                     | 226,000   |                                    | 71,600 |                     | 71,600    |
| Murray                  | Target Implementation of the Murray Catchment Blueprints Within the South West Slopes Management Unit   | 270,000                            |         |                     | 415,000   | 171,695                            |        |                     | 236,265   |
| Murrumbidgee            | Implementation of MIA EnviroWise (Previously MIA&D Community Land and Water Management Plan)  |                                    |         |                     | 4,804,000 | 1,730,852                          |        |                     | 1,730,852 |
|                         | Kyeamba Valley Targeted Salinity and Water Quality Control Program  | 196,150                            |         |                     | 395,750   | 29,523                             |        |                     | 29,523    |
| State-wide              | Providing the Capacity for Salt Action Teams and Catchment Communities to Access Economic Information and Advice for Greater Adoption of Salinity Solutions | 225,250                            |         |                     | 613,600   | 341,699                            |        |                     | 365,813   |
|                         | Working with Catchment Management Boards to Expand the Use of Deep Rooted Perennials Project  | 59,000                             |         |                     | 59,000    | 22,622                             |        |                     | 22,622    |
| <b>Queensland</b>       |   |                                    |         |                     |           |                                    |        |                     |           |
| Burdekin                | Addressing Dryland Salinity in the Belyando-Suttor Sub catchment of the Burdekin  | 266,200                            |         |                     | 266,200   | 67,550                             |        |                     | 67,550    |
|                         | Initiation of a Lower Burdekin Water Quality and Salinity Management Programme  | 842,750                            |         |                     | 842,750   | 89,250                             |        |                     | 89,250    |

| Region                                   | Activity Title   | Budgeted Activity Expenditure (\$) |         |                     |         | Reported Activity Expenditure (\$) |        |                     |        |
|--|--|------------------------------------|---------|---------------------|---------|------------------------------------|--------|---------------------|--------|
|  |  | July 03 - March 04                 |         | Total to March 2004 |         | July 03 - March 04                 |        | Total to March 2004 |        |
|  |  | NAP                                | Trust   | NAP                 | Trust   | NAP                                | Trust  | NAP                 | Trust  |
| South Australia                          |  |                                    |         |                     |         |                                    |        |                     |        |
| Eyre Peninsula                           | Priority Integrated Natural Resource Management Action - Eastern Eyre Peninsula  |                                    | 157,500 |                     | 157,500 |                                    | 81,563 |                     | 81,563 |
|  | Priority Integrated Natural resource Management Action - Lower Eyre Peninsula  |                                    | 217,500 |                     | 217,500 |                                    | 39,642 |                     | 39,642 |
| Mount Lofty Ranges                       | Addressing Salinity and Water Quality Decline in the Bremer Barker Catchment   | 29,000                             |         | 87,000              |         | 29,000                             |        | 87,000              |        |
|  | Dryland Salinity Response Team - NAP PR1   |                                    |         | 50,000              |         |                                    |        | 228,000             |        |
|  | Local Action Plan for the Southern Fleurieu Peninsula  | 29,000                             |         | 109,000             |         | 41,000                             |        | 95,000              |        |
|  | Salinity response teams Dryland - NAP PR2  |                                    |         | 213,200             |         |                                    |        | 173,200             |        |
|  | Stop the Loss: Reducing Dryland Salinity and Maintaining Water Quality by Halting the Premature Death of Remnant Vegetation  | 79,200                             |         | 237,600             |         | 141,050                            |        | 189,050             |        |
|  | Upper Torrens Land Management Project - community responses to salinity issues   | 62,250                             |         | 249,000             |         | 62,250                             |        | 249,000             |        |
| Northern and Yorke Agricultural District | Amelioration of Salinity and Improvement of Water Quality Through On-ground Works and Monitoring of Surface and Groundwater - Northern and Yorke Agricultural District | 61,659                             |         | 271,659             |         |                                    |        | 150,538             |        |
| SA Murray Darling Basin                  | Salinity Mapping and Management Support  | 100,000                            |         | 360,000             |         |                                    |        | 800,000             |        |
| South East                               | Salinity Fightback in the Upper South East Region  |                                    |         | 700,000             |         | 440,408                            |        | 783,461             |        |
| Tasmania                                 |  |                                    |         |                     |         |                                    |        |                     |        |
| North Tasmania                           | Urban Salinity Scoping Project - Greater Launceston Area   | 191,500                            |         | 191,500             |         |                                    |        |                     |        |
| North West                               | King Island Salt Hazard Assessment Project   |                                    | 190,900 |                     | 190,900 |                                    |        |                     |        |
| Tasmanian NAP Region                     | Tasmanian NAP awareness raising campaign   | 50,000                             |         | 50,000              |         | 50,000                             |        | 50,000              |        |
| Victoria                                 |  |                                    |         |                     |         |                                    |        |                     |        |
| Corangamite                              | Support Tools and information Underpinning the Salinity Management Plan  |                                    |         | 1,741,000           |         | 303,109                            |        | 1,377,584           |        |
| Goulburn Broken                          | Goulburn Broken CMA - Dryland Salinity   |                                    |         | 1,125,500           |         |                                    |        | 1,125,500           |        |
|  | Goulburn Broken CMA - Irrigation Salinity  |                                    |         | 3,545,000           |         |                                    |        | 3,545,000           |        |
|  | Goulburn Broken CMA - Mid Goulburn catchment activities targeting salinity and water quality   |                                    |         | 703,850             |         |                                    |        | 703,850             |        |

| Region            | Activity Title   | Budgeted Activity Expenditure (\$) |           |                     |           | Reported Activity Expenditure (\$) |         |                     |         |
|-------------------|--|------------------------------------|-----------|---------------------|-----------|------------------------------------|---------|---------------------|---------|
|                   |  | July 03 - March 04                 |           | Total to March 2004 |           | July 03 - March 04                 |         | Total to March 2004 |         |
|                   |  | NAP                                | Trust     | NAP                 | Trust     | NAP                                | Trust   | NAP                 | Trust   |
| Mallee            | Salinity and Water Quality - Dryland   |                                    |           | 1,050,000           |           | 538,304                            |         | 663,583             |         |
| North Central     | Dryland Salinity   |                                    |           | 1,987,000           |           |                                    |         | 1,987,000           |         |
| North East        | Salinity-target extension, implementation, program monitoring                                      |                                    | 210,000   |                     | 210,000   |                                    | 75,801  |                     | 75,801  |
| Port Phillip      | Bunyip Cardinia Coalition Landcare Catchment Biolinks and Managing Salinity                        |                                    |           |                     | 60,000    |                                    | 45,000  |                     | 45,000  |
| Wimmera           | Targetting salinity control works to achieve NAP and community outcomes                            |                                    |           | 2,216,689           |           | 751,656                            |         | 1,794,630           |         |
| Western Australia |  |                                    |           |                     |           |                                    |         |                     |         |
| South Coast       | Hydrological support for natural resource and salinity management in the eastern south coast of WA |                                    | 24,990    |                     | 49,990    |                                    | 32,284  |                     | 32,284  |
| Total             |  | 2,807,209                          | 1,383,390 | 23,000,298          | 1,468,390 | 5,129,864                          | 438,952 | 16,878,380          | 438,952 |

## Achievements

The outputs, or products and services produced by these activities, are summarised in four tables according to the types of outputs described in Chapter 1. Summaries of the outputs related to resource assessment, planning, capacity building and on-ground activities are shown in Table 3.1.5, Table 3.1.6, Table 3.1.7, Table 3.1.8.

