

New Zealand's atmosphere and climate at a glance

Our atmosphere and climate 2017



401 ppm – levels of CO₂ in the atmosphere in late 2016

This is a 23% increase since 1972 and the highest levels in at least 800,000 years*. Atmospheric CO₂ is the biggest driver of global warming.



2016 – New Zealand's hottest year on record

New Zealand has experienced a 1°C temperature increase since 1909. This is a rapid change for the climate that is already affecting our natural systems that are slow to adapt.



51% – rise in global gross greenhouse gas emissions since 1990

This increase is largely driven by people burning fossil fuels for electricity, heat, transport, manufacturing and construction.



24% – rise in New Zealand's gross greenhouse gas emissions since 1990

While agriculture makes up nearly half of New Zealand's emissions, road transport has had one of the largest increases in emissions, with a 78% increase since 1990.



27 – average number of summer days with extreme UV intensity in 2016

Extreme UV levels can damage fair skin in minutes. New Zealand's high UV levels in summer are partly due to our high air clarity and Earth's orbit bringing us closer to the sun.



98% – drop in production of ozone depleting substances in the last 30 years

The ozone hole is shrinking and is expected to stop forming around the middle of this century.



169,000 – hectares of deforested land since 2000

In 2015 New Zealand's native and exotic forests removed 67% of our CO₂ emissions. If deforestation continues to outpace the area of new forest planted, it will reduce the amount of CO₂ absorbed from the atmosphere by our forests.



25% – volume of ice glacier lost since 1977

Our glaciers have lost enough ice to fill 133,000 Olympic-sized swimming pools each year over the past 40 years.



14-22cm – sea-level rise at four main ports since 1916

Warming oceans and melting glaciers are driving global sea-level rise. Higher sea levels threaten marine habitats and coastal roads and housing and will require many coastal communities to adapt.



0.03 – pH decrease of New Zealand's oceans in the last 19 years

Oceans absorb additional CO₂ in the atmosphere, changing the ocean's pH. A small decrease in pH is a substantial increase in acidity. Increased acidity can make it harder for shellfish to form shells and harm plankton, vital for a healthy food chain.

