

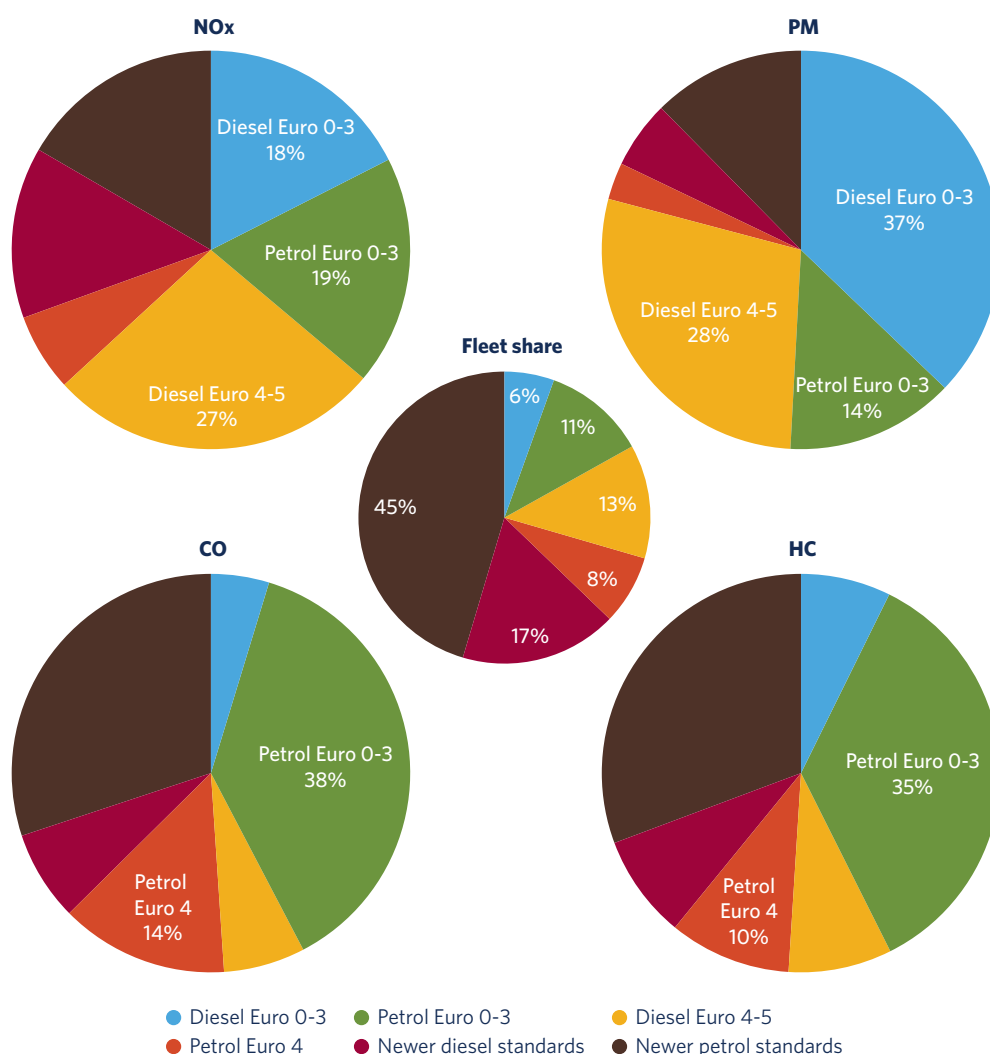
Recommendations for a clean transportation zone in Warsaw

BACKGROUND

Warsaw, Poland has air pollution levels that greatly exceed the World Health Organization guidelines, as well as European Union (EU) pollution limits. The road transport sector is one of the biggest sources of air pollution in Warsaw, where the car ownership rate is one of the highest in Europe. In Poland, recent amendments to the Act on Electromobility and Alternative Fuels set a legal

framework for clean transportation zones, more widely known as low-emission zones. Such zones are designed to restrict the access of polluting cars from cities with the aim of improving air quality. The effectiveness of a clean transportation zone established in Warsaw will largely depend on how the rules and restrictions are designed.

A new TRUE report investigates real-world emissions of the Warsaw fleet and provides a timely analysis for the



Measurement share and estimated NO_x, PM, CO, and HC emission shares from passenger cars measured in Warsaw in 2020 by fuel type and emission standard.

development of a clean transportation zone. The study evaluates the nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), and hydrocarbon (HC) emissions from passenger cars measured in Warsaw in Fall 2020 and offers concrete policy recommendations for an effective clean transportation zone in the city.

KEY FINDINGS

The Warsaw passenger car fleet is characterized by a small share of old vehicles that contribute disproportionately to pollutant emissions. Vehicles certified to Euro 3 standards and older made up 17% of the fleet measured, but were responsible for 37% of NO_x emissions, 51% of PM emissions, and 43% of CO and HC emissions. Restricting the use of vehicles certified to Euro 3 and below from a clean transportation zone would remove the oldest and highest-emitting vehicles in the Warsaw fleet:

- Warsaw's diesel cars certified to Euro 3 and older showed real-world average distance-specific NO_x emissions far above the laboratory limits. Restricting these vehicles would remove cars that are estimated to be responsible for 18% and 37% of the total NO_x and PM emissions, respectively, while accounting for only 6% of the entire fleet.

- Warsaw's petrol cars belonging to this group were found to have real-world distance-specific CO and HC emissions exceeding the regulatory limits. The petrol vehicles in Warsaw that would be affected by restrictions accounted for over 35% of the total CO and HC emissions measured, despite making up only 11% of the fleet.

In addition to restricting the oldest vehicles, progressive inclusion of successive emission standards in clean transportation zone restrictions in Warsaw could lead to significant benefits:

- Phasing out diesel Euro 4 and Euro 5 vehicles, which accounted for 27% of the total NO_x emissions and 28% of the total PM emissions, should be prioritized.
- Restrictions should move forward to also include petrol Euro 4 vehicles, which make up only 8% of the fleet but are responsible for nearly 14% of the total CO emissions and 10% of the total HC emissions.
- All vehicles powered by fossil fuels should be subject to the same restrictions in a clean transport zone to achieve the greatest reduction in emissions. Petrol vehicles converted to run on liquified petroleum gas should not be given exemptions from the restrictions, as they do not appear to emit less pollutants than petrol vehicles.



TO FIND OUT MORE

For details on the Warsaw remote-sensing project and related questions, contact Yoann Bernard, y.bernard@theicct.org.

For more information on TRUE, visit www.trueinitiative.org