**Table 3.1.5** Priority action resource assessment outputs related to land salinity

| Standard Output  | July 03 - March 04 |       |         | Total to March 04 |       |         |
|--|--------------------|-------|---------|-------------------|-------|---------|
|  | NAP                | Trust | Joint   | NAP               | Trust | Joint   |
| Baseline, trend or condition studies for targets   |                    |       |         |                   |       |         |
| Number of sites monitored  | 619                |       | 262     | 725               |       | 262     |
| Number of studies undertaken   |                    |       |         | 1                 |       |         |
| Decision support tools   |                    |       |         |                   |       |         |
| Number models, information management systems and other decision support tools developed | 12                 |       |         | 16                |       |         |
| Investigations (survey, inventory and mapping and data analysis)                         |                    |       |         |                   |       |         |
| Number undertaken  | 176                |       | 13      | 197               |       | 25      |
| Area (hectares) surveyed   |                    |       | 1500000 | 900000            |       | 1500000 |
| Research and development studies   |                    |       |         |                   |       |         |
| Number undertaken  | 16                 |       |         | 23                |       |         |

**Table 3.1.6** Priority action planning outputs related to land salinity

| Standard Output                             | July 03 - March 04 |       |       | Total to March 04 |       |       |
|---|--------------------|-------|-------|-------------------|-------|-------|
|   | NAP                | Trust | Joint | NAP               | Trust | Joint |
| Improved practice codes or guidelines       |                    |       |       |                   |       |       |
| Number developed                            |                    |       | 2     |                   |       | 2     |
| Integrated catchment or sub-catchment plans |                    |       |       |                   |       |       |
| Number developed                            |                    | 8.5   |       | 17.5              |       |       |
| Property management plans                   |                    |       |       |                   |       |       |
| Number completed                            |                    | 128   |       | 128               |       |       |

**Table 3.1.7** Priority action capacity building outputs related to land salinity

| Standard Output  | July 03 - March 04 |       |       | Total to March 04 |       |       |
|--|--------------------|-------|-------|-------------------|-------|-------|
|  | NAP                | Trust | Joint | NAP               | Trust | Joint |
| <b>Awareness raising activities</b>  |                    |       |       |                   |       |       |
| Number of demonstrations, field days, study tours and other non-training forums held                           | 18                 |       | 5     | 22                |       | 5     |
| Number of participants in person-days at demonstrations, field days, study tours and other non-training forums | 112                |       | 82    | 112               |       | 82    |
| Number of brochures, newsletters, displays and other non-training products developed                           | 4716               |       |       | 4718              |       | 1     |
| Quantity of brochures, newsletters, displays and other non-training products distributed                       | 7700               |       |       | 7700              |       |       |
| <b>Facilitation motivation and support activities</b>  |                    |       |       |                   |       |       |
| Number of active positions (FTE) supported   | 11.1               |       | 0.2   | 21.2              |       | 0.2   |
| Number of community groups or projects assisted  | 31                 |       |       | 47                |       |       |
| <b>Skills and training activities</b>  |                    |       |       |                   |       |       |
| Number of training sessions, workshops seminars and other events held  | 10                 |       |       | 15                |       |       |
| Number of participants in person-days at training sessions, workshops seminars and other events                | 116                |       |       | 241               |       |       |
| Number of workbooks, course notes and other key materials developed  | 22                 |       |       | 33                |       |       |
| Quantity of workbooks, course notes and other key materials distributed  | 50                 |       |       | 50                |       |       |

**Table 3.1.8** Priority action on-ground activity outputs related to land salinity

| Standard Output  | July 03 - March 04 |       |       | Total to March 04 |       |       |
|--|--------------------|-------|-------|-------------------|-------|-------|
|  | NAP                | Trust | Joint | NAP               | Trust | Joint |
| <b>Conservation by agreements</b>  |                    |       |       |                   |       |       |
| Number of conservation agreements or covenants established                               | 131                |       | 1     | 131               |       | 1     |
| Area (hectares) covered by conservation agreements or covenants                          |                    |       | 10    |                   |       | 10    |
| <b>Indigenous vegetation protected by fencing</b>  |                    |       |       |                   |       |       |
| Area (hectares) protected  | 327.4              |       | 1.1   | 345.9             |       | 10.1  |
| Length (km) of streambank protected  | 4                  |       |       | 4                 |       |       |
| <b>Indigenous vegetation enhanced/rehabilitated</b>                                      |                    |       |       |                   |       |       |
| Area (hectares) enhanced or rehabilitated  | 3                  |       |       | 3                 |       |       |
| <b>Revegetation with indigenous vegetation</b>   |                    |       |       |                   |       |       |
| Area (hectares) revegetated  | 452.2              |       |       | 500.2             |       |       |
| <b>Revegetation with exotic vegetation</b>   |                    |       |       |                   |       |       |
| Area (hectares) revegetated  | 639.38             |       |       | 1372.88           |       |       |
| <b>Riparian and waterway health</b>  |                    |       |       |                   |       |       |
| Length (km) of stream bank or stream bed stabilised                                      | 19.8               |       |       | 20.8              |       |       |
| Number of off-stream (alternative) watering sites installed                              | 20                 |       |       | 21                |       |       |
| <b>Significant pest plant control</b>  |                    |       |       |                   |       |       |
| Area (hectares) of pest plant control  | 114615             |       |       | 114615            |       |       |
| Area (hectares) of pest animal control   | 7200               |       |       | 7200              |       |       |
| <b>Significant pest vertebrate control</b>   |                    |       |       |                   |       |       |
| Area (hectares) of pest animal control   | 11400              |       |       | 11400             |       |       |
| <b>Soil management</b>   |                    |       |       |                   |       |       |
| Area (hectares) of soil treatment for other than erosion, salinity or acid sulfate soils | 85                 |       |       | 229.5             |       |       |
| <b>Water use efficiency</b>  |                    |       |       |                   |       |       |
| Number of land managers using improved irrigation practices                              | 260                |       |       | 260               |       |       |
| Number of land managers using on-farm water saving practice by drainage diversion        | 12                 |       |       | 12                |       |       |

