# Tracking changes in South Australia's environment

Summary of our approach to trend and condition report cards | 2020



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#### **Acknowledgment of Country**

We acknowledge and respect the Traditional Custodians whose ancestral lands we live and work upon and we pay our respects to their Elders past and present. We acknowledge and respect their deep spiritual connection and the relationship that Aboriginal and Torres Strait Islanders people have to Country.

We also pay our respects to the cultural authority of Aboriginal and Torres Strait Islander people and their nations in South Australia, as well as those across Australia.





## Introduction

South Australia's economy, and the wellbeing of all South Australians, is dependent on how well we manage our environment. The condition of our environment changes over time in response to pressures such as a changing climate, invasive species, land clearance, as well as the decisions and actions we take to manage our landscapes.

These report cards communicate the current condition of our environment, and how it is changing (trending) over time and span a breadth of topics at a state scale. They encompass key environmental assets, such as water resources, native vegetation, flora and fauna and soil, as well key pressures that impact on our landscapes.

Understanding and tracking our natural resources is critical to managing sustainably productive landscapes that meets the economic needs of the present without compromising the future. By gaining insight into how our environment is changing over time, we can ensure our future prosperity.

This release of open access report cards gives a comprehensive picture on South Australia's long-term environmental trends to 2020. This provides insight into the effectiveness of past actions and opportunities for future action. This suite of report cards follows our previous releases in 2018, and 2013.

#### Understanding South Australia's 'natural capital' matters

A country could exhaust its mineral resources, cut down its forests, erode its soil, pollute its aquifers, and hunt its wildlife to extinction, but measured income would not be affected as these assets disappeared.

Robert Repetto (1989), former World Resources Institute economist

# Our approach to trend and condition report cards in 2020

South Australia's report cards are one in a suite of environmental and sustainability reports that are produced at national, state and territory levels to fulfil both Australian and international reporting requirements.

Our report cards assess and summarise the current condition of the environment, the trend or change in condition over time, as well as the reliability of the information.

Each 1-page report card is a succinct visual summary and links to a technical document that describes the underpinning data and analyses.

The information used to develop our report cards is compiled from South Australia's environmental data sets. These data sets gather data from across government agencies, NGOs, universities, field naturalists, and industry.

## The importance of reporting change

Although both trend and condition are important, the report cards give particular emphasis to trend. Trend shows us how the environment has responded to past drivers, decisions and actions, and is what we seek to influence through future decisions and actions.

The importance of trend is reflected in the design of our report cards. Our report cards show trend, condition, and information reliability in a succinct visual summary. The banner colour reflects the trend of the report card.

These report cards can be used on their own, or grouped to tell a more complete story.

#### The difference between 'condition' and 'trend'

**Condition** the state of the environment at a

single point in time.

**Trend** the trajectory of change in condition over

multiple points in time.



# Benefits of trend and condition report cards

## Report cards provide an important snapshot in time

South Australia's approach to environmental reporting provides a 'point in time' assessment of the natural assets we care about, as well as the pressures that act on these assets.

The full suite of report cards captures patterns in trend and condition at a state scale and give insight to changes in a particular asset over time. They also highlight gaps in our knowledge on priority assets that impede our ability to make evidence-based decisions.

Our comprehensive suite of report cards enable us to see patterns in trend and condition across South Australia. The report cards provide a broad 'snapshot in time' assessment of the state of our natural resources. This allows us to look back as well as forecast likely future trends, and look across our important natural resources and highlight where we need to pay particular attention.

Our report cards also give insight to a particular asset over time, for example the improvement in the protection of agricultural land from soil erosion.

Our report cards also give insight to emerging challenges, such as the forecast for drier and warmer conditions and the increasing likelihood of bushfire danger weather (see bushfire case study).

#### The recognised benefits of trend and condition report cards:

- providing insight into our environment by tracking its change over time
- interpreting complex information in a simple and accessible format
- providing a transparent and open evidence base for decision-making
- highlighting those knowledge gaps that will impede South Australia's ability to make decisions
- driving alignment of environmental reporting, ensuring we 'do once, use many times'
- improving management, accessibility and presentation of data that is made available for use in other purposes.

# New report cards in 2020

New report cards have been added to the suite for the 2020 release. Of note is the refresh of the full suite of report cards under the River Murray theme. The measures and indicators used in these cards are now fully aligned with South Australia's reporting obligation to report on the achievement of environmental outcomes under the Basin Plan.

