

Days at risk of soil erosion



South Australia's environmental trend and condition report cards 2023

Land | Agricultural land



Trend
Getting worse



Condition
Fair



Reliability
Very good

STATE

Trend

Soil erosion risk on agricultural land has been getting worse over the last 5 years.

Rainfall has mostly been below average in the last 5 years (2018–2022), and there has been less plant growth and resulting groundcover to protect the soil from erosion (top figure).

Over the past 20 years, farmers have adopted methods of soil and land management that better protect soil from the risk of erosion. For example, surveys indicate that the proportion of the crop area sown using no-till (instead of full tillage) has increased from 16% in 1999 to 83% in 2016.

The trend in days at risk of soil erosion is getting worse in 6 of the 14 South Australian agricultural districts. This mostly occurs in lower rainfall areas that have had much drier than average seasons. In the remaining 8 districts, the trend was stable.

This trend is highly dependent on seasonal conditions. It tends to get worse in dry seasons but gets better in above average rainfall seasons.

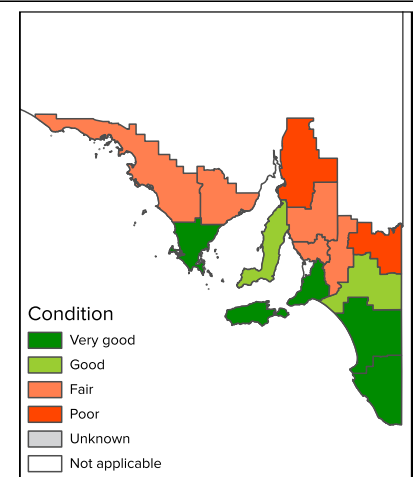
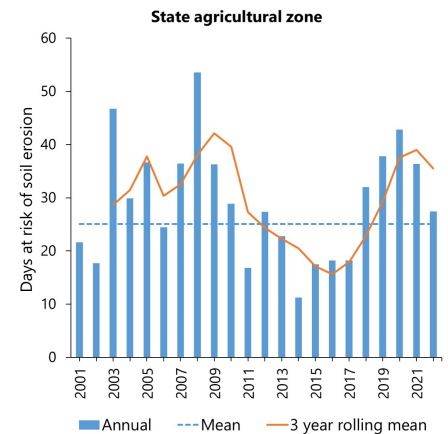
Condition

The level of soil erosion risk on agricultural land in South Australia is fair.

The condition rating is based on the state's agricultural zone being at risk of soil erosion for 36 days in 2022 (3 year mean).

Condition varied a lot across agricultural districts, mostly depending on rainfall (bottom figure). Seven districts that are in higher rainfall areas had a 'very good' or 'good' condition rating. The Upper North and Northern Mallee districts had a 'poor' condition rating due to well below average rainfall in most of the past 5 seasons, which resulted in lower groundcover levels.

The statewide trend of soil erosion risk on agricultural land is getting worse. Level of risk varies across agricultural districts.



Why is protecting agricultural land from soil erosion important?

Protecting land from soil erosion is critical for maintaining South Australia's annual \$17.3 billion agricultural industry. Protected agricultural land also minimises dust storms and reduces sediments and nutrients that reach our waterways.

What are the pressures?

Approximately 61% of South Australia's agricultural soils are susceptible to wind erosion, and 32% are susceptible to water erosion. Soils can be exposed to erosion in very dry seasons when there is not enough plant growth to cover the soil. Tilling the soil, bushfires and managed burns (for pest and weed management) also remove plant cover, increasing the risk of erosion.

Future climate predictions forecast warmer temperatures, reduced rainfall and more severe storms across most agricultural areas in South Australia, which could increase the likelihood of erosion events.

What is being done?

Agricultural soils are regularly monitored using satellite data and field surveys to estimate the number of days at risk of erosion annually.

The Government of South Australia works with agribusiness, agricultural advisers, industry and farmer groups to improve soil management and assist farmers to adopt practices that protect the soil from erosion.

For further information see: [technical information](#)



This report is a work in progress. As resource monitoring improves, so too will our ability to describe trends in condition. Licensed under [Creative Commons Attribution 4.0 International License](#). © Crown in right of the State of South Australia.



Government of South Australia