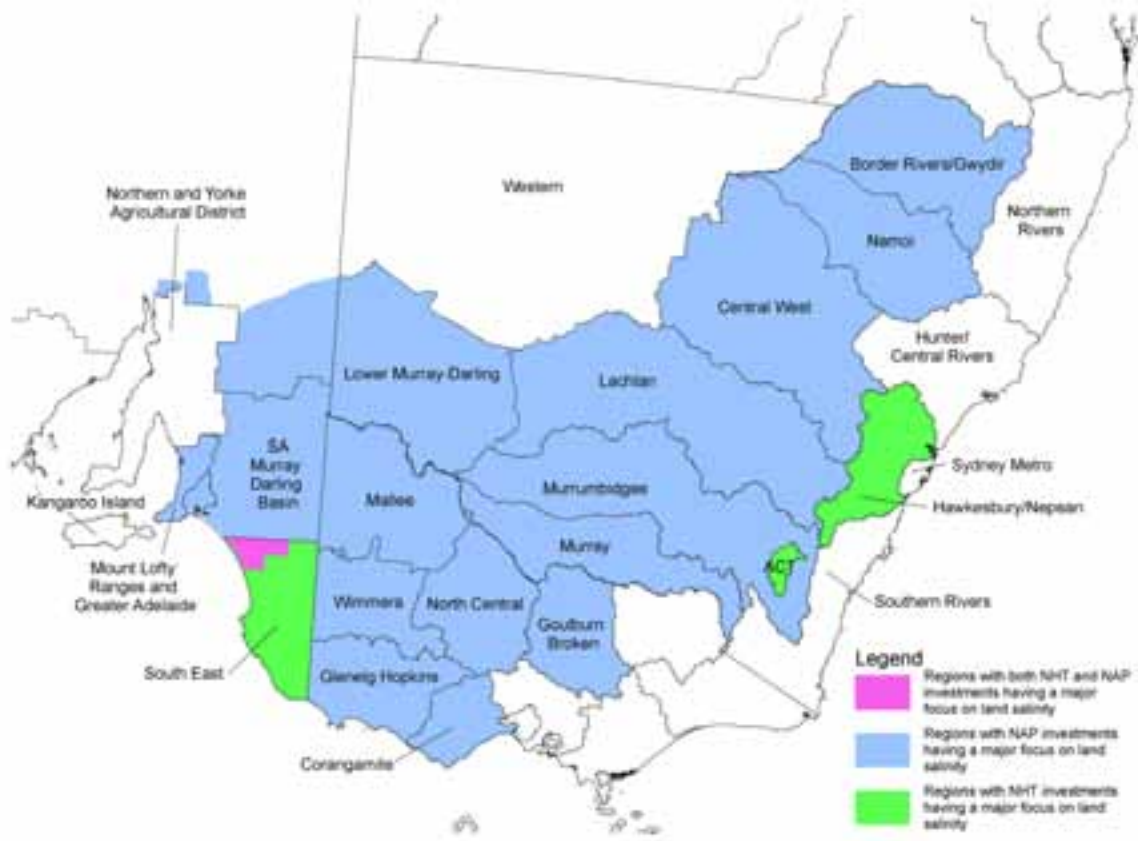
## 3.2 REGIONAL INVESTMENTS HAVING A MAJOR FOCUS ON LAND SALINITY

### Approvals and reported expenditure

76

Funding through regional investment strategies based on accredited regional plans commenced after 30 June 2003. Investment strategies based on accredited regional plans have been approved for regions in the Australian Capital Territory, New South Wales, South Australia and Victoria. Up to 30 June 2004, investments having a major focus on land salinity total approximately \$21m. Figure 3.2.1 shows the regions having a major focus on land salinity through this funding. Table 3.2.1 and Table 3.2.2 respectively show the approved funding and the reported expenditure by region through its investment strategy.

**Figure 3.2.1** Regions with regional investments having a major focus on land salinity



**Table 3.2.1** Regional investments having a major focus on land salinity approved to June 2004\*

| State                        | Region                       | 2003-04 Approvals (\$) |                | Total Approvals to June 2004 (\$) |                |
|------------------------------|------------------------------|------------------------|----------------|-----------------------------------|----------------|
|                              |                              | NAP                    | Trust          | NAP                               | Trust          |
| Australian Capital Territory | Australian Capital Territory |                        | 110,500        |                                   | 110,500        |
| New South Wales              | Border Rivers - Gwydir       | 406,430                |                | 406,430                           |                |
|                              | Central West                 | 925,000                |                | 925,000                           |                |
|                              | Hawkesbury - Nepean          |                        | 125,000        |                                   | 125,000        |
|                              | Lachlan                      | 2,008,000              |                | 2,008,000                         |                |
|                              | Lower Murray Darling         | 34,650                 |                | 34,650                            |                |
|                              | Murray                       | 4,792,234              |                | 4,792,234                         |                |
|                              | Murrumbidgee                 | 5,599,500              |                | 5,599,500                         |                |
| South Australia              | Namoi                        | 1,117,500              |                | 1,117,500                         |                |
|                              | Mount Lofty Ranges           | 20,000                 |                | 20,000                            |                |
|                              | SA Murray Darling Basin      | 450,000                |                | 450,000                           |                |
| Victoria                     | South East                   |                        | 66,000         |                                   | 66,000         |
|                              | Corangamite                  | 1,230,000              |                | 1,230,000                         |                |
|                              | Glenelg Hopkins              | 598,000                |                | 947,000                           |                |
|                              | Goulburn Broken              | 188,000                |                | 188,000                           |                |
|                              | Mallee                       | 409,930                |                | 409,930                           |                |
|                              | North Central                | 2,107,000              |                | 2,107,000                         |                |
|                              | Wimmera                      | 662,300                |                | 662,300                           |                |
| <b>Total</b>                 |                              | <b>20,548,544</b>      | <b>301,500</b> | <b>20,897,544</b>                 | <b>301,500</b> |

\* Figures reflect Australian Government and State/Territory Government approvals for NAP and only Australian Government approvals for the Trust. State/Territory Government cash and in-kind funding for the Trust is not included.

**Table 3.2.2** Reported expenditure for regional investments having a major focus on land salinity

| State           | Region                 | Budgeted Activity Expenditure (\$) |       |                   |                  | Reported Activity Expenditure (\$) |                  |                   |       |
|-----------------|------------------------|------------------------------------|-------|-------------------|------------------|------------------------------------|------------------|-------------------|-------|
|                 |                        | July 03 - March 04                 |       | Total to March 04 |                  | July 03 - March 04                 |                  | Total to March 04 |       |
|                 |                        | NAP                                | Trust | NAP               | Trust            | NAP                                | Trust            | NAP               | Trust |
| New South Wales | Border Rivers - Gwydir | 163,811                            |       | 163,811           |                  |                                    |                  |                   |       |
|                 | Central West           | 486,500                            |       | 486,500           |                  |                                    |                  |                   |       |
|                 | Lachlan                | 295,000                            |       | 295,000           |                  |                                    |                  |                   |       |
|                 | Lower Murray Darling   | 34,650                             |       | 34,650            |                  |                                    |                  |                   |       |
|                 | Murray                 | 2,204,320                          |       | 2,204,320         |                  |                                    |                  |                   |       |
|                 | Murrumbidgee           | 2,799,250                          |       | 2,799,250         |                  |                                    |                  |                   |       |
|                 | Namoi                  | 180,519                            |       | 180,519           |                  |                                    |                  |                   |       |
| Victoria        | Corangamite            | 1,230,000                          |       | 1,230,000         | 350,835          |                                    | 350,835          |                   |       |
|                 | Glenelg Hopkins        | 598,000                            |       | 947,000           | 533,297          |                                    | 618,807          |                   |       |
|                 | Goulburn Broken        | 188,000                            |       | 188,000           | 141,000          |                                    | 141,000          |                   |       |
|                 | Mallee                 | 409,930                            |       | 409,930           | 55,875           |                                    | 55,875           |                   |       |
|                 | North Central          | 2,107,000                          |       | 2,107,000         | 1,184,250        |                                    | 1,184,250        |                   |       |
|                 | Wimmera                | 662,300                            |       | 662,300           | 394,556          |                                    | 394,556          |                   |       |
| <b>Total</b>    |                        | <b>11,359,280</b>                  |       | <b>11,708,280</b> | <b>2,659,813</b> |                                    | <b>2,745,323</b> |                   |       |

## Activities and achievements

### Funded activities

Funding for the types of regional investment activities having a major focus on land salinity supported by the NAP and the regional component of the Trust, is shown in Table 3.2.3.

