# Technical Information

## Are activities being undertaken to conserve our threatened plants and animals?

This document describes the sources of information, advice, methods, indicators and data processing procedures used to develop the reports. Reliability of data, as well as metadata attributes, are also described.

**State NRM Plan Guiding Target:**

Improve the conservation status of species and ecological communities.

**State NRM Plan Representative Measure:**

Proportion of all EPBC listed species and ecological communities with conservation actions and monitoring occurring.

**Data collection period:**

2013.

**Expected frequency of reporting:**

Annual.

**Data sources:**

1.  BDBSA (Biological Database of SA, which is managed by DEWNR). Data for species recorded in South Australia was extracted 8/10/2012. This database stores records of flora and fauna compiled from 730 datasets. Data extracted provided the number of terrestrial plant and animal species recorded in South Australia (www.environment.sa.gov.au/knowledge_bank/information_data/biological_databases_of_south_australia).

2.  EPBC listed threatened species are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Australian Government – Department of the Environment (DoE 2013)) (www.environment.gov.au/biodiversity/threatened/index.html).

3.  A questionnaire was sent to NRM threatened species experts to obtain data relating to the conservation actions and monitoring being undertaken for EPBC listed threatened species occurring in each NRM region.

**Indicators used:**

1.  Number (percentage) of EPBC-listed threatened plant and animal species for which conservation actions are occurring in South Australia.

2.  Number (percentage) of EPBC-listed threatened plant and animal species for which monitoring of population distribution is occurring in South Australia.

3.  Number (percentage) of EPBC-listed threatened plant and animal species for which monitoring of population abundance is occurring in South Australia.

**Methods of data collection and processing:**

The species lists sent to NRM threatened species experts were derived from a Biological Database of South Australia (BDBSA) query obtained 8/10/2012. The following steps were undertaken to refine data obtained through the query:

1.  Data query run from the Biological Database of South Australia for all known records of terrestrial plants and animals (vertebrates only).

2.  The data fields queried were as follows: OBJECTID, FREQUENCY, NSXCODE, ISINDIGENO, SPECIES, COMNAME, CATEGORY, ESACTSTATC, NPWACTSTAT, NRMREGION, NUMOBSERVE.

3.  All non-indigenous/feral species were not included in final analyses.

4.  Only records identified to Genus and species, or Genus species subspecies were retained.

5.  All species returning 0 (number observed) were not included in final analyses.

6. Hybrid species were not included in final analyses.

7. "Unverified" species were not included in final analyses

8. All non-vascular plants (lichens, mosses, fungi etc) were not included in final analyses.

9. Only marine algaes were included in final analyses. All algal species returned from search were checked for marine affinity.

10. The distribution and nomenclature of EPBC-listed threatened species was cross checked against available literature/information. Species information was edited where inconsistencies were found.

11. Marine fish species were not included in this report. Species recorded in South Australia and listed under the EPBC Act include the great white shark (*Carcharodon carcharias*) (Vulnerable), southern dogfish (*Centrophorus zeehaani*) (Conservation Dependent), school shark (*Galeorhinus galeus*), orange roughy (*Hoplostethus atlanticus*), and southern bluefin tuna (*Thunnus maccoyii*).

12. Albatrosses/petrels/marine turtles, antarctic fur seal, elephant seal, fin whale, & humpback whale were removed from threatened species lists and reporting for this report. These species are considered rare and/or vagrants within waters of all NRM regions and therefore conservation actions were not considered warranted at a NRM regional level.

The questionnaire sent to NRM threatened species experts was developed in consultation with threatened species officers from the Adelaide Mount Lofty Ranges NRM region. Following review of the questionnaire, the questionnaire was sent to NRM threatened species experts in each NRM region.

Questionnaire responses were then collated for all regions. Species were omitted from final analyses if:

a) conservation actions were not identified for the species within the NRM region where the species has been recorded as present.

b) if they were considered locally extinct/or occasional vagrants by regional NRM staff. These species would not be expected to be a priority for regional conservation actions or monitoring.

Analyses were then undertaken to determine the percentage of SAs EPBC listed threatened species that have conservation actions or monitoring activities occurring in **all** NRM regions where they have been recorded.

**Future reporting measures**:

DEWNR may work to develop methods of fine-scale (region/subregion) reporting for this measure in the future.

**The following government agencies contributed to this report**:

1. The Department of Environment, Water and Natural Resources (DEWNR).

**The following non-government agencies contributed to this report**:

None.

**Key stakeholders**:

Natural Resources Management Council, Natural Resources Management Boards, DEWNR regional staff, DEWNR Strategy and Advice Group & NRM communities.

