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The Brussels Low Emission Zone & upcoming thermic ban

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Outline

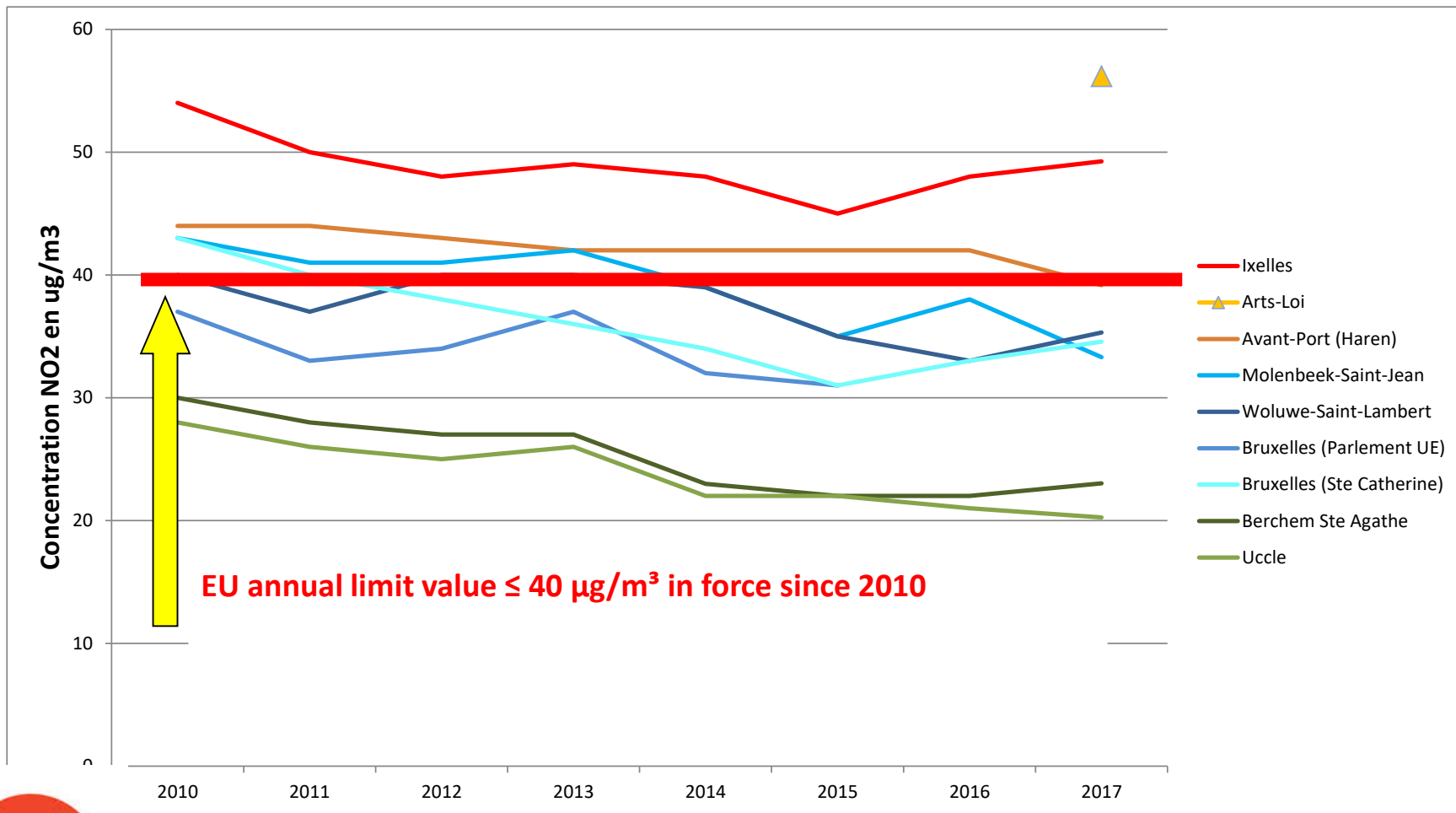
1. The Brussels Low Emission Zone (LEZ)
2. Impacts of the LEZ: first observations
3. Next steps



Why cut air pollution from road transport?