**Table 3.2.3** Types of activity supported by regional investments having a major focus on land salinity

| Activity Type        | Budgeted Activity Expenditure (\$) |       |                   |       | Reported Activity Expenditure (\$) |       |                   |       |
|----------------------|------------------------------------|-------|-------------------|-------|------------------------------------|-------|-------------------|-------|
|                      | July 03 - March 04                 |       | Total to March 04 |       | July 03 - March 04                 |       | Total to March 04 |       |
|                      | NAP                                | Trust | NAP               | Trust | NAP                                | Trust | NAP               | Trust |
| Resource assessment  | 295,155                            |       | 345,155           |       | 101,909                            |       | 112,419           |       |
| Planning             | 657,697                            |       | 657,697           |       | 73,500                             |       | 73,500            |       |
| Capacity building    | 943,519                            |       | 943,519           |       | 217,335                            |       | 217,335           |       |
| On-ground activities | 9,462,909                          |       | 9,761,909         |       | 2,267,069                          |       | 2,342,069         |       |
| Total                | 11,359,280                         |       | 11,708,280        |       | 2,659,813                          |       | 2,745,323         |       |

Funding for regional investment activities having a major focus on land salinity supported by the NAP and the regional component of the Trust are described in Table 3.2.4.

**Table 3.2.4** Funding for regional investment activities having a major focus on land salinity

| Region                 | Activity Title   | Budgeted Activity Expenditure (\$) |       |                     |       | Reported Activity Expenditure (\$) |       |                     |       |
|------------------------|--|------------------------------------|-------|---------------------|-------|------------------------------------|-------|---------------------|-------|
|                        |  | July 03 - March 04                 |       | Total to March 2004 |       | July 03 - March 04                 |       | Total to March 2004 |       |
|                        |  | NAP                                | Trust | NAP                 | Trust | NAP                                | Trust | NAP                 | Trust |
| New South Wales        |  |                                    |       |                     |       |                                    |       |                     |       |
| Border Rivers - Gwydir | Developing Essential Salinity Resources for the Border Rivers/Gwydir   | 54,767                             |       | 54,767              |       |                                    |       |                     |       |
|                        | Monitoring and Evaluating Changes in Salinity to Determine Progress Towards Achieving End of Valley Targets, Within Valley Targets as well as Identifying Hot Spots and Priority Areas | 30,155                             |       | 30,155              |       |                                    |       |                     |       |
|                        | Salt Tolerant Species for Rehabilitation in the Border Rivers/Gwydir   | 21,167                             |       | 21,167              |       |                                    |       |                     |       |
|                        | Targeted Investment to Change Landuse Management for Improved Salinity and Water Quality Outcomes in the Border Rivers/ Gwydir   | 40,000                             |       | 40,000              |       |                                    |       |                     |       |
|                        | Water Use and Efficiency   | 17,722                             |       | 17,722              |       |                                    |       |                     |       |
| Central West           | Salinity - Effective Interception Planting   | 296,500                            |       | 296,500             |       |                                    |       |                     |       |
|                        | Salinity - Management of Perennials  | 190,000                            |       | 190,000             |       |                                    |       |                     |       |

| Region               | Activity Title  | Budgeted Activity Expenditure (\$) |       |                     |       | Reported Activity Expenditure (\$) |       |                     |       |
|----------------------|---|------------------------------------|-------|---------------------|-------|------------------------------------|-------|---------------------|-------|
|                      |   | July 03 - March 04                 |       | Total to March 2004 |       | July 03 - March 04                 |       | Total to March 2004 |       |
|                      |   | NAP                                | Trust | NAP                 | Trust | NAP                                | Trust | NAP                 | Trust |
| Lachlan              | Improved Farming Systems to Better Manage Salinity  | 235,000                            |       | 235,000             |       |                                    |       |                     |       |
|                      | Interception Tree Planting to Manage Salinity   | 60,000                             |       | 60,000              |       |                                    |       |                     |       |
| Lower Murray Darling | Cropping Soils and Recharge Management  | 34,650                             |       | 34,650              |       |                                    |       |                     |       |
| Murray               | Implementation of Murray Region Land and Water Management Plans   | 2,204,320                          |       | 2,204,320           |       |                                    |       |                     |       |
| Murrumbidgee         | Developing and Implementing Best Management Practices for Dryland Cropping Systems to Achieve Improved Soil and Water Management                      | 175,000                            |       | 175,000             |       |                                    |       |                     |       |
|                      | Establish Agroforestry for Groundwater Interception   | 90,000                             |       | 90,000              |       |                                    |       |                     |       |
|                      | Establishment and Improved Management of Perennial Pastures for Persistence Groundcover and Control of Degradation Particularly Dryland Salinity      | 366,000                            |       | 366,000             |       |                                    |       |                     |       |
|                      | Establishment and Maintenance of Saline Perennial Pastures for Salinity Control in Saline Sites in Twelve Priority salinity Sub-catchments            | 133,000                            |       | 133,000             |       |                                    |       |                     |       |
|                      | Grain and Graze   | 90,000                             |       | 90,000              |       |                                    |       |                     |       |
|                      | Implementation of Part of MIA EnviroWise  | 1,093,000                          |       | 1,093,000           |       |                                    |       |                     |       |
|                      | Implementation of Parts of the Coleambally, Kerarbury and Coleambally Outfall District Land and Water Management Plans                                | 537,250                            |       | 537,250             |       |                                    |       |                     |       |
|                      | Profitable Animal Production From Perennials  | 90,000                             |       | 90,000              |       |                                    |       |                     |       |
|                      | Strategy to Assess and Prioritise the Extent and Impact of Urban Salinity on High Value Infrastructure in Urban Centres in the Murrumbidgee Catchment | 225,000                            |       | 225,000             |       |                                    |       |                     |       |

