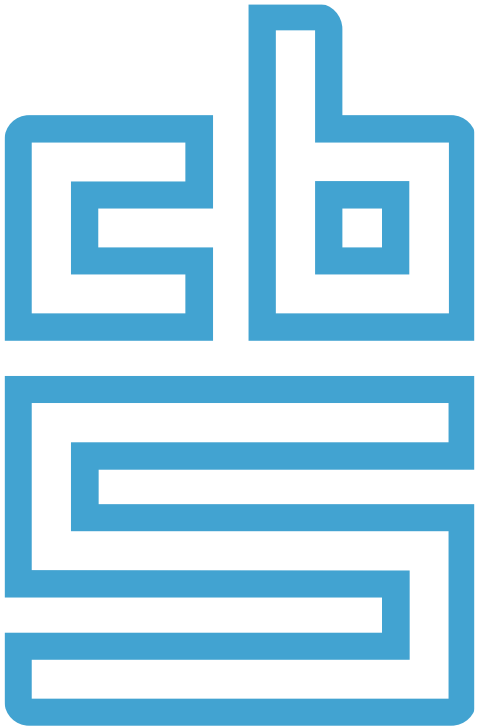


# Air Inequity Dashboard:

## Insights on Pollution & Socioeconomic Disparities

Statistics Netherlands

Athithya, Chris, Shaya

11-03-2025

eurostat

# Take a deep breath

# Air pollution

- Air pollution is an invisible threat

**2022**

| Pollutant | Premature deaths |
|---|---|
| PM2.5 | 239,000 |
| O3 | 70,000 |
| NO2 | 48,000 |

# Inequality across Europe

- Air quality is not shared equally

- Low-income and marginalized groups often live near:
  - Industrial sites
  - Busy roads
  - Areas with poor air quality

- Higher pollution exposure and worsening health inequalities

# Air pollution isn’t just an environmental issue—it’s a social one

# EU Policies for Cleaner Air and Equity

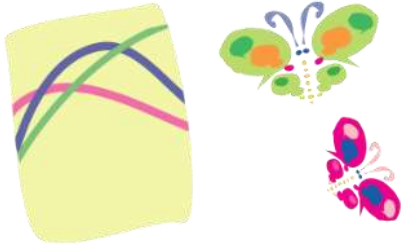
EU policies aim to reduce air pollution and its unequal impacts:

- **Ambient Air Quality Directive**
- **Zero Pollution Action Plan 2030**

- target a **55% reduction in pollution-related premature deaths** by 2030.

- **Other relevant policies:** European Green Deal, Just Transition Mechanism

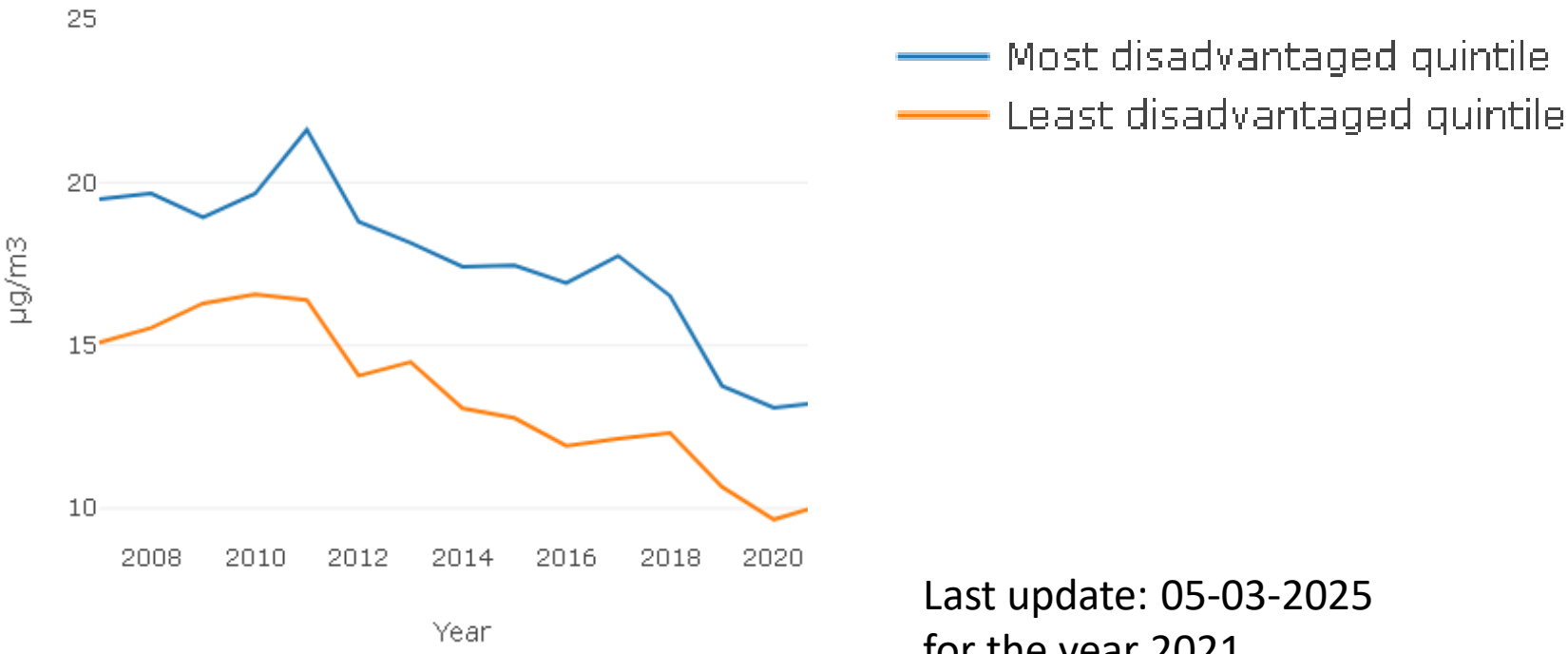
# How can policymakers ensure cleaner air reaches those who need it most?



