

(NIWA, n.d.)

Main navigation

Search

Science

Aquaculture Atmosphere

Climate

Services

Resources

Research

Forecasting impacts from extreme weather Nowcasting and short-to-medium range forecasting for solar and wind energy High resolution drought forecasting Our Future Climate New Zealand Updated national climate projections for Aotearoa New Zealand Physics and AIbased highresolution climate projections Forecasting weather systems River flow

Publications News FAQs Contact us

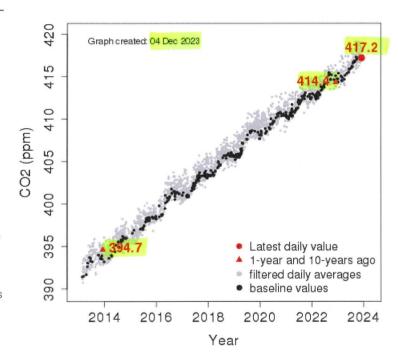
forecasting

Coasts and Estuaries Environmental Information Fisheries Freshwater

Daily CO2 measurements from NIWA's atmospheric monitoring station at Baring Head







The graph shows carbon dioxide (CO_2) levels measured at Baring Head, NIWA's clean air station, near Wellington. This station has been running since 1972 and is home to the longest running continuous CO_2 measurements in the Southern Hemisphere.

The red shows the latest daily average (the most recent day for which we obtained reliable data), and the levels on the equivalent days one year ago and 10 years ago. The gray filtered daily averages show all hourly measurements, filtered to remove outliers. The black points labelled baseline values show our most reliable and quality-controlled measurements, taken when the wind is coming from the south and not influenced by passing over nearby land. These baseline values form our ongoing historical records.

All of these values fluctuate with the seasons – with higher levels of ${\rm CO_2}$ produced in winter when energy use typically increases and ${\rm CO_2}$ uptake by forests through photosynthesis slows.

For comparison, the pre-industrial level of CO_2 in the atmosphere was 280 ppm. The Paris Agreement \mathcal{O} , signed by 197 countries, is aiming to keep