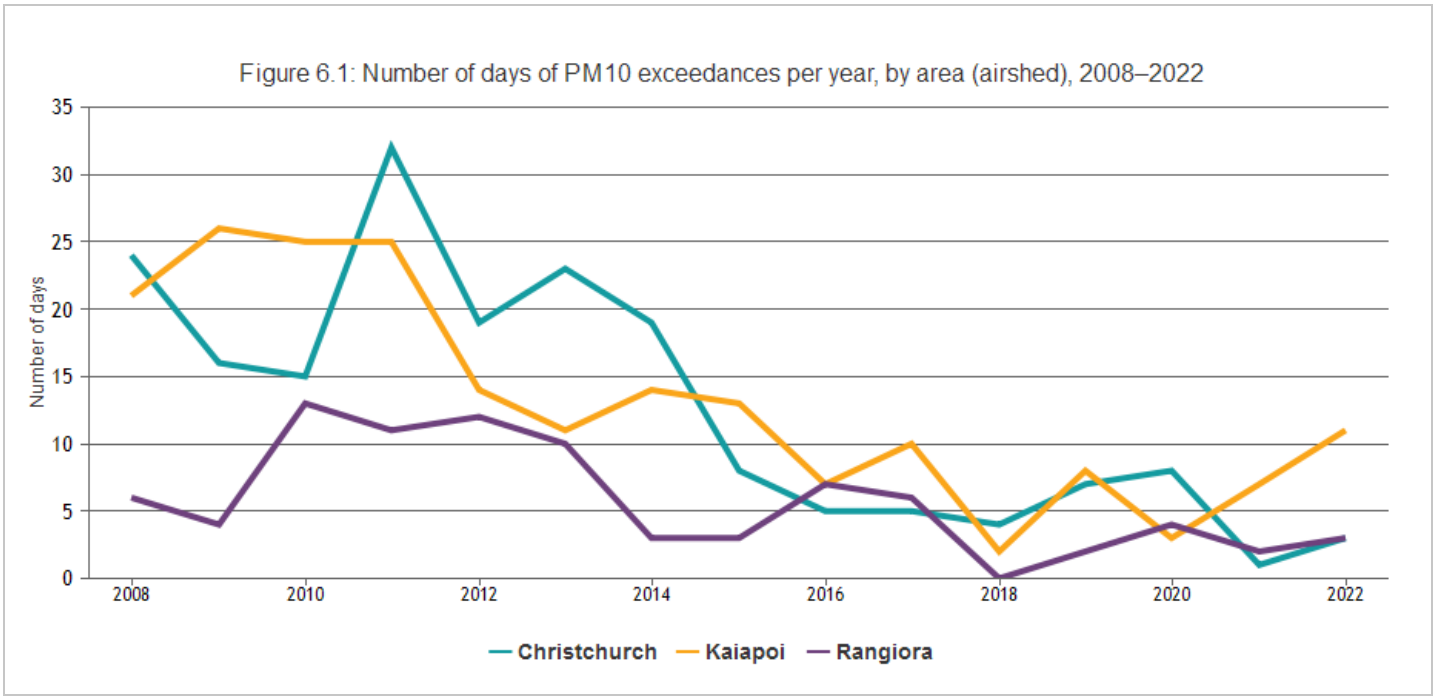
Environment: Air quality

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The main air pollutant in Canterbury is particulate matter smaller than 10 micrometres (PM10). Environment Canterbury monitors PM10 concentrations daily (in real time) across eight geographical areas in the region (known as airsheds) and reports on high pollution nights, or exceedances [26]. This allows Environment Canterbury to compare concentrations with national standards, assess variations over time and understand impacts of local weather conditions [26]. Particulate matter is emitted from the combustion of fuels, such as wood and coal (from home heating and industry) and petrol and diesel from vehicles. PM10 is associated with serious health outcomes such as cancer, respiratory problems, and cardiovascular disease [27].

The Government's National Environmental Standards for Air Quality set different targets for different airsheds (based on the World Health Organization's guideline) [28]. To meet the standard, the Christchurch City and Kaiapoi airsheds must experience no more than three exceedances per year, while the Rangiora airshed must experience no more than one exceedance per year. From 2021 the target for each airshed will become no more than one exceedance per year. Exceedances are when the daily average of PM10 is over 50 micrograms per cubic metre of air.

This indicator presents the number of PM_{10} exceedances per year for Christchurch City, Kaiapoi, and Rangiora.



The figure shows substantial improvements in air quality for all three airsheds since 2008, although some variability is apparent from year to year. Provisional data for the current (2022) reporting year indicate 3 exceedances for both Christchurch and Rangiora, and 11 exceedances for the Kaiapoi airshed, up from 7 exceedances in 2021. (Note the type of instrument used to measure PM_{10} in the Kaiapoi airshed changed from 2021, see additional notes in the Metadata).

From 2021, the National Environmental Standards for Air Quality target for each airshed changed to 'no more than one exceedance per year', therefore none of the airsheds met the standard in 2022. Some unusual winter weather patterns in 2018 resulted in unusually low PM_{10} concentrations that year.

Data Sources

Source: Environment Canterbury.
Survey/data set: Air quality monitoring data. Access publicly available data at the Environment Canterbury website www.ecan.govt.nz/data/air-quality-data/
Source data frequency: Data collected daily and reported annually in December.

Metadata for this indicator is available at https://www.canterburywellbeing.org.nz/our-wellbeing/index-data

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