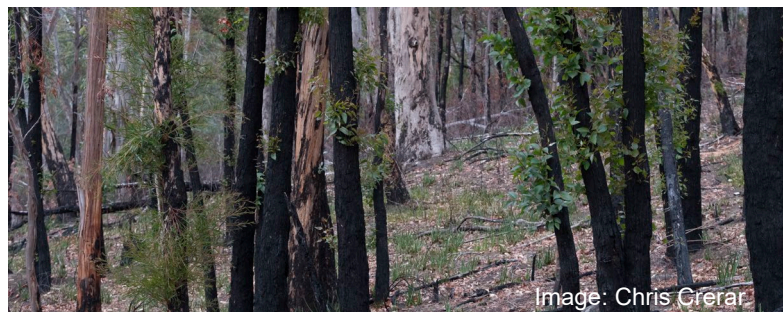


# Climate Change Office



## Climate change

Each part of the world has different weather conditions and patterns, known as a climate. Climate change means that these conditions and patterns are changing. For example, this could mean warmer temperatures, different rainfall patterns, or natural disasters like floods and bushfires might happen more often.

Science shows that the world's climate is changing, and it is caused by human activities.

Climate change is a serious and complex issue, which presents challenges and opportunities for Tasmania.

## What are greenhouse gases (emissions)?

Many human activities release greenhouse gases. These gases trap heat in the atmosphere and increase the temperature of the earth, which leads to changes in the climate.

The gases with the most significant impact on global warming are water vapour, carbon dioxide, methane and nitrous oxide. Other common greenhouse gases include ozone and chlorofluorocarbons.

Greenhouse gases are measured in tonnes (T) and mega-tonnes (a million metric tonnes) of carbon dioxide equivalent (Mt CO<sub>2</sub>-e), which is a way to group all greenhouse gases together into a single measurement, based on how much global warming they may cause.

## What are carbon sinks?

Plants, soils and oceans remove carbon dioxide from the atmosphere and store it, known as sequestration or storage. An area that stores a lot of carbon, like a forest, is sometimes called a 'carbon sink'.

## What's the difference between climate and weather?

Weather is measured over a short period of time, like your weekly forecast or monthly outlook. Climate tells us about atmospheric conditions over relatively long periods of time.

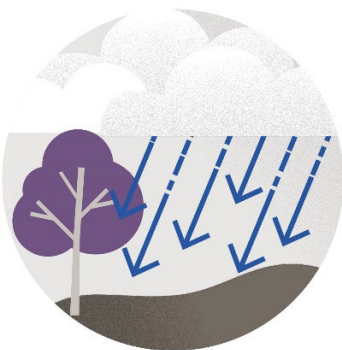
## Where does our information come from?

There is a range of scientific information available about the projected impacts of climate change at the local, national and international levels.

The three main sources of information for Tasmania are:

- The Climate Futures for Tasmania Project
- The CSIRO / Bureau of Meteorology
- The Intergovernmental Panel on Climate Change (IPCC)

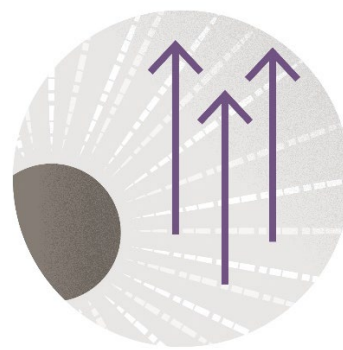
## What are the projected climate change impacts for Tasmania?



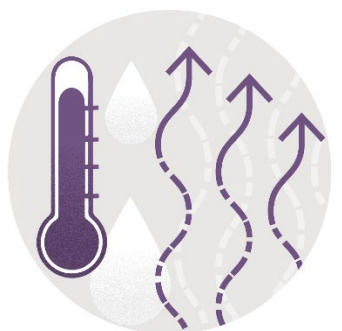
Significant change in rainfall patterns



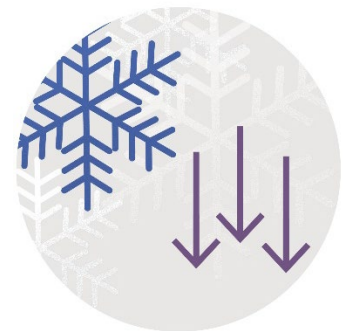
Increase in storms, creating coastal erosion



Rise in annual average temperatures



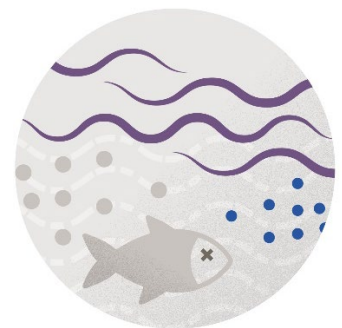
More hot days and heatwaves



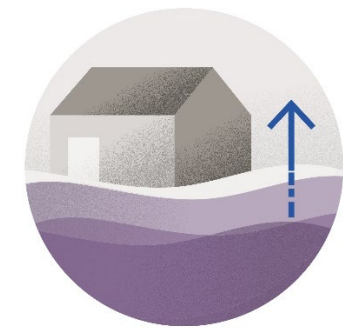
Fewer frosts



Longer fire seasons, more days of high fire danger



Increased ocean acidification and water temperature



Rise in sea levels



Increased windspeed