



LOCAL TAB: South Australia

Building capacity to implement natural resources information management systems.

www.nlwra.gov.au

SOUTH AUSTRALIA

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Guide to symbols

The following symbols are used throughout the Toolkit as a guide to users, and draw attention to important issues and information.



Information which readers should take particular note of



Best practice information



Tips for readers—based on experience and aimed at saving time and resources



Caution—readers are advised that particular care should be taken or that the subject issue may be complex



Additional information



Capability raising—used to show a signpost to a higher capability level

**Bold
Text**

Used to highlight a particular issue

**Boxed
Text**

Highlighting of issues specifically related to ANZLIC or the Audit

Local Tab: South Australia

South Australia has recently undergone a major restructuring and now has the nation's most comprehensive natural resources management (NRM) legislation which establishes a structure for the development of ecological sustainability for the state:

<http://www.dwlbc.sa.gov.au/nrm/index.html>

1 Material on South Australian NRM programs

Material on South Australian NRM programs is available online via a series of dedicated websites dealing with the NRM Council, NRM Register, State NRM Plan, Regional NRM Plans, and Reports and Publications:

<http://www.dwlbc.sa.gov.au/nrm/index.html>

2 Additional material on NRM programs

NRM Program: <http://www.nrm.gov.au/>

National Land & Water Resource Audit: <http://www.nlwra.gov.au/>

3 Spatial data Infrastructures and policies

South Australian NRM Policy Information

http://www.dwlbc.sa.gov.au/nrm/topics/nrm_policies.html

General resource material

Australian Spatial Data Infrastructure (ASDI):

http://www.anzlic.org.au/infrastructure_ASDI.html

ANZLIC policies: <http://www.anzlic.org.au/policies.html>

Australian Spatial Data Infrastructure (ASDI): <http://www.ga.gov.au/nmd/asdi>

Office of Spatial Data Management (OSDM): <http://www.osdm.gov.au/>

'Snapshot of SDI Development in Australia':

http://www.geom.unimelb.edu.au/research/publications/IPW/024_Warner%20REF.pdf

4 Copyright and Intellectual property

South Australian Office of the Chief Technical Officer (CTO)

http://www.cto.sa.gov.au/architecture-and-standards/policies-and-standards/data-and-information/cto_p3-4_protection_intellectual_property_rights.pdf

Additional Information:

Copyright: The Australian Copyright Council produces a number of information sheets and a range of detailed practical guides that provide additional information about copyright law and how it applies in practice.

The information sheets and additional resource material are available at:

<http://www.copyright.org.au/information/introductory.htm>.

Intellectual Property or IP: IP represents the property of the mind or intellect. In business terms this also means proprietary knowledge. Types of IP include patents, trade marks, designs, copyright, circuit layout rights, plant breeder's rights, and confidentiality/trade secrets. IP Australia maintains a website providing background information on IP in Australia and guidelines on how to develop a strategy to protect IP rights. See: <http://www.ipaustralia.gov.au/ip/introduction.shtml>.

5 Data access and licensing policies

The *Office of the Chief Technology Officer website* is the central, authoritative point of reference for information and communications technology standards, architecture, initiatives, service delivery, contact management and sourcing information:

http://www.cto.sa.gov.au/architecture-and-standards/policies-and-standards/index_html and

<http://www.cto.sa.gov.au/architecture-and-standards/policies-and-standards/data-and-information>

The National Land & Water Resources Audit (the Audit) and ANZLIC – the Spatial Information Council

The Audit and ANZLIC have collectively developed a Data Access and Management Agreement signed by all jurisdictions in September 2001. The agreement provides for consistent access arrangements to the datasets held by the Audit and its jurisdictional partners. See <http://www.anzlic.org.au/get/2375374673>

In addition, ANZLIC and the Audit have collaborated in developing a model agreement for use in any natural resource management program. The Model Data Access and Management Agreement (<http://www.anzlic.org.au/get/2375374755>) incorporates guidelines for custodianship, metadata, archiving, accessing, data licensing and pricing and puts them into an operational context.

6 Data discovery, visualisation and reporting

NRM Information

Numerous South Australian Government agencies maintain and manage spatial datasets. For a listing of datasets refer:

http://www.environment.sa.gov.au/mapland/sicom/accessing_data.html#dataset and

http://www.environment.sa.gov.au/mapland/spatial_products.html

Nature Maps

The South Australian Department for Environment and Heritage's interactive online mapping site supporting NatureLinks:

<http://www.naturemaps.sa.gov.au/>

Atlas of South Australia

Planning SA's online mapping application providing economic, images, infrastructure, land management, natural environment, population and social thematic datasets for visualisation:

<http://www.atlas.sa.gov.au/>.