South Australia experienced a devastating bushfire season in summer 2019/20. We have added fire danger weather and air quality, small particles including smoke, to the reporting suite in recognition of our increasing bushfire risk, and the impact that bushfires have on our natural resources as well as people and property.



#### Climate theme

· Climate: Fire danger weather

#### **River Murray theme**

- CLLMM: Open Murray Mouth: Barrage outflow & dredging
- CLLMM: Lower Lakes Vegetation: Vegetation target success
- CLLMM: Coorong waterbirds: population condition score
- · CLLMM: Diadromous fish: Fish recruitment
- River Murray: Floodplain trees: Tree condition index
- River Murray: Flow dependent fish: Fish population condition.

#### Air quality theme

Air quality: Particles (PM<sub>2.5</sub>).

### Your guide to statewide report cards

- 1. The focus of the report card, which could be an environmental asset. a pressure, or a management activity.
- 2. The 'indicator' is what we measured to assess trend and condition.
- 3. The banner colour indicates the statewide trend of this report card (see Icon index, below).
- 4. The 'trend' is the statewide change over time.
- 5. The 'condition' is the current state of the indicator (see 2).
- 6. Rating out of five for the reliability of the information based on; collection methods, age of the information, and how applicable the information is.
- 7. A map, which is on most report cards. shows regional trends.
- 8. The key message that sums up the report card.
- 9. Background information.
- 10. A hyperlink to access more technical information or to search Enviro Data SA.



Average annual temperatures across South Australia have been increasing since the 1970s, with the highest rates of increase in the north of the state.

This assessment uses Bureau of Meteorology (BOM) Australian variability and change trend maps. These are based on observed temperature data from BOM monitoring stations distributed across

Mean annual temperature, averaged across the state, is now approximately 1 degree Celsius (°C) warmer than in the

The increase in annual average temperature has been variable, such that the coolest parts of the state in the southeast region have had the lowest increases

The highest rate of increase in temperature is observed in the South Australian Arid Lands (SAAL) region. adding up to 1.5° C to mean annual temperatures over the past 49 years in what was already the warmest part of South Australia.

changes in temperature across South Australia since the 1970s have been manageable.

Parts of the state, particularly in the hot and arid north-east, now experience a higher frequency of very hot daytime and night-time temperatures during summer.

In Adelaide, the frequency of days over 40 °C in the past 10 years has more than doubled compared with the period 1977-2009. Since 1990, South Australia has experienced only one year with a mean temperature below the mean annual temperature of the 20th century (bottom

Average annual 8 temperatures have increased across the state in the past 40 years, especially in the arid north-east.



#### Why is climate important?

Climate affects almost every part of our lives. Communities, industries, landscapes and ecosystems all develop with a tolerance for a range of climate variation. If the climate changes beyond that range of tolerance, then they must either adapt, migrate, transform or decline.

One example of the effect of a rise in average temperatures is an increase in the occurrence of severe heatwaves, which are associated with increased mortalities in humans and some fauna species

#### What are the drivers?

According to the Australian Academy of Science, 'Earth's climate has changed over the past century. The atmosphere and oceans have warmed, sea levels have risen, and glaciers and ice sheets have decreased in size. The best available evidence indicates that greenhouse gas emissions from human activities are the main cause. Continuing increases in greenhouse gases will produce further warming and other changes in Earth's physical environment and ecosystems.

#### What is being done?

The South Australian Government supports a wide range of initiatives to reduce greenhouse gas emissions and help the state to adapt to the changing climate. These include supporting renewable energy generation and storage, carbon sequestration, climate change science and information, land-use planning reforms, climate-related hazard risk reduction, coastal protection, greening to cool urban environments, circular economy initiatives, and regional adaptation projects. More information can be found on the Climate Smart South Australia website.







This report is a work in progress. As resource monitoring improves, so too will our ability to describe trends in condition. Licensed under  $\underline{\text{Creative Commons Attribution 4.0}}$  International License. @ Crown in right of the State of South Australia.



#### Icon index

#### Statewide trend

Getting better





Getting worse



Unknown

#### **Condition**



Very good





Fair



Poor



Not applicable



Unknown

#### Information reliability



Excellent



Very good



Good





Poor

# Incorporating UN Sustainable Development Goals and targets

Consistent with national state of the environment reporting, and other jurisdictions, SA has aligned 2020 report cards to the UN Sustainable Development Goals (SDGs).