Policymaker
of the Future

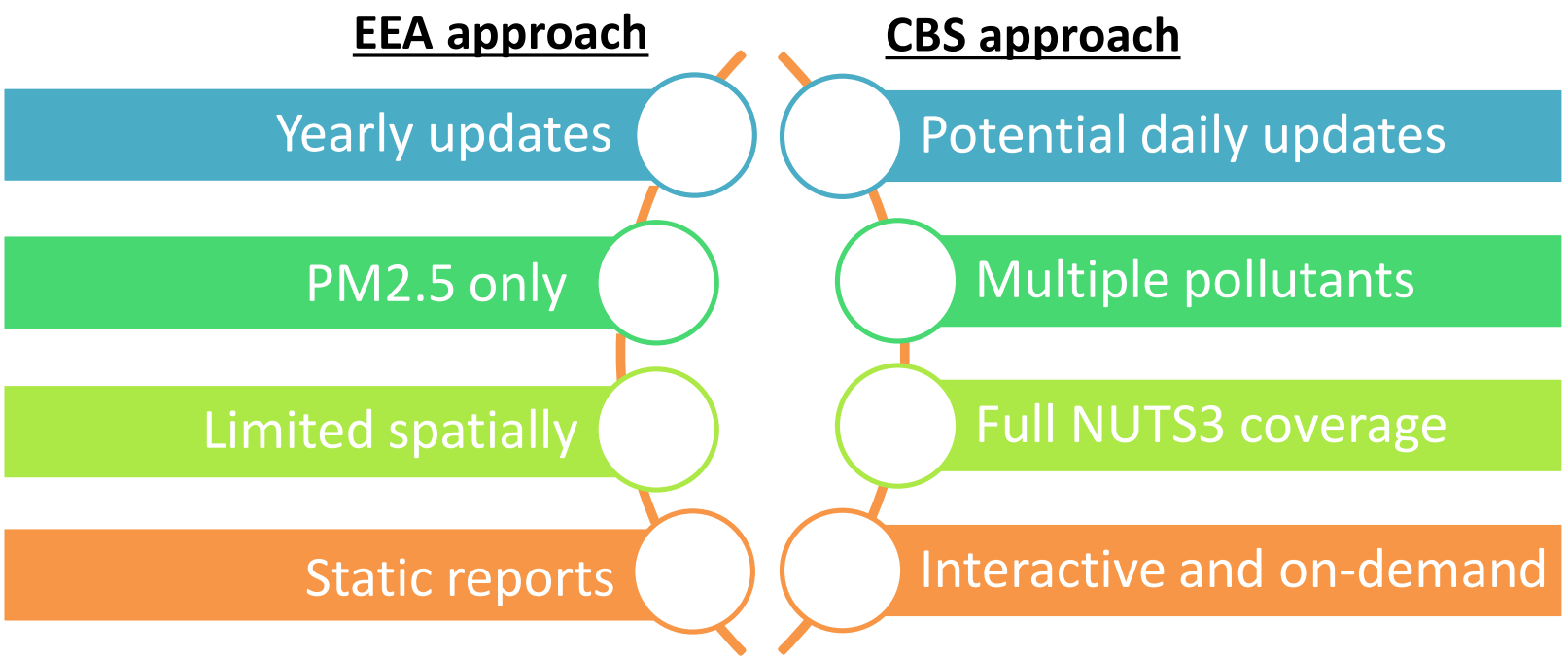
# Air Inequity Dashboard

# Inequity in exposure to air pollution (EEA)




Last update: 05-03-2025
for the year 2021

# Improvement



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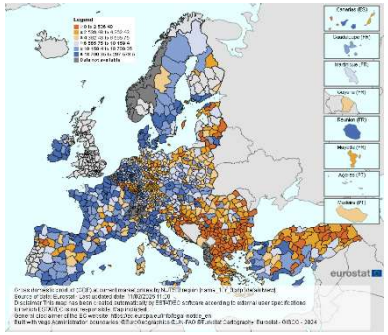

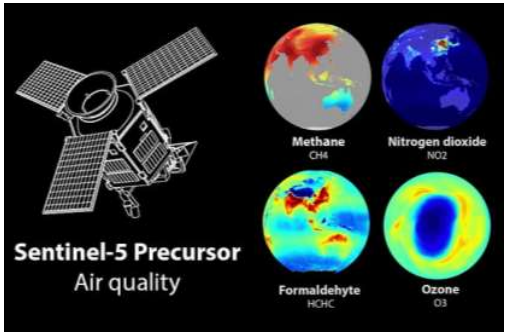


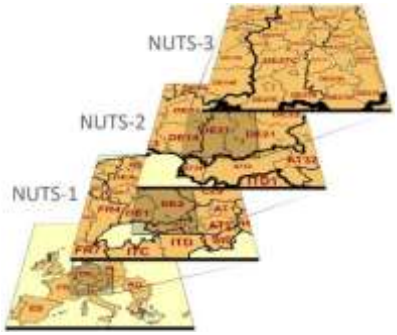


| POLLUTANT | INDEX LEVEL (based on polluant concentrations in µg/m3) | | | | | |
|---|---|---|---|---|---|---|
| | 1 Very good | 2 Good | 3 Medium | 4 Poor | 5 Very Poor | 6 Extremely Poor |
| Ozone ($O_3$) | 0-50 | 50-100 | 100-130 | 130-240 | 240-380 | 380-800 |