Other sources of spatial data

Some datasets from these websites are available for download:

- [SA Spatial – the website of the Spatial Information Committee](#)
- [Australian Agriculture and Natural Resources Online database](#)
- [Australian Bureau of Agricultural and Resource Economics Data](#)
- [Australian Bureau of Statistics](#)
- [Australian Soil Resource Information System](#)
- [Australian Spatial Data Infrastructure](#)
- [Australian Spatial Data Directory](#)—online searches of all connected nodes for Australian spatial data maintained by GeoScience Australia
- [Bureau of Meteorology](#)
- [Discover Information Geographically](#)
- [Geoscience Australia](#)
- [Murray Darling Basin Commission](#)
- [Office of Spatial Data Management](#)

7 NRM monitoring and evaluation

An appropriate monitoring and evaluation (M&E) process should be an integral part of all NRM projects. Regardless of the funding source, it provides early recognition, and subsequent justification, to adjust any abatement or enhancement program to ensure optimal efficiency in investment and outcome for natural resources. Monitoring and evaluation is an important aspect for adaptive management of NRM programs.

In the past, monitoring and evaluation has tended to focus on actions (outputs) rather than changes (outcomes). This focus has tended to result in greater resources being directed towards activities with short-term pay-offs, at the expense of strategic programs that more effectively address resource condition issues.

Monitoring and evaluation, under new NRM arrangements in SA, will attempt to move away from that paradigm to a model that focuses on the changes in resource condition that result from the

actions undertaken. However, for this model to work effectively, there will need to be a recognition by all parties that many of these changes will not occur within the life-time of current programs.

The new M&E framework ensures that monitoring and evaluation across the state is coordinated, integrated, effective and efficient, and consistent with the National Monitoring and Evaluation Framework that applies to relevant bilateral agreements between South Australia and the Commonwealth Government.

South Australia's M&E framework establishes the following policies:

- all NRM plans, programs and projects are to include monitoring and reporting on the state and condition of natural resources over appropriate scales and timeframes
- evaluations are to be conducted at designated stages of delivery that are identified in the planning process
- costs of NRM monitoring will be shared amongst beneficiaries.

Under this model natural resource information should be:

- obtained to meet the strategic needs of government, industry and the community
- readily available to government, industry and the community
- captured on an agreed priority basis
- collected using a coordinated approach with uniform measurement standards, data management protocols, storage and retrieval
- consistent with national and international standards and protocols.

For additional information refer:

http://www.dwlbc.sa.gov.au/nrm/topics/monitoring_evaluation.html and

http://www.dwlbc.sa.gov.au/assets/files/NRM_StateNRMPPlan2006.pdf

National Land & Water Resources Audit

http://www.nlwra.gov.au/About_Us/Monitoring_and_Evaluation/index.aspx

The initial set of indicators developed by the Australian Government Monitoring and Evaluation Working Group has been used as the starting point for further development by the Audit. Information on the initial indicator set can be found at: <http://www.nrm.gov.au/me/index.html> Note: This site may not have the most up-to-date information on indicators.

South Australian Government contacts for further information relating to the Matters for Target and associated issues

Theme	Custodian Agency/s	Contact	Website
Soils	DWLBC	Department of Water, Land and Biodiversity Conservation Erosion: Giles Forward Senior Scientific Officer (Land Condition Monitoring Program) 08 8463 6835 forward.giles@saugov.sa.gov.au Soil Carbon: David Maschmedt Soil Scientist 08 8463 6682 maschmedt.david@saugov.sa.gov.au au	Australian Soil Resource Information System (ASRIS): http://www.asris.csiro.au/index_ie.html Digital Atlas of Australian Soils: http://www.daffa.gov.au/brs/data-tools/daas-lut-metadata DAFF Healthy Soils for Australian Farms: http://www.daff.gov.au/natural-resources/land-salinity/soils
	PIRSA	Primary Industries and Resources SA – Rural Solutions SA Acidity: Glenn Bailey Land Management Consultant 08 8762 9171 bailey.glenn@saugov.sa.gov.au	
Vegetation	DEH	Department of Environment and	Ecological Communities – Biological Surveys:

Theme	Custodian Agency/s	Contact	Website
		Heritage Felicity Smith GIS Team Leader 08 8463 3972 smith.felicity@saugov.sa.gov.au	http://www.environment.sa.gov.au/biodiversity/biosurveys.html Naturemaps – interactive online mapping site: http://www.naturemaps.sa.gov.au/ National Vegetation Information System: http://www.environment.gov.au/erin/nvis/index.html Vegetation Mapping and Monitoring Links: http://www.environment.gov.au/erin/nvis/links.html Integrated Vegetation Information for NAP and NRM regions: http://data.brs.gov.au/mapserv/intveg/index.html DAFF Vegetation: http://www.daff.gov.au/natural-resources/vegetation
Significant native species and ecological communities	DEH	Department of Environment and Heritage	Ecological Communities – Biological Surveys: http://www.environment.sa.gov.au/biodiversity/biosurveys.html Naturemaps - interactive online mapping site: http://www.naturemaps.sa.gov.au/
Water Quality (surface, marine and groundwater)	EPA	Environment Protection Authority David Duncan Principal advisor, water quality 08 8204 2094 david.duncan@epa.sa.gov.au	Water Quality in South Australia: http://www.epa.sa.gov.au/water_quality.html Australian Water Resources Information System (AWRIS): http://www.water.gov.au – Search on AWRIS OzCoasts and OzEstuaries Home Page: http://www.ozcoasts.org.au/
Coastal, Estuarine & Marine	DEH	Department of Environment and Heritage	Water Quality in South Australia: http://www.epa.sa.gov.au/water_quality.html