- Over 8 000 premature deaths each year in Belgium due to outdoor air pollution, over 400 000 in the EU
- Diseases, loss in quality of life, economic costs (medication, hospitalisations, lost working days), impacts on buildings, ecosystems, etc.
- Road transport pollutants: particulate matter (PM₁₀, PM_{2.5}), black carbon (BC), nitrogen dioxide (NO₂) and ozone (O₃)
- Diesel car exhaust classified carcinogenic to humans (WHO, 2012)

Air quality: evolution of annual NO₂ concentrations since 2010

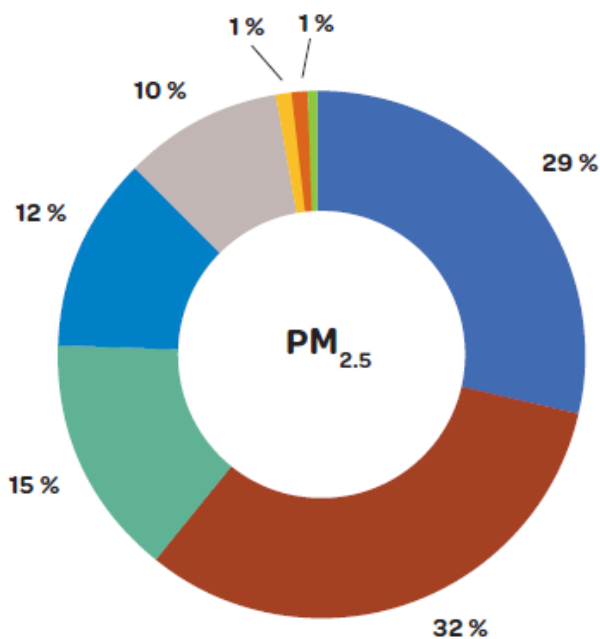


The EU annual limit value (≤ 40 µg/m³) is still breached

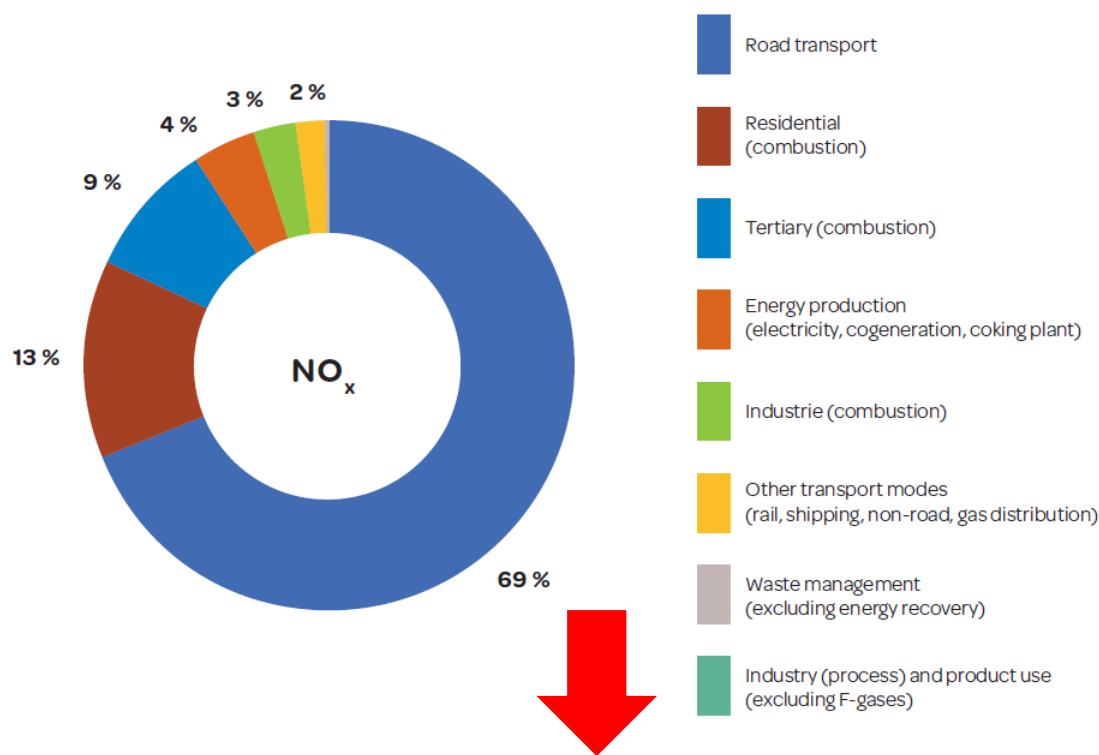
! Problem at stations close to traffic !

