

HAPINZ 3.0 and measures to reduce harmful motor vehicle emissions

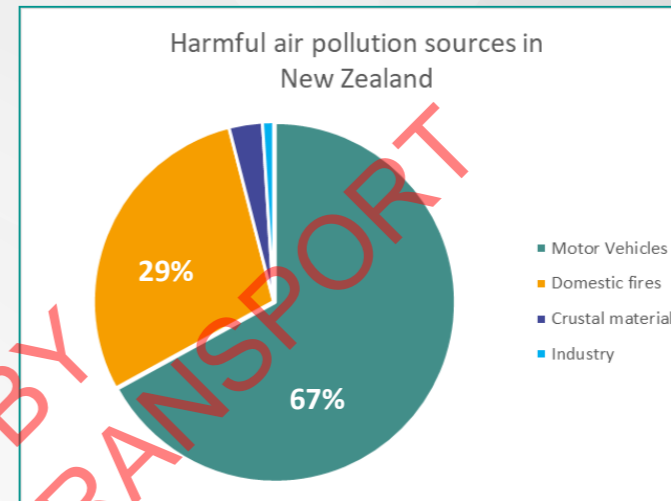
Health impacts from transport emissions cause much more harm than previously thought

Air pollution from motor vehicles costs **NZD\$10.512 billion** in social harm every year.

This includes:

- 2,247 premature deaths
- 29,673 years of life lost
- 2,457 cardio-vascular hospitalisations
- 6,919 respiratory hospitalisations
- 13,299 cases of asthma prevalence in children
- 330,338 restricted activity days

- HAPINZ is a scientific study of the health effects of air pollution in NZ. It takes into account levels of fine particles and nitrogen dioxide in the air.
- It also uses NZ health data like hospital admissions and childhood asthma cases to work out the effects of air pollution and how many people are affected.
- This HAPINZ study is more accurate than its previous iterations because it extends the assessment of impacts to a broader range of contaminants, most notably nitrogen dioxide (NO₂), which is exclusively attributed to motor vehicles.
- Due to increased numbers of VKT and diesel vehicles, **NO₂ has increased by 15% since 2006**, resulting in an increase of social costs of 18%.
- The study has had a significant amount of peer review and is consistent with findings in international studies.

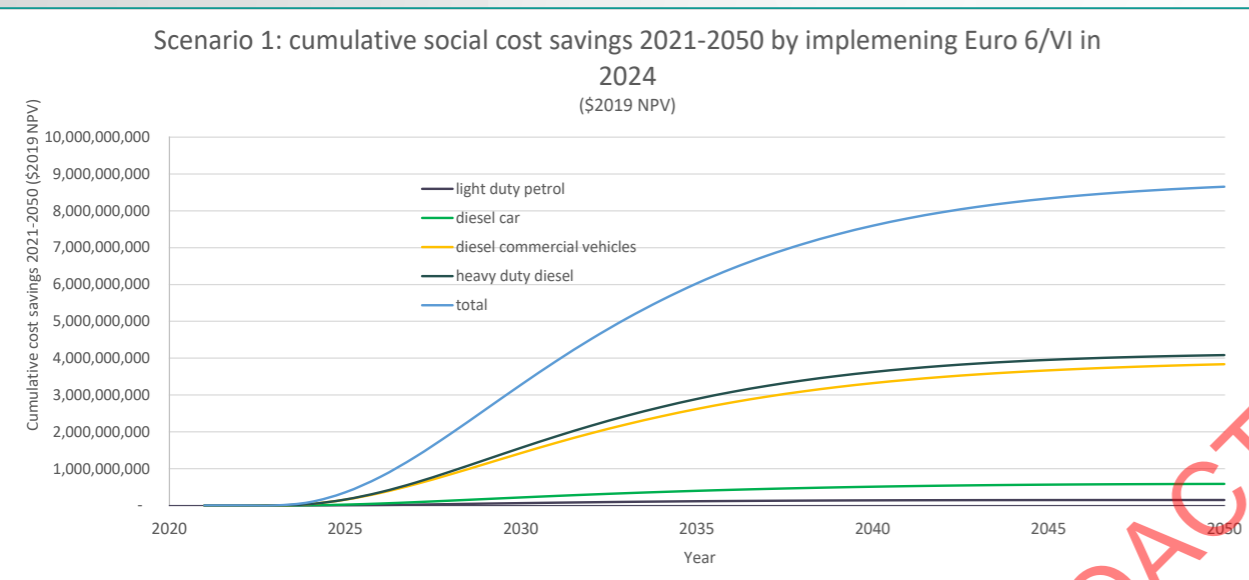


The total social costs of harmful air pollution from all sources is NZD\$15.6 billion. Of this, the cost from motor vehicles comprises 67%.