**Information reliability scoring**:

Information is scored for reliability based on average scores given for information currency and applicability, and its level of spatial representation (Tables 1–3).

**Table 1. Information currency**

| Reliability | Criteria |
|---|---|
| 5 | Information up to 3 years old |
| 4 | Information up to 5 years old |
| 3 | Information up to 7 years old |
| 2 | Information up to 10 years old |
| 1 | Information >10 years old |

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**Table 2. Applicability of the information**

| Reliability | Criteria |
|---|---|
| 5 | All data based on direct indicators of the measure |
| 4 | Most data based on direct indicators of the measure |
| 3 | Most data based on indirect indicators of the measure |
| 2 | All data based on indirect indicators of the measure |
| 1 | Data are based on expert opinion of the measure |

**Table 3. Spatial representation of information (sampling design)**

| Reliability | Criteria |
|---|---|
| 5 | Information is collected from across the whole region/state (or whole distribution of asset within the region/state) using a stratified sampling design |
| 4 | Information is collected from across the whole region/state (or whole distribution of asset within the region/state) using a sampling design that is not stratified |
| 3 | Information is collected from an area that represents less than half the spatial distribution of the asset within the region/state |
| 2 | Information is collected from an area that represents less than 25% the spatial distribution of the asset within the region/state |
| 1 | Information is collected from an area that represents less than 5% the spatial distribution of the asset within the region/state or spatial representation unknown |

Based on tables 1, 2 & 3 above, respectively, the reliability of information relating to the number of nationally listed species in South Australia that have conservation actions and monitoring being undertaken is (5+5+5)/3 = 5 (Excellent).

**This report is linked to the following report cards/snapshots:**

1. [How many of our species are extinct or threatened with extinction?](#)

2. [How many of our ecological communities are extinct or threatened with extinction?](#)

3. [Are conservation activities being undertaken to conserve our threatened ecological communities?](#)

4. [Is the condition of our native vegetation improving?](#)

5. [Is the extent and connectivity of our native vegetation improving?](#)

6. [How much of our native vegetation is protected?](#)

7. [Are the extent and condition of our seagrass improving?](#)

8. [Are the extent and condition of our saltmarshes improving?](#)

9. [Is the condition of our subtidal reefs improving?](#)

10. [Are the extent and condition of our coastal dunes improving?](#)

11. [Are the extent and condition of our mangroves improving?](#)

12. [Is the condition of our estuaries improving?](#)

13. [Are South Australia's marine parks effective in protecting marine habitats and species?](#)

**Metadata description:**

| | |
|---|---|
| **Project/Dataset name:** | BDBSA (Biological Database of South Australia, which is managed by DEWNR): Data extracted 8/10/2012. |
| **Abstract/description** | Dataset is all species recorded in South Australia from field surveys and entered up to 8/10/2012. Species recorded in multiple NRM regions may be represented multiple times. Duplicate records have been accounted for (excluded) in data analyses. |
| **Data types** | Fields queried. OBJECTID, FREQUENCY, NSXCODE, ISINDIGENO, SPECIES, COMNAME, CATEGORY, ESACTSTATC, NPWACTSTAT, NRMREGION, NUMOBSERVE. |
| **Organisation/ DEWNR business area that sponsors/holds/manages the data** | DEWNR |

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| Date range | Last updated: 8/10/2012 |
|---|---|
| Study area | South Australia. Species records provided for each NRM region |
| Data format | Excel |
| Data distribution rules | Licensed under Creative Commons Attribution 3.0 Australia |
| Is the dataset source data (raw), value-add data (analysed/summarised) or final indicator/score data? | Value add data |

| Project/Dataset name: | Questionnaire data for the presence/absence of conservation actions and monitoring occurring for South Australia plant and animal species listed under the *EPBC Act 1999*. |
|---|---|
| Abstract/description | Dataset is questionnaire results for nationally listed species occurring within each NRM region that have conservation actions and monitoring programs for distribution and abundance occurring |
| Data types | Nationally listed threatened species lists for each NRM region. Numeric and descriptive data with comments. |
| Organisation/ DEWNR business area that sponsors/holds/manages the data | DEWNR |
| Date range | 2013 only |
| Study area | South Australia/Australia |
| Data format | Excel |
| Data distribution rules | Licensed under Creative Commons Attribution 3.0 Australia |
| Is the dataset source data (raw), value-add data (analysed/summarised) or final indicator/score data? | Value add data |

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**Scientific literature referred to in the report:**

Species Profile and Threats Database (2013). Accessed November 2013.

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