Report card themes are aligned to SDGs.

Individual cards are aligned to the SDG targets.

Report card theme	SDG	SDG targets
Climate	13 CLIMATE ACTION	13.2
Inland waters	6 CLEAN WATER AND SANITATION  15 LIFE ON LAND	6.4, 6.6, 15.1, 15.5, 15.8
River Murray	6 CLEAN WATER AND SANITATION  15 LIFE ON LAND	6.4, 6.6, 15.1, 15.9
Land	6 CLEAN WATER AND SANITATION  15 LIFE ON LAND	2.4, 15.1, 15.5, 15.8
Coastal and marine	14 LIFE BELOW WATER	14.2, 14.4, 14.5
Air quality	3 GOOD HEALTH AND WELL-BEING 11 SUSTAINABLE CITIES AND COMMUNITIES	3.9, 11.6

# **Environmental** reporting types

Report cards provide a stocktake or an audit of the state of our environment at a given point in time. It is also critical if we wish to understand, track and communicate the importance of natural resources for our social and economic wellbeing. In order to make effective decisions on the management of natural resources we need a range of different types of information, at a variety of spatial scales. South Australia is working to advance complementary types of reporting, which together with trend and condition report cards will better support decision making (see 'Case study on complementary reporting for River Murray' p. 10.).

Complementary types of reporting include:

- evaluation reporting on the achievement and effectiveness of interventions, programs and investments
- outlook or forecast reporting that report expected trajectories of change or likely future scenarios.
- natural capital reporting, such as environmental economic accounting, which brings environmental and economic information together.
- data visualisation tools and interactive reporting, such as story maps and dashboards, which enable users to dig deeper and extract information at particular scales or context of interest.
- web portals and data services that provide access to real-time or near real-time data.

#### Where to next

The South Australian 2018 State of the Environment Report recommended a review of environmental reporting in the state, including a review of the themes and measures of the trend and condition report cards.

## Improving our reporting of biodiversity

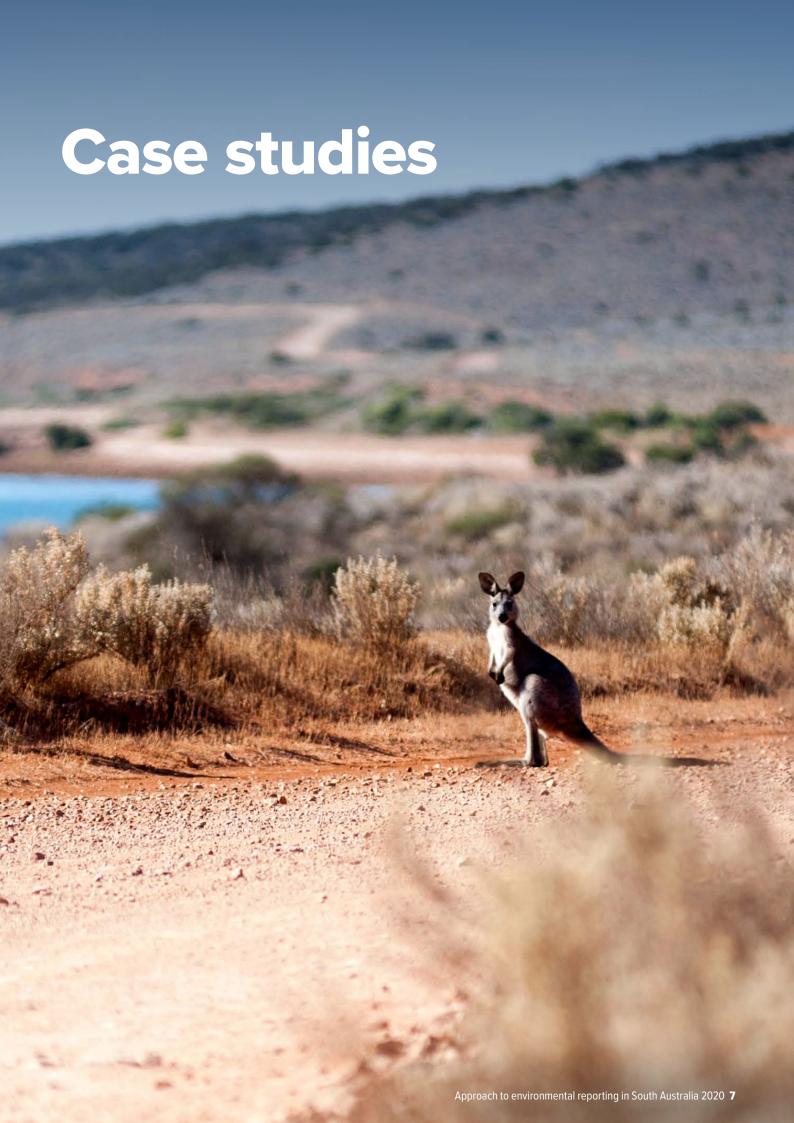
It is recognised that we need to improve our ability to report the trend and condition of biodiversity. The information reliability for some priority aspects of biodiversity is low, such as threatened species. We need to improve the existing measures to ensure they are repeatable and enable explicit measurement of trends. The ability to do forecast or outlook reporting is also considered critical in order to direct resources and effort to where it will have best impact and make positive change. In 2021 South Australia will seek to trial our new risk-based state and transition framework, which SA will seek to apply to management issues such as kangaroos, soils, other abundant species, and bushfire impacts to vegetation habitat value.