Theme	Custodian Agency/s	Contact	Website
		Patricia von Baumgarten Principal Marine Adviser 08 8124 4809 vonbaumgarten.patricia@saugov.sa.gov.au	Naturemaps – interactive online mapping site: http://www.naturemaps.sa.gov.au/ Coasts and Oceans Home Page: http://www.environment.gov.au/coasts/index.html Coastal CRC: http://www.coastal.crc.org.au/ National Land and Water Resources Audit: http://www.nlwra.gov.au/Natural_Resource_Topics/Estuarine_Coastal_and_Marine/index.aspx
Land Use	DWLBC	Department of Water, Land and Biodiversity Conservation David Tonkin GIS Manager 08 84636836 tonkin.david@saugov.sa.gov.au	Bureau of Rural Sciences: http://www.daff.gov.au/brs/land/use-management
Invasive Species	DWLBC	Department of Water, Land and Biodiversity Conservation Mark Ramsey Manager, Animal and Plant Control Group 08 83039530 ramsey.mark@saugov.sa.gov.au	DWLBC: http://dwlbc.sa.gov.au/biodiversity/pests/index.html Weeds: Australian Government Weeds: http://www.weeds.gov.au/ Australian Weeds Committee – Weeds Australia website: http://www.weeds.org.au/ DAFF Weeds: http://www.daff.gov.au/natural-resources/invasive/weeds

Theme	Custodian Agency/s	Contact	Website
			<p>CRC for Australian Weed Management: http://www.weeds.crc.org.au/index_flash.html</p> <p>Invasive Animals: Invasive Animals CRC: http://www.invasiveanimals.com/</p> <p>Australian Government/BRS Feral Animals: http://www.feral.org.au</p> <p>National Land & Water Resources Audit: http://www.nlwra.gov.au/Natural_Resource_Topics/Invasive_Species/index.aspx</p>
Land Salinity	DWLBC	Department of Water, Land and Biodiversity Conservation James Hall Senior Soil and Environmental Scientist 08 84636833 hall.james@saugov.sa.gov.au	<p>National Dryland Salinity Program: http://www.ndsp.gov.au/</p> <p>CRC for Plant-based Management of Dryland Salinity: http://www.crcsalinity.com/index.php</p> <p>DAFF Dryland Salinity: http://www.daff.gov.au/natural-resources/land-salinity/salinity</p> <p>National Land & Water Resources Audit: http://www.nlwra.gov.au/Natural_Resource_Topics/Land_Salinity/index.aspx</p> <p>Australian Soil Resource Information System (ASRIS): http://www.asris.csiro.au/index_ie.html</p>
Rangelands	DWLBC	Department of Water, Land and Biodiversity Conservation David Leek Manager, Pastoral Programme	

Theme	Custodian Agency/s	Contact	Website
		08 83039758 leek.david@saugov.sa.gov.au	
Wetlands	DEH	<p>Department of Environment and Heritage Biodiversity significance and value: Russell Seaman Principle Wetlands Officer 08 8222 9355 seaman.russell@saugov.sa.gov.au</p> <p>Department of Water, Land and Biodiversity Conservation Environmental flows, ecosystem processes: Glen Scholz Senior Ecologist 08 8463 6993 scholz.glen@saugov.sa.gov.au</p> <p>Environment Protection Authority Peter Goonan Senior Aquatic Ecologist 08 8204 2044 peter.goonan@epa.sa.gov.au</p>	
Socio-economic	PIRSA	Primary Industries and Resources SA	

Theme	Custodian Agency/s	Contact	Website
Biodiversity	DEH	Department of Environment and Heritage Mapping, monitoring, databases, condition metrics: Stuart Pillman Coordinator Monitoring and Databases 08 222 9440 pillman.stuart@saugov.sa.gov.au	
Species and Communities	DEH	Department of Environment and Heritage Threatened Species and Communities, ecosystem recovery, landscapes: Vicki Linton Acting Manager Biodiversity Conservation Programs 08 82229416 linton.vicki@saugov.sa.gov.au	Ecological Communities – Biological Surveys: http://www.environment.sa.gov.au/biodiversity/biosurveys.html