| Nitrogen dioxide ($NO_2$) | 0-40 | 40-90 | 90-120 | 120-230 | 230-340 | 340-1000 |
| Sulphur dioxide ($So_2$) | 0-100 | 100-200 | 200-350 | 350-500 | 500-750 | 750-1250 |
| Particules less than 10 µm ($PM_{10}$) | 0-20 | 20-40 | 40-50 | 50-100 | 100-150 | 150-1200 |
| Particules less than 2.5 µm ($PM_{2.5}$) | 0-10 | 10-20 | 20-25 | 25-50 | 50-75 | 75-800 |

**Note:** PM10 and PM2.5 values are based on 24-hour running means

| Pollutant | Winter (Dec-Feb) | Spring (Mar-May) | Summer (Jun-Aug) | Autumn (Sep-Nov) |
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| PM2.5 | 0.40 | 0.36 | 0.25 | 0.35 |
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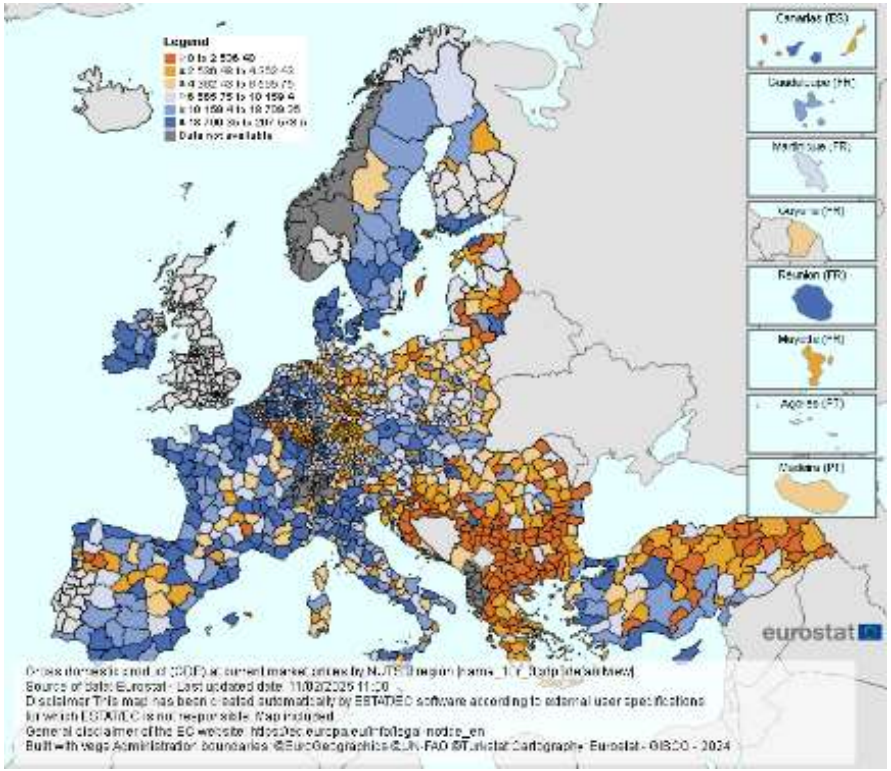


