

Source Project:
People, Politics, and
the Environment

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BACKGROUND

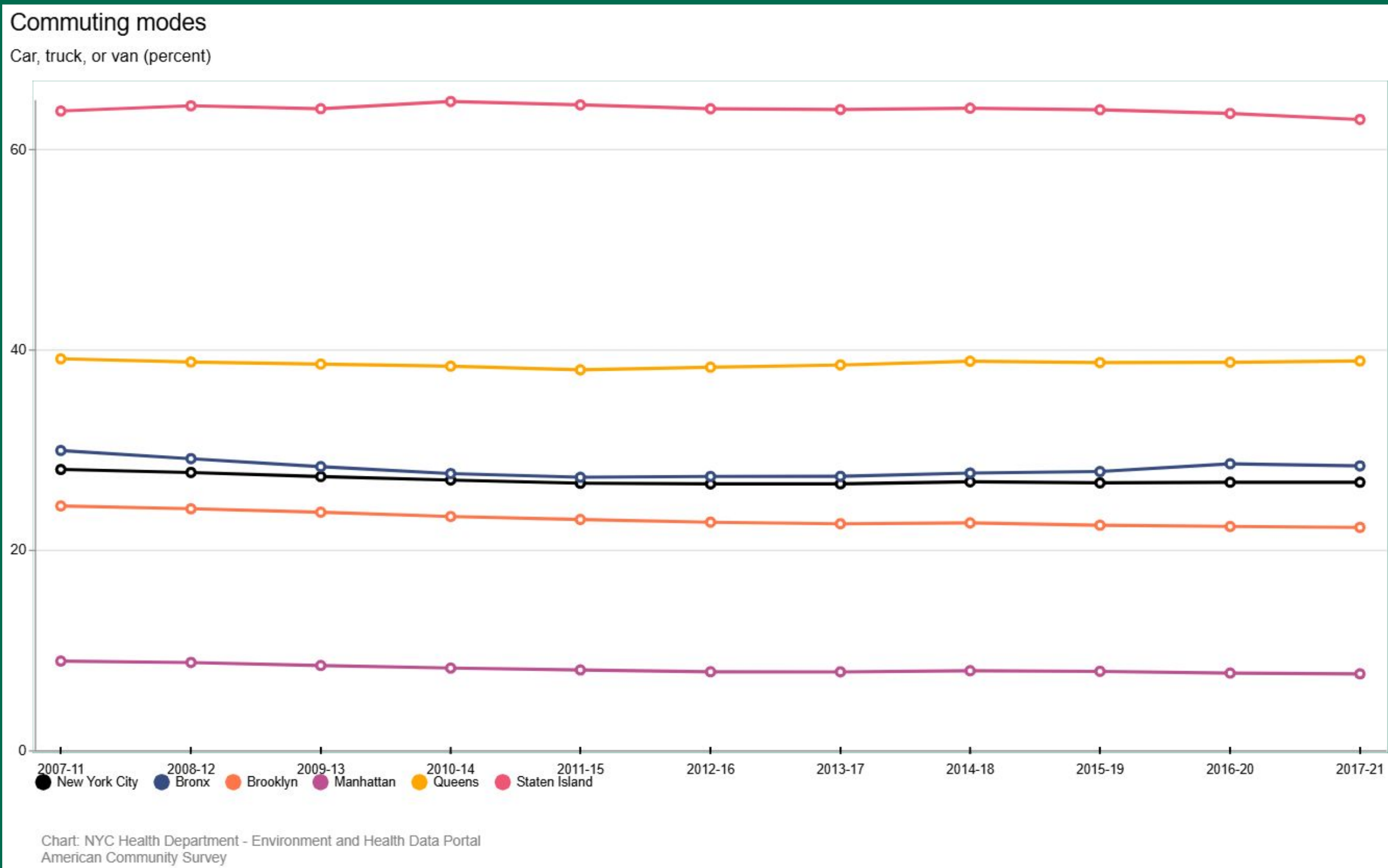
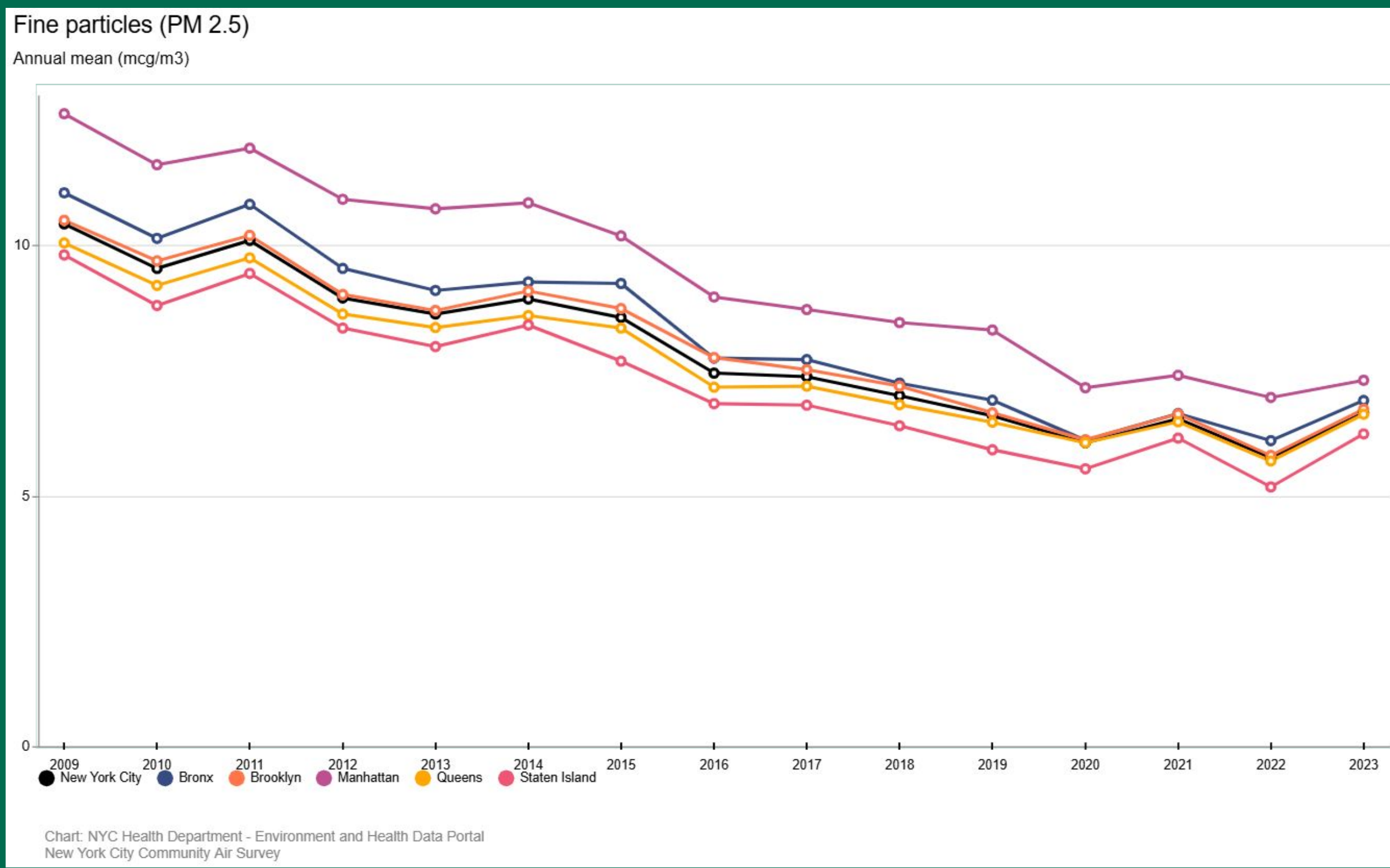
- Industrial zoning dictates where industries can be developed, many regulations have been enacted specific to industrial environments to address environmental sustainability concerns within certain regions
- Seeing how these regulations impact its surrounding environment will help determine if industrial zoning regulations positively or negatively impact residential air pollution levels and welfare
- Understanding these impacts is crucial for developing zoning policies that balance industrial growth with public health and environmental sustainability