# Evidence supporting our commitments to nature conservation

New biodiversity measures will be developed to support the state's Nature Conservation Strategy. These measures will be consistent with the principle nature conservation actions with the best available knowledge that is integrated, context-specific, and proactive in the face of future change.

South Australia has a number of obligations and commitments to manage and protect biodiversity. Improving the way we organise, measure and report our biodiversity information will enable us to better participate in statewide, national, and global conservation strategies and commitments.

We will continue to build and improve our data through a strategic combination of field-based monitoring data, remote sensing data, analysis and modelling. Collaboration, through national initiatives and programs, as well as partnerships with third party data collectors, such as industry and citizen scientists will be critical.



### **Bushfire case study**

#### Report card(s):

Climate: Fire danger weather

**Climate: Rainfall** 

**Climate: Projected rainfall** 

**Climate: Temperature** 

Climate: Projected temperature

Air quality: Particles (PM<sub>2.5</sub>)

#### Why this case study?

This case study shows how report cards can help us assess risks.

#### What are these report cards telling us?

The 2020 report cards related to bushfire risk are showing the following trends:

Fire danger weather conditions have increased in occurrence and severity across much of SA over recent decades. This increases the likelihood of bushfires, including their potential extent and intensity. The increase has been affected by trend towards lower rainfall, drier conditions, and higher temperatures.

The climate theme report cards on projected rainfall and projected temperature show that the trends in these variables are likely to continue into the future, further increasing the likelihood of occurrence of bushfires.

Smoke and associated particulate pollution from bushfires represent a threat to human health. Annual average levels of ambient fine particles ( $PM_{2-5}$ ) have declined at key monitoring sites across metropolitan Adelaide since 2005 (see report card, Air Quality,  $PM_{2-5}$ ), despite major bushfire events such as the summer of 2019/20.

By understanding the changing risk factors for bushfires and their impacts, we can plan mitigation measures. For example, a fire planning tool is being developed by the Department for Environment and Water to ensure prescribed burning occurs at suitable times and is creating the desired age class diversity within different habitat types across the state.

Responding to our changing climate requires us to prepare and adapt. South Australia has already become hotter and drier, with more variable and extreme weather. These trends are projected to continue over this century and beyond.

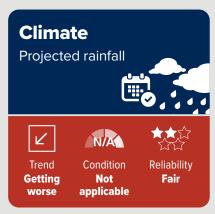
South Australia has recently published the *Climate Change*Science and Knowledge Plan for South Australia, which
identifies the evidence base required to support this adaptation.

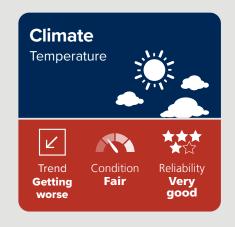
Statewide climate trends projected to 2050 are summarised in the *DEW Guide to Climate Projections for Risk Assessment and Planning in South Australia, 2020.* (See table, p. 9).