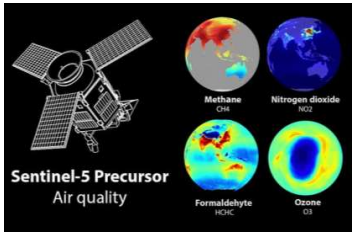



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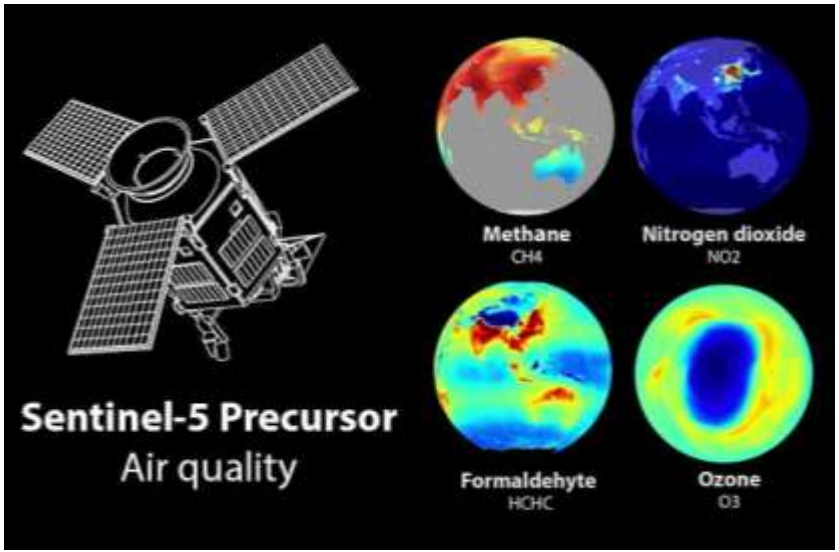