METHODS

- Analyzing how industrial zoning regulations changed over time
- Analyzing air pollution measurements in the five boroughs of New York
- Comparing air pollution measurements with traffic percentages and other residential factors

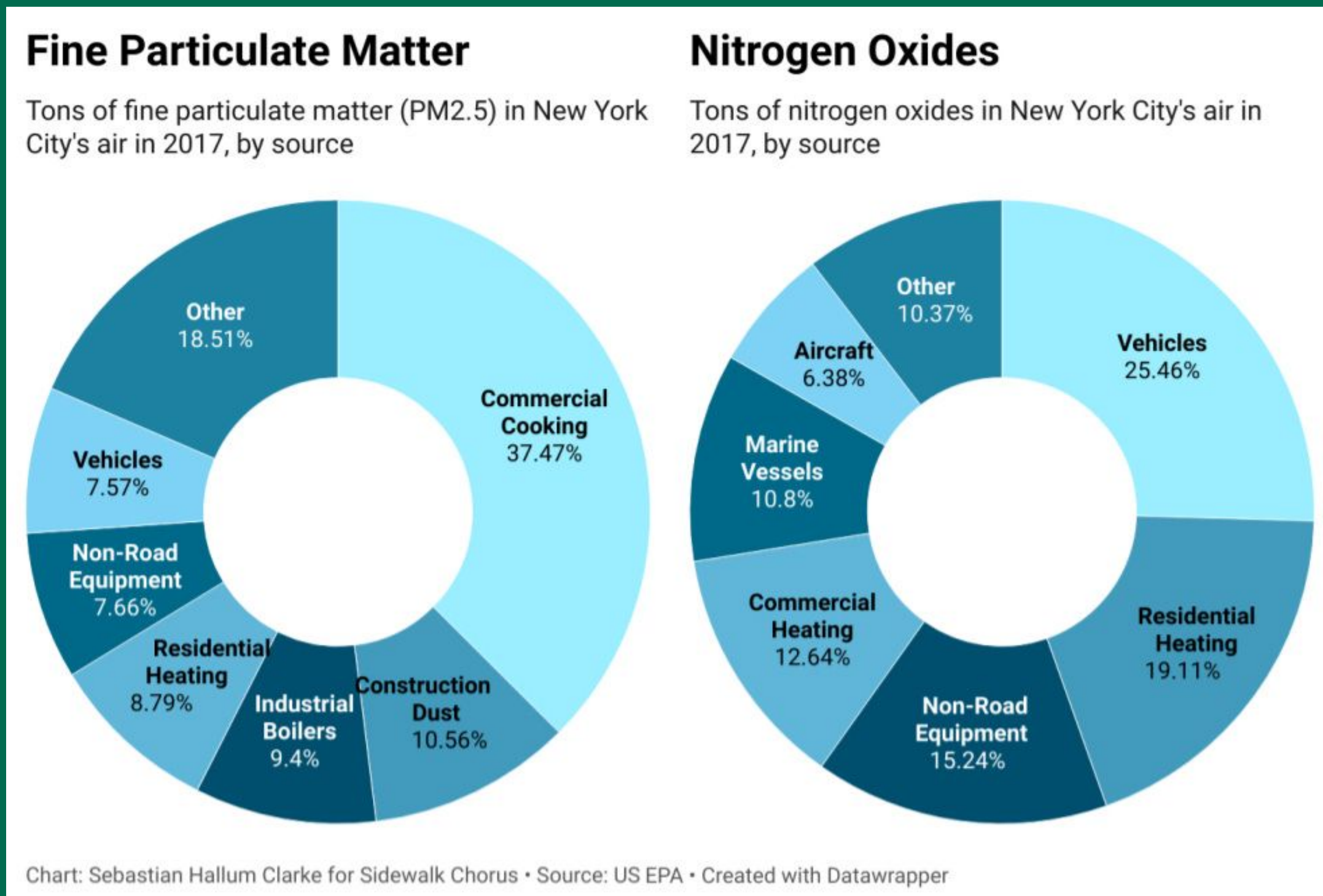
Industrial Zoning Regulations: Impact on Air Pollution
and Residential Welfare

Less traffic density helps, but it does not negate the density of the pollutants from buildings in Manhattan. PM 2.5 is still higher than in the boroughs with a higher percentage of industrial areas and commuting modes.



- Annual average amount of particulate matter (PM 2.5) from 2009 to 2023. The overall trend is decreasing in all five boroughs

- Percentage of car, truck, or van commuters in the five boroughs from 2007 to 2017.



- Sources of PM 2.5 and nitrogen oxide emissions in New York City
- The highest contributor of PM 2.5 is commercial cooking
- The highest contributor of nitrogen oxides is vehicles and residential heating

RESULTS

- Manhattan has the lowest percentage of commuters, but the highest percentage of PM 2.5
- Even though there has been an increasing amount of industrial zoning regulations to help regulate the pollutants emitted by industrial activities, it's offset by the pollutants that buildings emit
- Industrial zoning regulations are not effective at reducing the amount of total pollutants
- Policies need to be addressed toward the emissions of building pollutants in order for the regulations to be effective and have a reduction in pollution in NYC



- Pollutants go down as industry leaves Manhattan
- As regulations increase, typically industrial areas decrease and move to more business friendly environments
- There will be less noise and more healthy people relative to pollutants

FULL PAPER



REFERENCES

