

INDICATOR METADATA: NUMBER OF MOTOR VEHICLES

Indicator name	Number of motor vehicles in New Zealand
Domain and topic	Air quality domain Transport domain
Rationale	<p>Motor vehicles produce air pollution, including particulate matter, carbon monoxide, nitrogen dioxide and sulphur dioxide. In 2006, an estimated 22% of premature deaths caused by human-made air pollution in New Zealand were due to motor vehicles (Kuschel et al, 2012).</p> <p>Diesel vehicles and older vehicles tend to produce more emissions. In particular, diesel vehicles are disproportionately more polluting than petrol vehicles in terms of particulate matter and total nitrogen oxides (Sridhar, Wickham and Metcalfe, 2014). Recent evidence also shows that diesel engine fumes can cause lung cancer (Benbrahim-Tallaa et al, 2012).</p> <p>Motor vehicles crashes also cause around 300 deaths in New Zealand each year. Additionally, road traffic noise can also affect blood pressure (Babisch et al, 2009; Bluhm et al, 2007; van Kempen and Babisch, 2012).</p>
Data source	Ministry of Transport Annual Vehicle Fleet statistics, and the World Bank.
Indicator definition	<p>Number of motor vehicles in New Zealand, by vehicle type. Vehicle types include:</p> <ul style="list-style-type: none"> • light passenger (passenger cars and vans) • light commercial (if under 3500 kg) (includes goods vans, trucks, utility vehicles, buses, motor caravans) • trucks (if over 3500 kg) (includes trucks and motor caravans) • buses (if over 3500 kg) • motorcycles (includes motorcycles and mopeds). <p>Statistics are also reported for diesel vehicles.</p>
Time period	<p>The statistics are presented for 2000 onwards.</p> <p>The 2014 statistics published by the Ministry of Transport reworked all the time trend comparisons to take into account of the different exclusions (based on expiry of vehicle licenses). This approach means that the comparisons presented with the 2014 data are valid; however, the factsheet based on 2014 data onwards should not be compared with earlier published factsheets.</p>
Population coverage	All vehicles on the Motor Vehicle Register, excluding those that are exempt from having a license (not used on roads) and those that have an expired license (if the license has not been renewed within 6 months).
Variables presented	The results are presented by vehicle type, year and by region. International comparisons are also included (sourced from the World Bank).

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Limitations	The data come from the Motor Vehicle Register. Since 2014, the statistics have excluded vehicles when their license expired, if it has not been renewed within 6 months. This approach gives a larger live fleet size than previously published. The 2014 published statistics have reworked all the time trend comparisons; this approach means data should not be compared with earlier published factsheets.
Related indicators	Average age of motor vehicles
For more information	Ministry of Transport Annual Vehicle Fleet statistics.
References	<p>Babisch W, Neuhauser H, Thamm M, Seiwert M. (2009). Blood pressure of 8–14 year old children in relation to traffic noise at home – Results of the German Environmental Survey for Children (GerES IV). <i>Science of the Total Environment</i>, 407(22), 5839–5843.</p> <p>Benbrahim-Tallaa L, Baan RA, Grosse Y, Lauby-Secretan B, El Ghissassi F, Bouvard V, et al. (2012). Carcinogenicity of diesel-engine and gasoline-engine exhausts and some nitroarenes. <i>The Lancet Oncology</i>, 13(7): 663-664.</p> <p>Bluhm GL, Berglind N, Nordling E, Rosenlund M. (2007). Road traffic noise and hypertension. <i>Occupational and Environmental Medicine</i>, 64(2), 122–126.</p> <p>Kuschel G, Metcalfe J, Wilton E, Guria J, Hales S, Rolfe K, et al. 2012. <i>Updated Health and Air Pollution in New Zealand Study. Volume 1: Summary report</i>. Prepared by Emission Impossible and others for Health Research Council of New Zealand, Ministry of Transport, Ministry for the Environment, and NZ Transport Agency. Available online: http://www.hapinz.org.nz</p> <p>Sridhar S, Wickham L, Metcalfe J. (2014). <i>Future trends in motor vehicle emissions in Auckland</i>. Prepared by Emission Impossible Ltd for Auckland Council. Auckland Council technical report, TR2014/028.</p> <p>Van Kampen E, Babisch W. (2012). The quantitative relationship between road traffic noise and hypertension: a meta-analysis. <i>Journal of Hypertension</i>, 30(6) 1075–1086.</p>