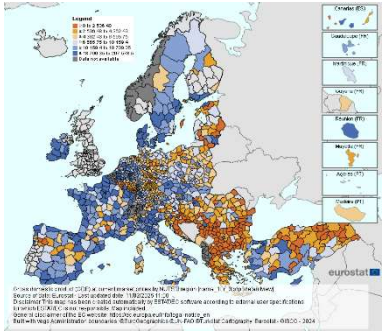


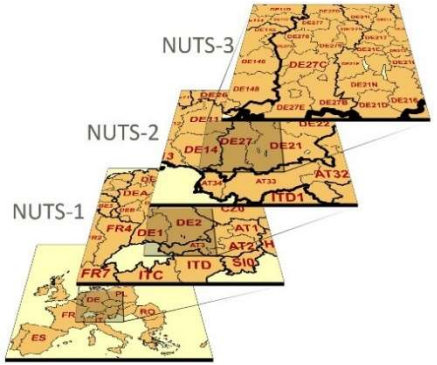


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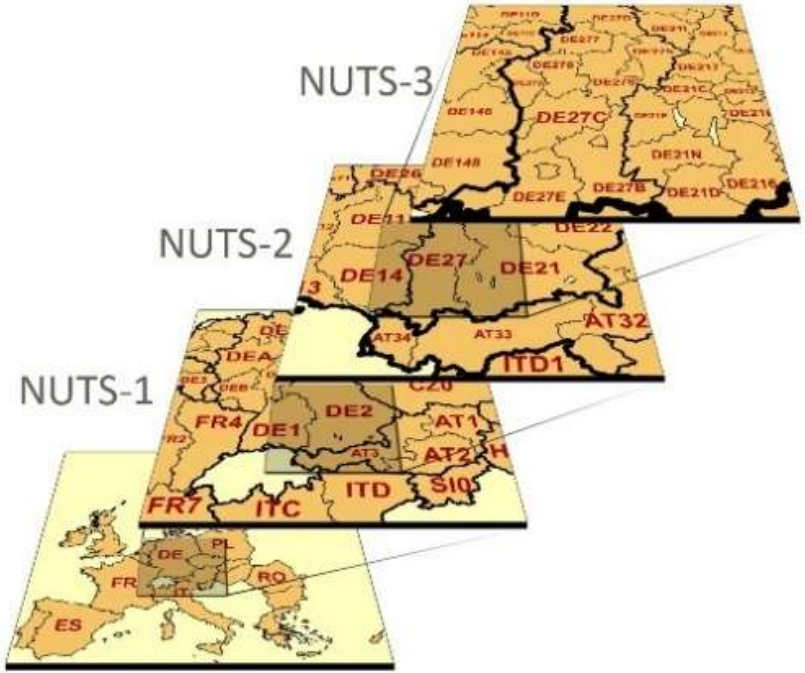


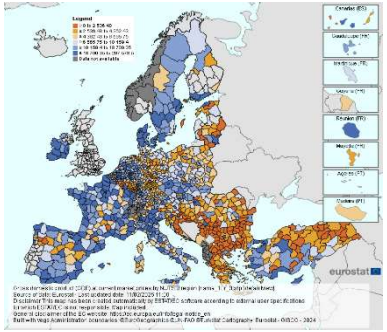


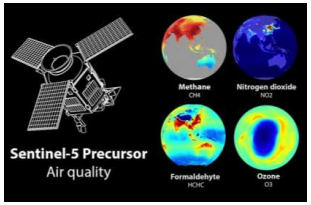


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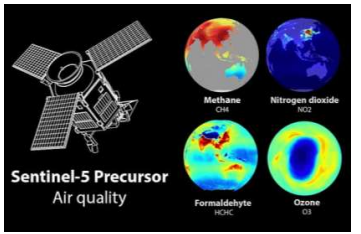


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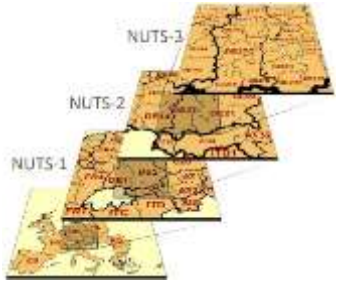


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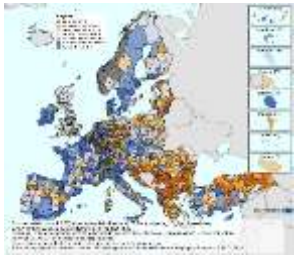

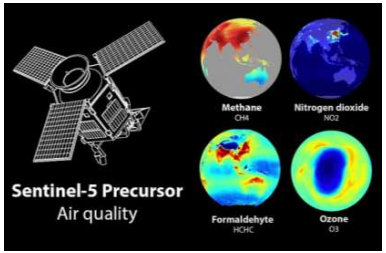


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# Methodology

$$API_{NUTS3} = \sum_{Pollutant} (APS_{Pollutant} \times Weight_{Season})$$

$$GDP'_{NUTS3} = 1 - \frac{GDP_{NUTS3} - GDP_{Min}}{GDP_{Max} - GDP_{Min}}$$

***GDP per capita is used***

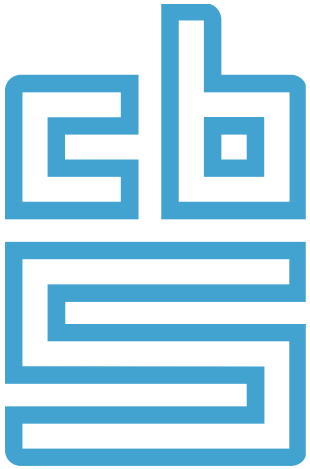
$$AII_{NUTS3} = API_{NUTS3} \times GDP'_{NUTS3}$$

# Production pipeline


# Dashboard demo

Go to dashboard:

# Thank you for listening!



Facts that matter