Information topic	Details
Indicator name	**1. Monitoring sites exceeding the national environmental standard (one-hour average) for nitrogen dioxide** **2. Monitoring sites exceeding the 2021 WHO daily average guideline for nitrogen dioxide** **3. Monitoring sites exceeding the 2021 WHO annual average guideline for nitrogen dioxide**
Domain and topic	Air Quality: Other air pollutants
Indicator definition and units	1. Number of monitored sites that exceeded the NESAQ one-hour standard for nitrogen dioxide: exceedances occur when 1-hour average concentrations of nitrogen dioxide are greater than the national standard of 200µg/m^3 2. Number of monitored sites that exceeded the 2021 WHO daily average guideline for nitrogen dioxide: exceedances occur when daily average concentrations are greater than 25µg/m^3 3. Number of monitored sites that exceeded the 2021 WHO annual average guideline for nitrogen dioxide: exceedances occur when annual average concentrations are greater than 10µg/m^3
Data source	Ministry for the Environment & Statistics New Zealand
Numerator	Monitoring sites exceeding the NESAQ standard and the 2021 WHO guidelines for nitrogen dioxide
Time period and time scale	Annual, from 2005 to 2023
Spatial Coverage	All sites nationwide where data was reported to MfE & Stats NZ and found to be valid (see 'Limitations of source')
Measures of frequency	1. Number of exceedances of NESAQ standard, by monitoring station and year 2. Number of exceedances of the 2021 WHO daily average guideline value, by station and year 3. Number of exceedances of the 2021 WHO annual average guideline value, by station and year
Limitations of indicator	The population coverage of the monitoring site is unknown, meaning a national representative average cannot be applied.

Limitations of data source	- A monitoring site is required to have 75% completion rate for a given period of time for the data to be considered valid). A complete year is defined as a year in which: each season contains at least 75% of complete days. A complete day is defined as one with at least 18 out of 24 hours of valid data recorded for the daily (24-hour) average. - Some of the monitoring occurs at peak sites (sites expected to have high concentrations e.g. where home heating emissions accumulate, close to high-volume road traffic or near industrial activities). These sites may therefore not be representative of the surrounding area.
Related indicators	- Fine particulate matter - Other air pollutants - Motor vehicles - Health effects of air pollution - Wood and coal fires - HAPINZ 3.0
For more information	Nitrogen dioxide concentrations: Data to 2023 | Stats NZ (accessed July 2025). Ministry for the Environment and Stats NZ. Environmental reporting: Air. URL: https://environment.govt.nz/facts-and-science/air/ (accessed August 2025).
References	Stats NZ (2024). Nitrogen dioxide concentrations (air quality): Data to 2023. URL: Nitrogen dioxide concentrations: Data to 2023 | Stats NZ Ministry for the Environment and Stats NZ. 2021. *Our air 2021*. Wellington: Ministry for the Environment. Ministry for the Environment & Stats NZ (2024). New Zealand's Environmental Reporting Series: Our air 2024 | Tō tātou hau takiwā. Retrieved from environment.govt.nz