| Region          | Activity Title  | Budgeted Activity Expenditure (\$) |       |                     |       | Reported Activity Expenditure (\$) |       |                     |       |
|-----------------|---|------------------------------------|-------|---------------------|-------|------------------------------------|-------|---------------------|-------|
|                 |   | July 03 - March 04                 |       | Total to March 2004 |       | July 03 - March 04                 |       | Total to March 2004 |       |
|                 |   | NAP                                | Trust | NAP                 | Trust | NAP                                | Trust | NAP                 | Trust |
| Namoi           | Benefit-Cost Analysis (Salinity)  | 10,000                             |       | 10,000              |       |                                    |       |                     |       |
|                 | Facilitation and Coordination (Salinity)  | 40,000                             |       | 40,000              |       |                                    |       |                     |       |
|                 | Identification of Salinity Hazard Areas   | 10,000                             |       | 10,000              |       |                                    |       |                     |       |
|                 | Monitoring and Evaluation (salinity)  | 10,000                             |       | 10,000              |       |                                    |       |                     |       |
|                 | Property Planning to Address Salinity   | 20,000                             |       | 20,000              |       |                                    |       |                     |       |
|                 | Salinity Education Awareness and Communication  | 40,519                             |       | 40,519              |       |                                    |       |                     |       |
|                 | Salinity Technical Support and On-Ground Works  | 50,000                             |       | 50,000              |       |                                    |       |                     |       |
| Victoria        |   |                                    |       |                     |       |                                    |       |                     |       |
| Corangamite     | Geelong and Environs - Salinity risk reduction  | 400,000                            |       | 400,000             |       | 105,000                            |       | 105,000             |       |
|                 | Lakes and Plains and Northern Foothills Sub Region - Salinity Risk Reduction                  | 400,000                            |       | 400,000             |       | 147,000                            |       | 147,000             |       |
|                 | Leigh Moorabool - Salinity risk Reduction   | 205,000                            |       | 205,000             |       | 15,000                             |       | 15,000              |       |
|                 | Salinity Action - Coordination  | 110,000                            |       | 110,000             |       | 68,835                             |       | 68,835              |       |
|                 | Salinity Action - Knowledge management and sharing  | 40,000                             |       | 40,000              |       | 15,000                             |       | 15,000              |       |
|                 | Salinity Action - Science   | 75,000                             |       | 75,000              |       |                                    |       |                     |       |
| Glenelg Hopkins | A systems approach to Implementing Improved Salinity and Water Quality on Farms               | 60,000                             |       | 60,000              |       | 45,000                             |       | 45,000              |       |
| Glenelg Hopkins | Incentives for On Ground Works for Dryland Salinity Management                                | 400,000                            |       | 600,000             |       | 365,655                            |       | 365,655             |       |
|                 | Regional Monitoring and Evaluation Plan for Salinity  | 48,000                             |       | 48,000              |       | 36,000                             |       | 36,000              |       |
|                 | Research and Development Compendium of Salinity and water Quality Research                    |                                    |       | 50,000              |       | 25,109                             |       | 35,619              |       |
|                 | Review of a systems approach to implement improved salinity and water quality manage on farms |                                    |       | 24,000              |       | 16,983                             |       | 16,983              |       |
|                 | Salinity Plan Coordination  |                                    |       | 75,000              |       |                                    |       | 75,000              |       |
|                 | Salinity Plan Coordinator   | 90,000                             |       | 90,000              |       | 44,550                             |       | 44,550              |       |

| Region          | Activity Title  | Budgeted Activity Expenditure (\$) |       |                     |       | Reported Activity Expenditure (\$) |       |                     |       |
|-----------------|---|------------------------------------|-------|---------------------|-------|------------------------------------|-------|---------------------|-------|
|                 |   | July 03 - March 04                 |       | Total to March 2004 |       | July 03 - March 04                 |       | Total to March 2004 |       |
|                 |   | NAP                                | Trust | NAP                 | Trust | NAP                                | Trust | NAP                 | Trust |
| Goulburn Broken | Landcare Network Support  | 28,000                             |       | 28,000              |       | 21,000                             |       | 21,000              |       |
|                 | Monitoring and Evaluation   | 30,000                             |       | 30,000              |       | 22,500                             |       | 22,500              |       |
|                 | Municipal Implementation Plan   | 30,000                             |       | 30,000              |       | 22,500                             |       | 22,500              |       |
|                 | SEDNet Target Program   | 100,000                            |       | 100,000             |       | 75,000                             |       | 75,000              |       |
| Mallee          | Environmental Management Systems- Whole Farm Planning (Dryland)                       | 170,000                            |       | 170,000             |       |                                    |       |                     |       |
|                 | Estimating recharge   | 40,000                             |       | 40,000              |       | 9,750                              |       | 9,750               |       |
|                 | Farming systems to reduce recharge  | 130,000                            |       | 130,000             |       | 46,125                             |       | 46,125              |       |
|                 | Mallee Salinity and Water Quality Management Plan evaluation program                  | 69,930                             |       | 69,930              |       |                                    |       |                     |       |
| North Central   | Avon and Upper Richardson Targeted Salinity Project                                   | 251,000                            |       | 251,000             |       | 140,250                            |       | 140,250             |       |
|                 | Bullabul targeted salinity project.   | 172,000                            |       | 172,000             |       | 94,500                             |       | 94,500              |       |
|                 | Carapooee targeted salinity project.  | 147,000                            |       | 147,000             |       | 81,750                             |       | 81,750              |       |
|                 | Dryland Salinity Plan Program Management  | 85,000                             |       | 85,000              |       | 48,000                             |       | 48,000              |       |
|                 | Glenloch targeted salinity project  | 283,000                            |       | 283,000             |       | 169,500                            |       | 169,500             |       |
|                 | Lower Avon-Richardson Salinity Study - Phase 2 & 3.                                   | 25,000                             |       | 25,000              |       | 11,250                             |       | 11,250              |       |
|                 | Natte Yallock targeted salinity project.  | 208,000                            |       | 208,000             |       | 115,500                            |       | 115,500             |       |
|                 | North Central Dryland Salinity Technical Support Group                                | 60,000                             |       | 60,000              |       | 22,500                             |       | 22,500              |       |
|                 | Pental Hills targeted salinity project  | 259,000                            |       | 259,000             |       | 153,000                            |       | 153,000             |       |
|                 | Redbank targeted salinity project.  | 171,000                            |       | 171,000             |       | 93,750                             |       | 93,750              |       |
|                 | Timor West targeted salinity project.   | 223,000                            |       | 223,000             |       | 117,750                            |       | 117,750             |       |
|                 | Upper Bet Bet targeted salinity project.  | 223,000                            |       | 223,000             |       | 136,500                            |       | 136,500             |       |
| Wimmera         | Implementation of priority actions in the draft Wimmera Regional Salinity Action Plan | 662,300                            |       | 662,300             |       | 394,556                            |       | 394,556             |       |
| Total           |   | 11,359,280                         | -     | 11,708,280          | -     | 2,659,813                          | -     | 2,745,323           | -     |

## Achievements

The outputs, or products and services produced by these activities, are summarised in three tables according to the types of outputs described in Chapter 1. Summaries of the outputs related to planning, capacity building and on-ground activities are shown in Table 3.2.5, Table 3.2.6 and Table 3.2.7.