Background: sources of NO_x and PM₁₀ emissions in the Brussels region

PM_{2.5} emission sources, 2016



NO_x emission sources, 2016



Diesel cars emit 3 to 20 times more NO_x than petrol cars!

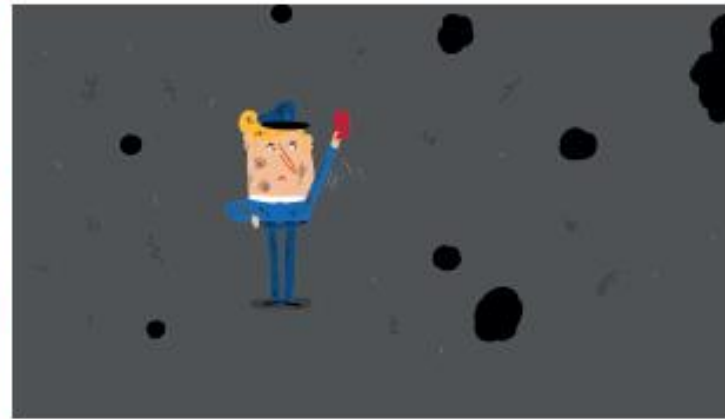


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Growing awareness from citizens



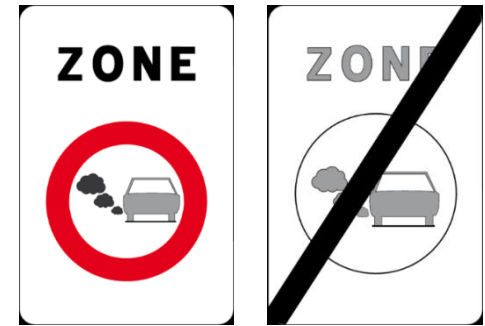
The Brussels LEZ



Most polluting cars cannot circulate in the region anymore



The Brussels LEZ



- Cover the entire Brussels region except the Ring
- Cars, vans, (mini-)buses, coaches are concerned
- Access criteria depending on fuel and Euro norme/age
- Enforcement via ANPR cameras
- Possible derogations (old timers > 30 years, foodtrucks, ...)
- Maximum of 8 day passes per year (35 euro/pass)
- Vehicles registered outside Belgium must register for the LEZ





