



Greenhouse gas is a natural part of the atmosphere. It absorbs solar radiation and keeps the earth warm enough to support life. Human activity, including burning fossil fuels for energy, land clearing and agriculture, has overloaded the amount of greenhouse gas in the atmosphere.

The Intergovernmental Panel on Climate Change (IPCC) has concluded that it is *extremely likely* that more than half the observed global surface temperature increase from 1951 to 2010 is due to human activity and the release of greenhouse gases from burning fossil fuels, land use change and agriculture.

Atmospheric concentrations of carbon dioxide are now more than 40 per cent higher than they were before industrialisation. According to the Bureau of Meteorology eight of Australia's ten warmest years on record have occurred since 2002.

What is means for Victoria?

Victoria faces a warmer and drier future, resulting in:

- harsher fire weather and longer fire seasons
- fewer frosts
- more frequent and more intense downpours
- more hot days and warm spells
- less rainfall in Winter and Spring south of the Great Dividing Range; less rainfall in Autumn, Winter and Spring north of the Great Dividing Range
- sea storm surges and coastal erosion that are expected to increase with sea level rise

Climate change is already being experienced in Victoria, with a rise in temperature and fall in rainfall across the state since 1950. The sea level around the Victorian coast is approximately 225mm higher than in 1880.

A changing climate presents us with risks and opportunities. The risks include things such as hotter days and sea level rise, the opportunities include the creation of new jobs and a skilled workforce, boosting new economic sectors and reducing our emissions while growing our economy.