82

**Table 3.2.5** Regional investment planning outputs related to land salinity

| Standard Output                                    | July 03 - March 04 |       |       | Total to March 04 |       |       |
|--|--------------------|-------|-------|-------------------|-------|-------|
|  | NAP                | Trust | Joint | NAP               | Trust | Joint |
| <b>Improved practice codes or guidelines</b>       |                    |       |       |                   |       |       |
| Number developed                                   | 1                  |       |       | 1                 |       |       |
| <b>Integrated catchment or sub-catchment plans</b> |                    |       |       |                   |       |       |
| Number developed                                   | 1                  |       |       | 1                 |       |       |
| <b>Property management plans</b>                   |                    |       |       |                   |       |       |
| Number completed                                   | 680                |       |       | 680               |       |       |

**Table 3.2.6** Regional investment capacity building outputs related to land salinity

| Standard Output  | July 03 - March 04 |       |       | Total to March 04 |       |       |
|--|--------------------|-------|-------|-------------------|-------|-------|
|  | NAP                | Trust | Joint | NAP               | Trust | Joint |
| <b>Awareness raising activities</b>  |                    |       |       |                   |       |       |
| Number of demonstrations, field days, study tours and other non-training forums held | 4                  |       |       | 4                 |       |       |
| Number of media opportunities including websites developed                           | 12                 |       |       | 12                |       |       |
| <b>Skills and training activities</b>  |                    |       |       |                   |       |       |
| Number of training sessions, workshops seminars and other events held                | 1                  |       |       | 1                 |       |       |

**Table 3.2.7** Regional investment on-ground activity outputs related to land salinity

| Standard Output                                   | July 03 - March 04 |       |       | Total to March 04 |       |       |
|---|--------------------|-------|-------|-------------------|-------|-------|
|   | NAP                | Trust | Joint | NAP               | Trust | Joint |
| <b>Indigenous vegetation protected by fencing</b> |                    |       |       |                   |       |       |
| Area (hectares) protected                         | 842                |       |       | 842               |       |       |
| <b>Revegetation with indigenous vegetation</b>    |                    |       |       |                   |       |       |
| Area (hectares) revegetated                       | 393.5              |       |       | 393.5             |       |       |
| <b>Revegetation with exotic vegetation</b>        |                    |       |       |                   |       |       |
| Area (hectares) revegetated                       | 8226               |       |       | 8226              |       |       |

## Land salinity targets

### Resource condition targets related to approved investment activities

Land salinity targets are shown in Table 3.2.8.

**Table 3.2.8** Resource condition targets for land salinity

| Region                       | Resource condition target   |
|------------------------------|---|
| Australian Capital Territory |   |
| Australian Capital Territory | By 2005, ACT complying with the Murray-Darling Basin salinity target agreed for the ACT   |
| New South Wales              |   |
| Border Rivers - Gwydir       | By 2012, to minimise the impact of dryland salinity, the area of land where the ground water is within 2 metres of the surface will not exceed 16,800 ha  |
| Lachlan                      | By 2012, the Lachlan River at Forbes will be equal to or less than: 80th percentile for salinity concentrations levels at 550 EC  |
|                              | By 2012, the Lachlan River at Forbes will be equal to or less than: 50th percentile for salinity concentration levels at 410 EC   |
|                              | By 2012, the Lachlan River at Forbes will be equal to or less than: 50th percentile for salt load at 240,000 tonnes annually  |
|                              | By 2012, the Lachlan River at Forbes will be equal to or less than: 80th percentile for salt load of 290,000 tonnes annually  |
| Namoi                        | By 2010, to reduce the mobilisation of salt across the whole catchment by ensuring that the area of land affected by a watertable within 2 m of the surface does not exceed the current level – 2,896 ha  |
| South Australia              |   |
| Mount Lofty Ranges           | Natural resources associated with primary production land sustained in accordance with land capability and in a manner that does not impact negatively on natural resources, targeting particular industries or priority areas by 2010                  |
|                              | To halt the rise in saline groundwater levels in catchments throughout the region by 2022   |
| SA Murray Darling Basin      | By 2015, a 30% reduction in priority areas of floodplain currently affected by salt   |
|                              | By 2020 groundwater resources will not have salinity impacts on land condition and will meet the needs of dependent ecosystems  |
|                              | By 2015, to have salinity of water in the River Murray less than: 543EC for 80% of the time at Berri Irrigation Pump Station  |
|                              | By 2015, to have salinity of water in the River Murray less than: 412EC for 80% of the time downstream of Rufus River   |
|                              | To have an increasing trend in soil carbon levels in cropping soils leading to improved soil health by 2020   |
|                              | By 2015, to have salinity of water in the River Murray less than: 800EC for 95% of the time at Morgan   |
|                              | By 2020, reduce the area of agricultural land at risk or wind erosion during June each year by 40%  |
|                              | By 2020 improve or maintain condition of terrestrial native vegetation focusing on identified priority areas and improve condition of 50% of remnant vegetation on private land as well as increasing vegetation cover by 1% in the agricultural region |
|                              | By 2020 to have constrained the area of salt and waterlogging affected land within the Irrigation areas   |
|                              | By 2015, to have salinity of water in the River Murray less than: 770EC for 80% of the time at Murray Bridge Pump Station   |
|                              | By mid 2006, to have reduced the total drainage volume from highland irrigation areas by 50%  |
|                              | Reduce recharge by improving dryland water use efficiency to 70% across the region by 2020  |
|                              | By 2020 to have constrained the area of salt affected land within the region to 120,000 ha  |
|                              | By mid 2006, to have reduced the total drainage volume from highland irrigation areas by 50%  |
| South East                   | Predicted rate of increase in salinity across all other salinity affected areas in the upper South East reduced by 50% by 2020  |
|                              | Area of saline land to be reduced by 30% within the drained area of the Upper South East by 2010  |
|                              | Current and predicted trends in the salinity of groundwater in the unconfined aquifer used for productive purposes remain within acceptable levels by 2011 and beyond   |

| Region  | Resource condition target   |
|---|---|
| Victoria  |   |
| Corangamite   | Reduce salinity in the surface storages of the Moorabool river system from an average 1000 µs/cm/yr to an average of 700 µs/cm/yr by 2020   |
|   | Reduce the area of land at risk of secondary salinity processes from approximately 213,000 ha to 50,900 ha by 2020  |
|   | Develop a process to identify and establish Resource Condition Targets for community participation by 2004  |
|   | By 2010, all Corangamite region priority waterways condition is maintained to 2003 condition  |
| Glenelg Hopkins   | The aspirational target for the Salinity Plan is: that surface and groundwater salinity levels do not impact on key regional assets   |
|   | Other resource condition targets will be developed by 2004  |
| Goulburn Broken   | Manage salinised land and land with high watertable in the riverine plain ("live with salt"). This means managing salinised land in the riverine plain: 30,000ha by 2100 and managing land with high watertables in the riverine plain 120,000 ha by 2100 |
|   | Reduces increase in salinisation of dryland areas where possible. This means reducing area of dryland that would otherwise be salinised (in foothills and river valleys of highland areas): 1,500 ha by 2050  |
|   | Maintain increase to salinity levels of the River Murray at Morgan from the Goulburn Broken Dryland at or below 1.3 ECs by 2050. This means reducing saltload by 34,000 tonnes per year by 2050   |
|   | Increase the cover of all endangered and applicable vulnerable EVCs to at least 15% of their pre-European vegetation cover by 2030  |
| Mallee  | Land threatened by salinisation reduced from 10% to 8% of total land surface  |
|   | Total groundwater recharge reduced by 20%   |
| North Central   | Greater than 90% currently salt affected agricultural land within the targeted project areas in the Loddon, Avoca and Aon-Richardson catchments will be stabilised with vegetation and either restored to agricultural production or revegetated by 2012  |
|   | Avoid future salt load export from the Glenloth project area (Avoca River). Reduce salt load export from dryland salinity targeted project areas: Upper Bet Bet by 3000 t/y; Timor West by 2000 t/y; Natte Yallock by 5000 t/y; Bullabul by 3500 t/y      |
|   | No net increase in the area of land with water table depths < 4 m and with rising trend in the upper Bet Bet, Bullabul, Carapooee, Redbank, Pental Hills and Reedy and Paradise dryland salinity targeted project areas by 2012                           |
|   | Reduce the irrigated land area of salt effected land (C and D class) to a specified % and increase the % of irrigate area that is A and B class soils by the year 2023.   |
|   | Increase the area of land with water table >4 m depth by 50% in the Avon-Upper Richardson, Glenloth and Natte Yallock dryland salinity targeted project areas by 2012   |
|   | Manage salt loads exported from the land to the river Murray and regional waterways and wetlands within EC credit limits and ecological limits  |
|   | Maintain long term trend for real increase in the gross value of agricultural production from mid catchment broad acre farming areas by 2012  |
|   | Reduce regional irrigation tail water flows and accessions to groundwater by between 20% to 50% by the year 2023.   |
| Achieve agreed Murray-Darling Basin 2015 within-valley and end-of-valley water quality targets. |   |
| Wimmera   | Maintenance and improvement of soil health by levels to be determined by 2004   |