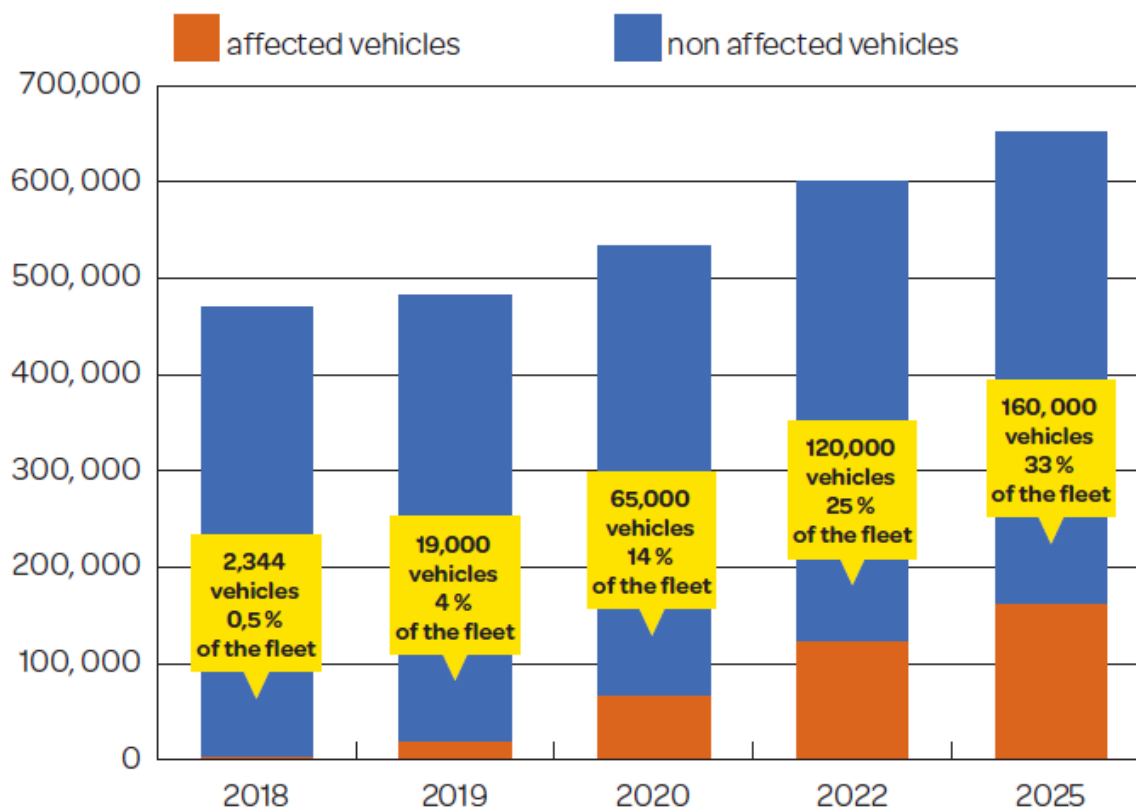
Access criteria

Diesel	2018	2019	2020	2022	2025
EURO 6	Access	Access	Access	Access	Access
EURO 5	Access	Access	Access	Access	No access
EURO 4	Access	Access	Access	No access	No access
EURO 3	Access	Access	No access	No access	No access
EURO 2	Autorisé	No access	No access	No access	No access
EURO 1	No access	No access	No access	No access	No access
No EURO norm	No access	No access	No access	No access	No access

Petrol/LP G/CNG	2018	2019	2020	2022	2025
EURO 6	Access	Access	Access	Access	Access
EURO 5	Access	Access	Access	Access	Access
EURO 4	Access	Access	Access	Access	Access
EURO 3	Access	Access	Access	Access	Access
EURO 2	Access	Access	Access	Access	No access
EURO 1	Access	No access	No access	No access	No access
No EURO norm	Access	No access	No access	No access	No access