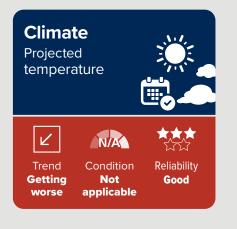
#### Report card snapshot













1200	Higher temperatures	Maximum, minimum and average temperatures will increase.
	Warmer spring temperatures	Warming in spring is likely to be greater than in any other season.
	Hotter and more frequent hot days	The frequency of very hot days will continue to increase, and periods of hot weather will get longer and hotter.
	Fewer frosts	The frequency of frost events will remain comparable until 2030. In the longer-term, frosts are expected to decrease as the climate warms.
	Declining rainfall	Average annual rainfall will decline.
9	Lower spring rainfall	Spring rainfall declines will be greater than any other season.
	More drought	Time spent in drought will increase.
	More intense heavy rainfall events	The number and intensity of heavy rainfall events will increase.
111	Increased potential evapotranspiration	Potential evapotranspiration is projected to increase across all seasons.
All De la Contraction de la Co	Wind	Wind speeds will remain comparable until 2030. In the longer-term, a pattern of winter wind speed decrease is likely.
•	More dangerous fire weather	Harsher fire weather will be experienced, and fuels will be drier and more ready to burn.
	Rising sea levels	Sea levels will continue to rise.
	Warmer and more acidic ocean waters	Sea surface temperatures will continue to rise, and acidity will continue to increase.

Table: Summary of climate trends projected for South Australia to 2050, from *DEW Guide to Climate Projections for Risk Assessment and Planning in South Australia, 2020.* 

# Case study on complementary reporting for River Murray

#### Report card(s):

**CLLMM:** Open Murray mouth: barrage outflow and dredging

**CLLMM:** Lower Lakes vegetation:

Vegetation target success

CLLMM: Coorong waterbirds: Population condition score

**CLLMM: Diadromous fish: fish recruitment** 

**River Murray: Floodplain trees:** 

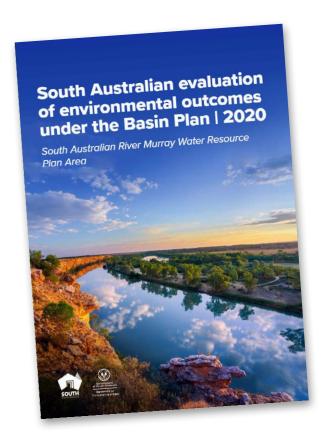
**Tree condition index** 

River Murray: Flow dependent fish:

Fish population condition

#### **Evaluation report:**

South Australian evaluation of environmental outcomes under the Basin Plan 2020



#### Why this case study?

This example shows how environmental trend and condition report cards underpin and support other forms of reporting, such as evaluation reporting.

## What are these report cards telling us?

The trend and condition report cards show the changes in condition over time (trend) for key components of the River Murray ecosystems, such as birds, fish and vegetation. These observations of trend support South Australia's requirement to report on the achievement of environmental outcomes under the Basin Plan.

The complementary reporting products, South Australian evaluation of environmental outcomes under the Basin Plan, 2020, meet our reporting obligations under the Basin Plan. These reports provide an evaluative assessment of trend, focusing specifically on key evaluation questions:

- Was this what we expected to see?
- · Why are we seeing these results?
- How has the basin plan contributed?
- What is still to be done and what do we expect to see in the future?

We will continue to track the trend and condition of SA River Murray indicators, which will feed into the next Basin Plan reporting due in 2025.

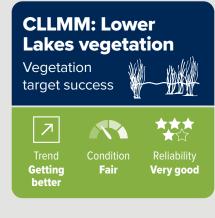
#### **Report card snapshot**













### **Biodiversity** case study

#### Report card(s):

Land: native flora: Population trends and percentage threatened.

Land: native fauna: Population trends and percentage threatened.

Land: protected areas: Landscapes that are adequately protected.

Native vegetation: Percentage cover

#### Why this case study?

Report cards highlight where we are seeing significant decline in important natural assets

#### What are these report cards telling us?

The native flora and fauna of South Australia, our natural heritage, continues to decline. This continuing decline is occurring is in spite of an increase in the terrestrial protected area network (see Land: Protected areas report card), and the stabilisation of habitat loss through native vegetation clearance (see Native vegetation: Percentage cover report card).

While the causes of biodiversity loss are often context specific, they include:

- · ongoing and emerging impacts of invasive plant and animal species (see Land: Invasive species report card)
- changes to fire regime (see Bushfire case study on Pg. 8).
- · legacies of historic habitat loss through vegetation clearance
- · increased frequency of drought as a result of a changing climate (see report Climate: Rainfall & Climate: Projected Rainfall report cards).