## Management action targets related to approved investment activities

Accredited regional plans detail management action targets having a major focus on land salinity. Management action targets are shown in Table 3.2.9.

**Table 3.2.9** Management action targets for land salinity

| Region                       | Management action target   |
|------------------------------|--|
| Australian Capital Territory |  |
| Australian Capital Territory | Beginning in 2005, increase perennial vegetation in saline and potentially saline catchments with the aim of reduction in recharge consistent with the findings in ST1   |
|                              | By 2004, the extent of known and potential salinity risk in rural and urban areas determined   |
| New South Wales              |  |
| Central West                 | By 2012, establish and manage a site specific range of large forestry plantings in 10% of the physical area of key upland landscapes   |
|                              | By 2012, establish and manage large interception plantings in 30% of suitable sites in identified key upland landscapes  |
|                              | By 2012, increase by 30% the area of well managed perennials (including native grasses) in identified recharge landscapes across the catchments  |
|                              | By 2012, reduce accessions to the water table by increasing water use efficiency in irrigation farming systems on 70% of irrigated land.   |
|                              | By 2012, reduce accessions to the watertable by increasing water use efficiency in dryland farming systems on 50% of cropped landscapes in the catchments  |
| Hawkesbury - Nepean          | By 2012, there is a 20% reduction in the area of severely to moderately degraded saline discharge sites  |
| Hunter - Central Rivers      | A 2,500 ha (approximately 10%) net gain of perennial groundcover of vegetation in priority discharge sites by 2012   |
|                              | A 5,000 hectare (approximately 2%) net gain of deep-rooted vegetation in identified priority recharge areas by 2012, with at least 50% of project areas designed to re-establish native vegetation communities |
| Lachlan                      | 30% of suitable sites in key saline landscapes planted to large interception plantings   |
|                              | 30% of the area of known saline discharge sites managed for landscape protection   |
|                              | 70% of land under irrigation will operate under efficient water use practices  |
|                              | By 2005 maintain and by 2012 improve the extent and condition of existing remnant vegetation in saline landscapes to prevent further land salinisation   |
|                              | Establish and manage multi-purpose tree plantings in 30% of key upland landscapes  |
|                              | Increase by 30% the level of perennial pastures managed to achieve optimal water use efficiency in key upland landscapes   |
|                              | Reduce recharge on 30% of dryland cropped landscapes through the use of water efficient farming systems  |
| Lower Murray Darling         | Implement effective on-farm irrigation management practices in 90% of farms by the year 2012 to minimise drainage and groundwater accessions   |
|                              | No nett increase in the risk of land and river salinisation due to the effect of dryland cropping, between 2002 and 2012   |
| Murray                       | By 2012, establish 185,000 hectares of perennial pastures (both introduced and native) in appropriate landscape units within the salinity priority area  |
|                              | By 2012, establish 5,000 hectares of plantation forestry in landscape units where the opportunity to reduce recharge or intercept groundwater flow is maximised  |
|                              | By 2012, reduce groundwater leakage by improving landholder skills, knowledge, and water management by 1170 (70%) of irrigation properties preparing whole farm plans  |
|                              | By 2012, reduce groundwater leakage by improving landholder skills, knowledge, and water management by 1500 (90%) of irrigation landholders undertaking irrigation training programs                           |
|                              | By 2012, reduce groundwater leakage by improving landholder skills, knowledge, and water management by 840 (50%) of irrigation properties installing on-farm drainage and re-use systems                       |

| Region   | Management action target   |
|--|--|
| Murray   | By 2012, reduce groundwater leakage by improving landholder skills, knowledge, and water management by increasing by 50% the number of dryland landholders currently undertaking a whole farm approach to addressing dryland salinity              |
|  | By 2012, reduce groundwater leakage by improving landholder skills, knowledge, and water management by promoting grazing management strategies   |
|  | To establish 23,800 ha targeted predominantly woody vegetation in the salinity priority areas by 2012  |
| Murrumbidgee   | By 2012, assist land managers and communities to rehabilitate 60% of severe and moderate saline discharge sites in the 12 priority sub catchments in the Murrumbidgee  |
| Namoi  | By 2010, to have 60% of land managers and an area of 18600 sq km across the whole of the Namoi catchment managed to minimise the mobilisation of salt to an agreed set of BMPs and in identified hazard areas to increase the adoption rate to 80% |
|  | From 2001, retain all vegetation on saline discharging areas and establish an additional 1000 ha of ground cover to be managed at greater than 70% cover   |
| South Australia  |  |
| Mount Lofty Ranges   | To increase the productivity of existing salt affected land by 30% by 2022   |
| SA Murray Darling Basin  | To be implementing LWMPs in all irrigation areas by 2006   |
|  | To be implementing plans by 2005 to protect all priority assets  |
|  | To have completed a biological survey of the River Murray corridor including the river system by 2005  |
|  | To have implemented a system for cost effective, consistent measurement and recording of water use efficiency at farm, district and regional scales by 2004  |
|  | To have introduced by 2005 market-based mechanisms to prevent a net increase in salt loads to the River Murray   |
|  | To have invested in targeted research, particularly to enhance knowledge of: market-based approaches to natural resource management  |
|  | To have invested in targeted research, particularly to enhance knowledge of: methods to improve rural and urban water use efficiency   |
|  | To have invested in targeted research, particularly to enhance knowledge of: new farming systems   |
|  | To have invested in targeted research, particularly to enhance knowledge of: salinity processes  |
|  | To have invested in targeted research, particularly to enhance knowledge of: the impacts of climate change on natural resources  |
|  | To have prepared Land and Water Management Plans for all irrigation areas by 2006  |
| To review and refine allocation plans for prescribed water resources by 2005 |  |
| South East   | Establish benchmark irrigation practices to enable management of risk to groundwater resources to within acceptable limits by 2008   |
|  | Quantify the salt accession rate and determine high risk areas by 2008   |
|  | Underground water is managed within its capability in two priority areas (Padthaway and Keith) by 2008   |
| Corangamite  | By 2008, develop and implement adaptive Landuse systems to reduce recharge and slow the rise of groundwater tables   |
|  | By 2008, treat 4500 ha of secondary salinity discharge to achieve a 20% reduction in the predicted area affected   |
|  | Determine salinity threats and the risks to rivers, streams and wetlands in the region by 2006   |
|  | Develop active management plans for 4,000 ha of primary salinised lands and wetlands by 2008   |
|  | Encourage community involvement and ownership of natural resource management issues in the region. Provide information and resources at a local level to help develop appropriate actions  |
|  | Improve access to information across levels of government to target specific groups, identifying why issues are important and what people can do   |

