Air Pollution in Europe: focus on cities

Alberto González Ortiz (EEA) / Healthy cities, healthy people: Pathways for clean air in the EU’s urban environments / Brussels, 23 April 2024
Air pollution: main urban emissions

Year 2021

Source: EEA's Air pollution in Europe: 2023 reporting status under the National Emission reduction Commitments Directive

European Environment Agency
Air quality in Europe 2022: NO₂

Source: Air quality statistics
Air quality in Europe 2022: PM$_{2.5}$

Source: Air quality statistics
The European city air quality viewer

Source: European city air quality viewer
Exposure of EU urban population in 2021

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>EU standards</th>
<th>WHO guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine particulate matter (PM$_{2.5}$)</td>
<td>&lt;1%</td>
<td>97%</td>
</tr>
<tr>
<td>Particulate matter (PM$_{10}$)</td>
<td>10%</td>
<td>76%</td>
</tr>
<tr>
<td>Ozone (O$_3$)</td>
<td>10%</td>
<td>94%</td>
</tr>
<tr>
<td>Nitrogen dioxide (NO$_2$)</td>
<td>&lt;1%</td>
<td>90%</td>
</tr>
<tr>
<td>Benzo(α)pyrene (BaP)</td>
<td>14%</td>
<td>64%</td>
</tr>
<tr>
<td>Sulphur dioxide (SO$_2$)</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Source: AIR003
In 2021, in Europe, mortality attributable to

**PM$_{2.5}$**
- 253,000 attributable deaths in EU-27 (293,000 in 40 countries)
- 2,584,000 years of life lost (2,936,000)
- 584 years of life lost per 100,000 inhabitants (618)

**NO$_2$**
- 52,000 attributable deaths in EU-27 (69,000 in 41 countries)

**O$_3$**
- 2,000 attributable deaths in EU-27 (27,000 in 41 countries)

Source: Air Quality Health Risk Assessments
Mortality is not the only impact of air pollution

Source: EEA, 2023
Trend analysis 2005 – 2021

Source: ETC HE Report 2023/8
Improvement also in the health impacts

Source: EEA's indicator AIR007
Managing air quality in Europe

Air quality remains a persistent problem in Europe, continuing to harm health and ecosystems. This briefing reviews the status of air quality plans put in place by countries in situations where air pollution limits are exceeded. It also identifies th...
Inequalities in the exposure to air pollution

Source: European environment and health atlas

Source: EEA's indicator AIR009
Clear narrative for people: the environment affects your health

Content organized around major topics

- Air pollutants: PM2.5, NOx, O3, industrial (air/water)
- Environmental noise
- Water (waste, bathing)
- Climate
- Green spaces
- Inequalities in exposure, combined impacts

European environment and health atlas
Making it personal: the “Check your place” widget