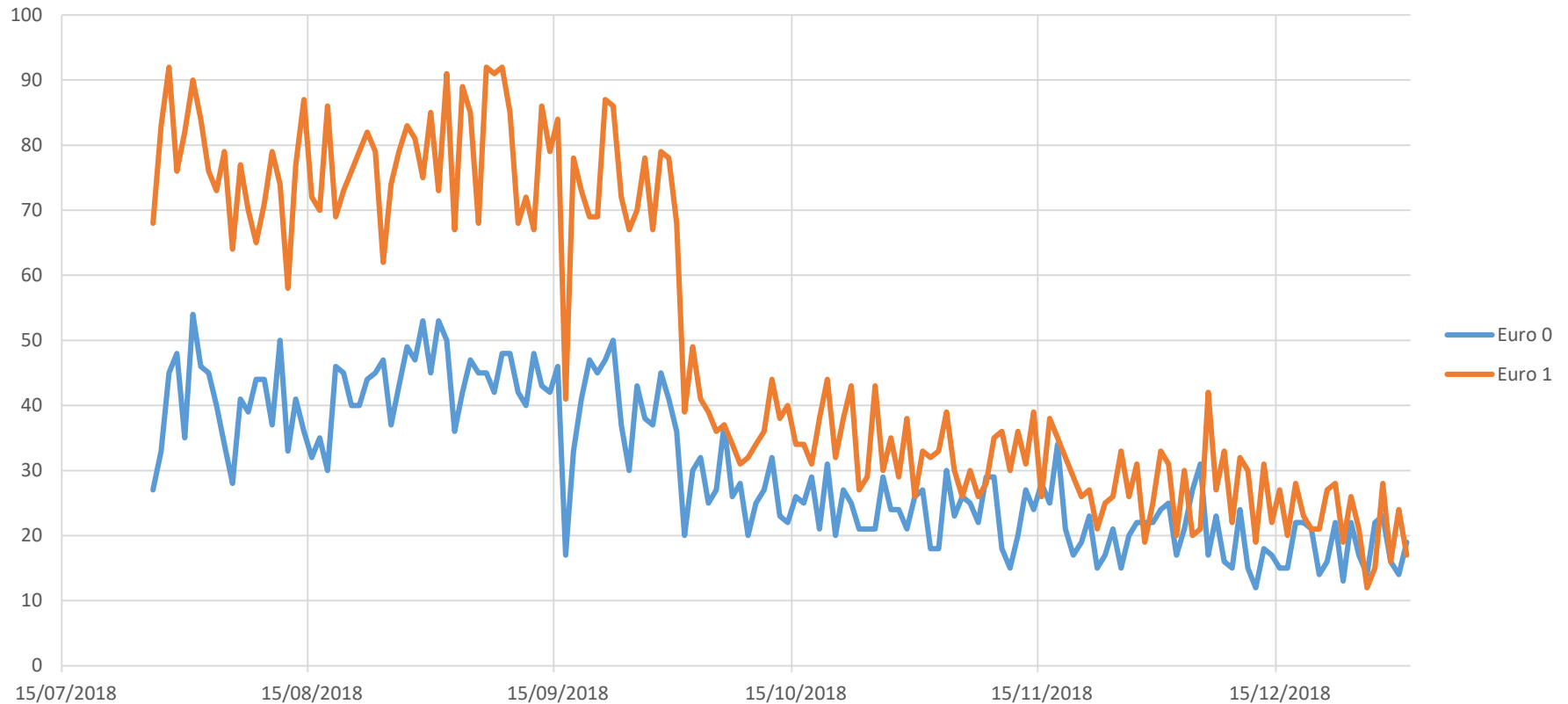
Impact on the fleet

Changes in the number of vehicles (cars, vans, buses/coaches) registered in RBC and affected vehicles by the driving ban between 2018 and 2025 (in a non-LEZ situation)



2018 – first observations

Number of diesel cars (M1) Euronorme 0 ou 1 circulant in the LEZ



Impact: NO_x et PM_{2.5} emissions in 2018

Emissions from belgian cars (M1) circulating in the LEZ: comparaison between June and December 2018 (before and after sending fines) (in tons)

	NO _x	PM _{2.5}
June week (18-24/6)	29,95	1,150
December week (10-16/12)	28,54	1,076
Difference	-4,7%	-6,4%

Note:

- The contribution of the LEZ to this decrease has not been calculated but, for reference: between 2016 and 2017, we estimate that emissions of NO_x and PM_{2.5} from cars registered in the Brussels region dropped by around 3,8% et 7% respectively.
- Emissions have been calculated using COPERT (www.emisia.com/utilities/copert/).

Conclusion

Good news:

- The LEZ system is up and running
- The LEZ has the desired effects

Still work to be done:

- No impact on NO₂ concentrations levels yet
- Emissions of Euro 6 vehicles not addressed by the current legislation
- WHO limits still out of reach (PM_{2.5})
- CO₂ emissions must be addressed
- Possession and use of private car must be reduced

Brussels gouvernement's commitments

- WHO standards as a goal for Brussels' air quality
- LEZ: new criteria for period after 2025
- Ambition is to phase out diesel vehicles by 2030 at the latest, petrol & LPG by 2035
- Inclusion of scooters and motorcycles in LEZ
- Develop financial support to accompany citizens
- Kilometer charge
- Broader regional mobility plan (encourage cycling, walking, 30km/h, etc.)

Diesel and petrol ban: process

- Written consultation
 - ✓ Questionnaire
 - ✓ Report (31/01/2019)
- Oral consultation
 - ✓ Round tables, focus groups, regional consultative bodies (CES, CRM, CE)
 - ✓ Report (4/04/2019)
- Closing event and general conclusions (23/04/2019)
- 4 impact studies:
 - ✓ Impact on air quality and climate
 - ✓ Impact on budget and public fleet
 - ✓ Impact on people's health
 - ✓ Impact on mobility, socio-economic impacts, energy & roadmap

LEZ & thermic ban

Challenges at local and EU level

- Information of people concerned
- Difference between different LEZ schemes in the EU
- Public acceptance, social dimension
- Alternatives: development and financial support for modal shift
- Foreign vehicles: no EU wide database, enforcement dependent on registration
- Euro norm vs. real emissions
- Exports of 2nd hand vehicles
- EU legislation to reduce emissions at source and address transboundary pollution is key
- Are EU air quality limit values adequate to protect European citizens' health in 2020?

Thank you!



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