Current management practices are not arresting the decline in biodiversity and there is increasing recognition new approaches to conservation will be required if we are to avoid the projected scale of loss.

The South Australian Government is responding to this ongoing loss of native biodiversity through the development of a new Nature Conservation Strategy and Action Plan. This Strategy will focus on the social, economic and on-ground actions required to address this ongoing decline, and ultimately positively change our relationship with nature.

#### Report card snapshot









Fair



#### **Land: protected** areas

Landscapes that are adequately profested,



Condition



#### **Native vegetation**

Percentage cover



Condition



Stable

Unknown

Very good

# Agricultural land case study

#### Report card(s):

Agricultural land: Days protected from soil erosion

Climate: Rainfall

Climate: Projected rainfall

Climate: Fire danger weather

#### **Evaluation report:**

This case study shows how inter-related report cards can help us assess risks and plan mitigation measures.

#### Why this case study?

This example shows how environmental trend and condition report cards underpin and support other forms of reporting, such as evaluation reporting.

## What are these report cards telling us?

This case study shows the potential impact that a changing climate will have on soil protection from erosion.

The trend in soil protection improved to 2011 and has stabilised at a 'good' level through to 2020. The amount of cover that protects soil from erosion depends on seasonal conditions and management. The uptake of improved farming practices by land managers such as no-till seeding, stubble retention and improved grazing management reduce soil disturbance and maximise plant and crop residue cover which protects agricultural soil from wind and water erosion.

The amount of crop and pasture growth available to protect soil depends on seasonal rainfall. This is likely to be influenced by the expected reductions in rainfall under a changing climate. Report cards for rainfall show a historic and projected continued declining trend in rainfall in the southern agricultural regions of SA.

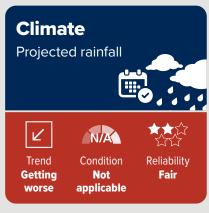
Bushfires have a significant impact on soil protection due to both the removal of soil cover and the reduced resistance of the soil to erosion. The severity and frequency of bushfires is also expected to increase under a changing climate. The report card for fire danger weather is showing a poor condition and trend of increasing occurrence of high fire danger weather.

By understanding the changing risk factors affecting the protection of soil from erosion, we can plan mitigation measures.

#### **Report card snapshot**









# Statewide summary of 2020 report card themes



# **Climate theme**

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
Climate	Rainfall	Getting Worse	Fair	***	13.2	Rainfall is declining in April-October in SA's southern agricultural areas, and increasing in November-March in the Far North.
Climate	Projected rainfall	Getting Worse	NA		13.2	Annual and spring rainfall across SA is projected to decline significantly by 2050.
Climate	Temperature	Getting Worse	Fair		13.2	Average annual temperatures have increased across the state in the past 40 years, especially in the arid north-east.
Climate	Projected temperature	Getting Worse	NA		13.2	Higher maximum temperatures and more days above 40°C are projected for SA.
Climate	Sea level	Getting Worse	Fair		13.2	Sea levels along South Australia's coast are rising, and the rate of rise is projected to increase in the future.
Climate	Fire danger weather	Getting Worse	Poor		13.2	Fire danger weather has increased in occurrence and severity across the state since the 1970s.

# **Inland waters theme**

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
Wetlands	Percentage cover	 Stable	Fair	***	6.6,15.1	Wetland cover is stable in South Australia, but has declined in the wetter regions.
Aquatic ecosystem condition	EPA condition assessments	? Unknown	Fair		6.6,15.1	Aquatic ecosystems assessed across South Australia are generally in fair condition.
Groundwater	Water level and salinity	 Stable	Fair	***	6.4	The salinity of South Australia's groundwater resources is generally stable, with some declines in water levels.
Inland waters: native fauna	Population trends and per cent threatened	Getting Worse	Fair		15.5	The statewide trend in populations of inland water native fauna is getting worse.
Inland waters: native flora	Population trends and per cent threatened	Getting Worse	Fair		15.5	The statewide trend in populations of inland water native flora is getting worse.
Inland waters: Invasive fish	Established invasive fish abundance and distribution	Stable	Poor		15.8	Invasive fish are widely distributed in large numbers in South Australia's waterways.
Inland waters: biosecurity	New incursions of invasive species	? Unknown	Fair	****	15.8	Five new incursions of aquatic invasive species were reported in 2019, but there is insufficient information to determine a trend.

