Extreme climate and weather

Rising temperatures are driving extreme weather conditions, including more intense rainfall events, ‘hot days’ and severe fire weather days in NSW.

Extreme weather is weather that occurs with extreme severity, such has heavy rainfall over a short period, or when least expected, such as a very hot day in winter. Extreme weather events could cause damage to the environment, communities and infrastructure.

Although extreme weather occurs naturally, human-induced climate change is changing the frequency, intensity or duration (happens more, or less often, becomes more intense or lasts longer) of different types of extreme weather events.

Increased frequency and intensity of extreme weather events causes damage to cultural sites and landscapes.

At a glance

How NSW is tracking

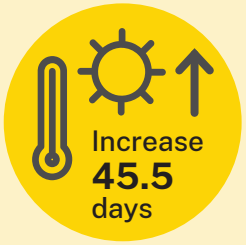
- The number of ‘hot days’ and severe fire weather days are both projected to increase by 2080–99. Severe fire weather days occur when there is a combination of wind, high temperatures, low humidity and no recent rainfall, resulting in Forest Fire Danger Index > 50.
- Extreme rainfall (99th percentile of precipitation in millimetres per day) is projected to increase or decrease depending on the season and geographical area. Further research is needed to understand the uncertainties in the projections.
- Significant uncertainty remains around rainfall projections, meaning it is difficult to project when drought conditions will occur.

The big picture

Globally, communities and governments are committed to reducing greenhouse gas emissions to mitigate climate change. They are developing policies and programs to prepare for, respond to and increase resilience to extreme weather.

Hot days

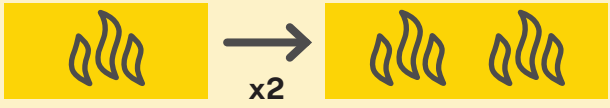
By 2080–99, NSW may experience an average increase of **45.5** hot days per year under a high-emissions scenario.*



2080–99

Severe fire weather days

Severe fire weather days are projected to increase, on average, by **9.4** per year by 2080–99 under a high-emissions scenario. This is twice as many severe fire weather days as now.



Current 2080–99

*High-emissions scenario is estimated warming of 2.8–4.6 degrees by 2100