In contrast, motor vehicles comprised 27% of social costs in the previous HAPINZ report (which did not account for NO₂).

Crustal material refers to windblown dust and construction dust.

We recommend rapidly implementing stringent emissions standards in line with global standards



This graph represents the cumulative cost savings out to 2050 through implementing Euro 6/VI in 2024 for new vehicles.

The greatest savings come from diesel commercial vehicles, like utes and vans, and heavy duty diesel vehicles, such as trucks used for freight.

Implementing Euro 6/VI in 2024 would lead to savings in social costs of \$NZD8.656 billion out to 2050.

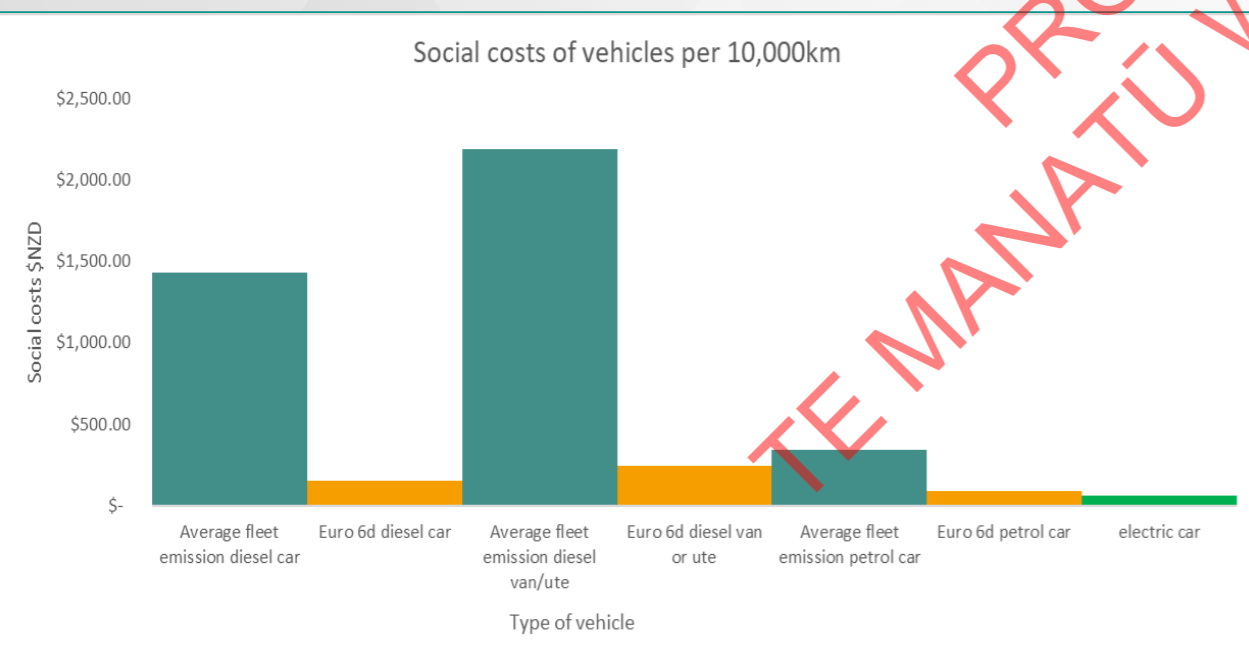
Most of our diesel vehicles only comply with Euro 5/V, which is now a **13 year old standard**.

Potential dates to require stringent emissions standards

	2023	2024	2025	2028
Light used	Euro 5/V and similar standards	Euro 6d and similar standards for manufacture year 2024		Euro 6 for all used vehicles
Heavy used	Euro 5/V and similar standards		Euro VI and similar standards for manufacture year 2024	Euro VI for all used vehicles
Light new		Euro 6d for all new imports		
Heavy new			Euro VI for all new imports	

Other potential measures could reduce harmful emissions

- Working with Waka Kotahi to update the RightCar website to show more accurate harmful emissions ratings.
- Leveraging the release of the HAPINZ 3.0 report in June to undertake education campaigns on motor vehicle pollution and its harms.
- Low-emission zones in population dense, air pollution hot spots.
- Engaging with industry to workshop other solutions, including to reduce tampering.



This graph depicts the social costs of motor vehicle emissions.

Euro 6d is one of the first harmful emissions standards to accelerate real-world emissions improvements.

It clearly shows a large reduction in social costs compared to the average fleet emission vehicles.

Given New Zealand vehicles stay in the fleet for an average of 20 years, it is paramount we adopt Euro 6/VI as soon as possible.

Petrol Euro 6d vehicles have only marginally higher social costs from air pollution to electric vehicles; the only local pollutants associated with EVs are tyre and road wear.