# **River Murray theme**

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
CLLMM: Open Murray Mouth	Barrage outflow and dredging	Getting better	Poor		6.6, 15.1, 15.9	Outflows to the Murray Mouth have improved; however, dredging is still required.
CLLMM: Lower Lakes vegetation	Vegetation target success	Getting better	Fair		6.6, 15.1, 15.9	Vegetation condition in the Lower Lakes is generally getting better, with some areas of decline.
CLLMM: Coorong waterbirds	Population condition score	Getting Worse	Poor		6.6, 15.1, 15.9	The abundance of Coorong waterbirds is getting worse.
CLLMM: Diadromous fish	Fish recruitment	Getting better	Fair		6.6, 15.1, 15.9	Increased connectivity has improved the recruitment of diadromous fish.
River Murray: floodplain trees	Tree condition index	Getting better	Fair	****	6.6, 15.1, 15.9	The condition of river red gum and black box is showing signs of improvement.
River Murray: Flow dependent fish	Fish population condition	Stable	Poor	****	6.6, 15.1, 15.9	Golden perch populations are stable, while Murray cod populations are improving.

# **Land theme**

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
Native vegetation	Percentage cover	Stable	<b>2</b> Unknown		15.1	The percentage cover of native vegetation is declining in the agricultural zone.
Land: protected areas	Landscapes that are adequately protected	Getting better	Fair		15.1	In 2020, 30% of landscapes in South Australia are adequately protected.
Agricultural land	Days protected from soil erosion	 Stable	Good	***	2.4	South Australian agricultural soils are protected from erosion on around 345 days each year.
Agricultural land	Soil acidity	Getting Worse	Fair		2.4	Soil acidity is getting worse across South Australia.
Land	Native fauna	Getting Worse	Fair		15.5	The statewide trend in populations of land native fauna is getting worse.
Land	Native flora	Getting Worse	Fair		15.5	The statewide trend in populations of land native flora is getting worse.
Land: Invasive species	Abundance and distribution of established invasive species	Stable	Fair	*****	15.8	The trend of established invasive species is stable in South Australia.





# **Coastal and marine theme**

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
Mangrove vegetation	Percentage cover	Getting better	<b>2</b> Unknown	***	14.2	Mangrove cover along South Australia's coastline has increased since 1990.
Coastal saltmarsh	Percentage cover	Stable	<b>2</b> Unknown	***	14.2	The area of coastal saltmarsh is generally stable but has increased in three regions since 1990.
Marine protected areas	Marine parks network	 Stable	Good	***	14.5	Marine park protection is stable, with 44% of state waters protected; 6% are highly protected.
Seagrass	Cover within sampling sites	Stable	Poor	***	14.2	Seagrass cover is getting better in some areas and worse in others, in response to local catchment conditions.
Subtidal reefs	Reef condition	? Unknown	Good		14.2	The statewide condition of subtidal reefs is good, but is poorer near metropolitan waters.
Coastal and marine: native fauna	Population trends and percentage threatened	 Stable	Fair		14.2	The trend in populations of coastal and marine native fauna is getting worse in more developed parts of the state.
Coastal and marine: native flora	Population trends and percentage threatened	Getting Worse	Fair		14.2	The trend in populations of coastal and marine native flora is getting worse in the more developed parts of the state.
Fish stocks	Proportion of stocks sustainable	Stable	Good	***	14.4	In South Australia, 76% of fishery stocks are classified as sustainable; 14% are depleted.
Coastal and marine: biosecurity	Number of incursions	 Stable	Good		14.2	Biosecurity in South Australia's marine environment is stable.

# Air quality theme

Focus	Indicator	Trend	Condition	Info reliability	SDG targets	Summary of change
Air quality	Particles (PM <sub>10</sub> )	Stable	Fair		3.9, 11.6	Annual average PM <sub>10</sub> particle concentrations have increased since 2017 due to below-average rainfall patterns. However, they remain below the national standard.
Air quality	Particles (PM <sub>2.5</sub> )	Getting better	Fair		3.9, 11.6	Annual average PM <sub>2.5</sub> particle concentrations have decreased since 2005, and are below the national standard.
Air quality	Nitrogen dioxide (NO <sub>2</sub> )	Stable	Very Good		3.9, 11.6	Annual average levels of nitrogen dioxide in South Australia are low and well below the national standard.





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