| Region          | Management action target  |
|-----------------|---|
| Glenelg Hopkins | Achieve a variety of biodiversity and water quality targets through development of a Regional Wetland Action Plan   |
|                 | Achieve biodiversity targets by building regional capacity of regional biodiversity assets, values and threats  |
|                 | Achieve native vegetation resource condition targets through building partnerships with private landholders to preserve rare EVCs   |
|                 | Achieve native vegetation resource condition targets through facilitating regional implementation of the Bushcare program   |
|                 | Achieve native vegetation resource condition targets through implementing key actions from The Glenelg Hopkins CMA Native Vegetation Plan   |
|                 | Achieve native vegetation resource condition targets through supporting the development and implementation of Roadside Vegetation Plans   |
|                 | Achieve native vegetation resource condition targets through the development of conservation covenants to protect areas of high value remnant vegetation  |
|                 | Achieve river health resource condition targets through implementing key actions from The Glenelg Hopkins CMA River Health Strategy   |
|                 | Address potential climate change threats to biodiversity through investigation and preparation of an appropriate strategic response   |
|                 | Build capacity and knowledge of industry and local government to plan and protect biodiversity, particularly threatened species and critical habitat  |
|                 | Build partnerships with conservation groups, recovery teams, universities and museums to help preserve biodiversity   |
|                 | Build regional capacity to manage soil issues through heightening awareness and increasing use of land degradation analysis   |
|                 | Build regional capacity to undertake scenario planning, catchment modelling and project planning  |
|                 | Continue community consultation process in the development of endorsed strategies   |
|                 | Contribute to meeting biodiversity aspirational target through completing and implementing Action Statements and Recovery Plans for listed threatened species   |
|                 | Contribute to meeting biodiversity aspirational target through reviewing, refining and implementing relevant Flora and Fauna Guarantee Action Statements  |
|                 | Develop industry-specific best practice EMS guidelines for incorporation into whole-farm planning   |
|                 | Establish mechanisms, procedures and policies to ensure the Board and IC members report back to their constituents and carry the messages of their constituents into the planning process                   |
|                 | Facilitate regional implementation of Victoria's Biodiversity Strategy and complete associated Bioregion Action Plans   |
|                 | Identify regional biodiversity research priorities and undertake appropriate research   |
|                 | Increase catchment community knowledge of soil acidification issues   |
|                 | Investigate joint projects with Corangamite CMA to protect significant wetlands   |
|                 | Investigate the feasibility of regional implementation of the Bush Tender process to achieve native vegetation resource condition targets   |
|                 | Meet communication targets through implementing The Glenelg Hopkins CMA Communications Plan   |
|                 | Meet salinity resource condition targets through implementing key actions from The Glenelg Hopkins CMA Salinity Plan  |
|                 | Meet soil and salinity aspirational targets through continuing to identify and manage soil erosion sites  |
|                 | Move toward achievement of biodiversity aspirational target by building regional capacity through training and education programs to increase awareness of regional biodiversity assets, values and threats |
|                 | Protect important biodiversity values found in the parks network through the implementation of park management plans  |
|                 | Protect internationally significant wetlands through implementation of the Western District Lakes Ramsar Site Strategic Management Plan   |
|                 | Raise profile of The Glenelg Hopkins CMA Board and Implementation Committees (IC)   |

| Region          | Management action target  |
|-----------------|---|
| Glenelg Hopkins | Reduce threats to biodiversity asset through implementing biodiversity protocols  |
|                 | Reduce threats to biodiversity assets through developing regional Threat Abatement Plans  |
|                 | Support regional sustainability initiatives through facilitating implementation of key actions from the South West Sustainability Blueprint   |
|                 | Update the Land and Water Management Contacts booklet   |
| Victoria        |   |
| Goulburn Broken | By 2007 plant, direct seed or naturally regenerate 8000ha (162,000ha by 2030) of native vegetation  |
|                 | Develop and implement Local Area Plans in the riverine plains   |
|                 | Establish high density trees or their equivalent over 148,000ha by 2050   |
|                 | Identify key recharge areas in the dryland and understand the recharge mechanisms at work   |
|                 | Reduce area of dryland that would otherwise be salinised 1,500ha by 2005  |
| Mallee          | All land affected by rising saline groundwater covered by appropriate management action plans   |
|                 | Extent of critical assets identified to enable better planning  |
|                 | Farming systems that reduce groundwater recharge adopted  |
|                 | Information on salt mobilisation trends improved to enable better investment planning.  |
|                 | Land capability mapped and land use monitored to enable continuous improvement in land management and continuous reduction in groundwater recharge  |
| North Central   | Agreed 5-year work program under surface water management project of Loddon-Murray LWMS implemented by 2008. Agreed programs under SIRCS implemented, including surface water and tail water management strategies  |
|                 | Agreed 5-year work program under sustainable agriculture project of the Loddon Murray LWMS, including reuse schemes, whole farm planning (FARMAP concept) and drainage diversion implemented by 2008. Agreed farm programs under SIRCS implemented          |
|                 | Agreed five year works program implemented under the irrigation supply system management and surface drainage management projects of the Loddon-Murray to protect water resources from salinity. Also priority irrigation and drainage programs implemented |
|                 | Assistance for adjustment with future land use packages (based on Kerang Swan Hill model) implemented across region by 2004   |
|                 | Extension on land and water management to upper catchment irrigators provided   |
|                 | Farming systems and management practices that increase resilience in the face of climate variability and climate change developed by 2008   |
|                 | Farming systems that suit floodplain environments and natural resource issues developed and reported by 2008  |
|                 | Guidelines for sustainable management of rural residential land developed by 2005   |
|                 | Irrigation efficiency to reduce groundwater accessions and irrigation tail water discharges improved. Audit energy demands and availability for pressurised irrigation  |
|                 | Irrigation EMS developed by 2005  |
|                 | Salinity processes in key dryland salinity research priority areas investigated. Assess and report on opportunities to protect environmental, agricultural and water resources by 2004  |
|                 | Salt interception. Continue to address the impacts of salt accumulation, new opportunities for commercial salt harvesting and saline water reuse.   |
|                 | Targeted salinity projects in priority projects in Bet Bet, Redbank, Carapooee, Reedy Creek, Paradise Creek completed by 2008 and targeted salinity projects in Timor West, Bullabul, Natte Yallock, Pental Hills, Glenloth and Marnoo completed by 2012    |
| Wimmera         | Five per cent increase in recommended land management techniques including minimum tillage, controlled traffic and stubble retention to manage soil structure by 2007, measured by annual crop transect monitoring  |
|                 | Fully Implemented Wimmera Regional Salinity Action Plan by 2007   |
|                 | Increase landholder participation in extension activities such as Topcrop (currently 20 per cent) by 2005   |
|                 | Increase number of landholders who have prepared an integrated property plan (currently 20 per cent) by 2007  |