



# EU Clean Air Policy

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27 January 2022

*European Commission  
Clean Air Unit*

# EU clean air policy



## Ambient Air Quality (AAQ) Directives

Maximum concentrations of  
air polluting substances  
(PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub> + 8 more)

### SETTING OBJECTIVES FOR GOOD AIR QUALITY

### REDUCING EMISSIONS OF POLLUTANTS



### National Emission reduction Commitments Directive

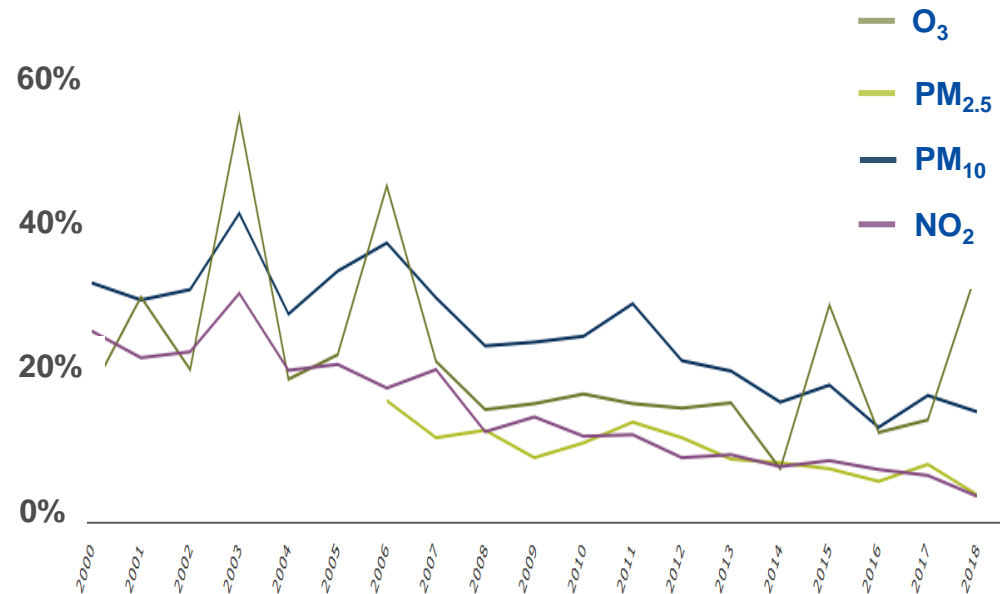
National emission totals  
(SO<sub>2</sub>, NO<sub>x</sub>, NMVOC, PM<sub>2.5</sub>, NH<sub>3</sub>)

### Source-specific emission standards

- IED Directive
- MCP Directive
- Eco-design Directive
- Energy efficiency
- Euro and fuel standards

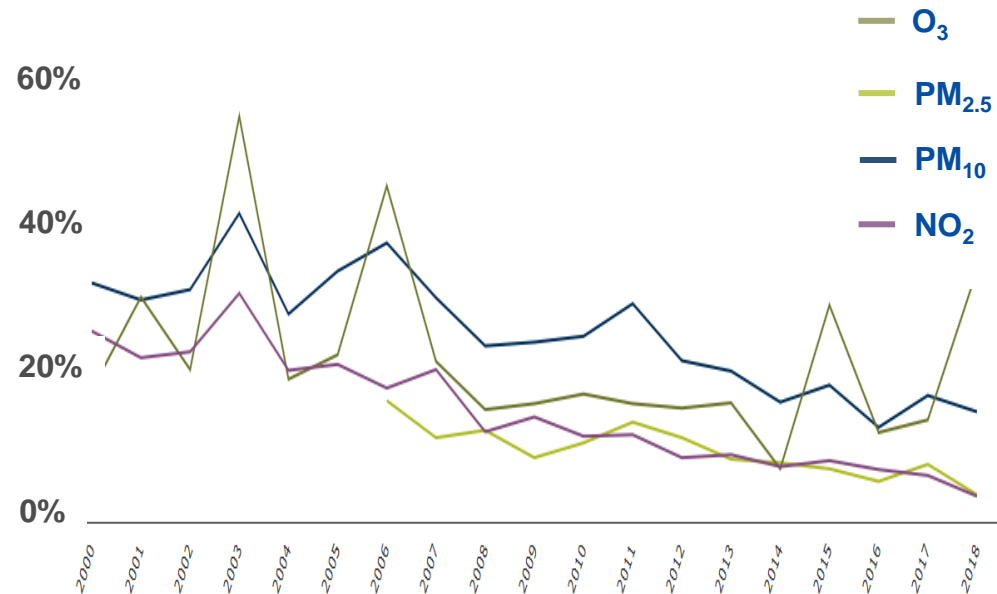
# EU clean air policy works ...

EU urban population exposed to air pollution above **EU standards from 2000 to 2018**

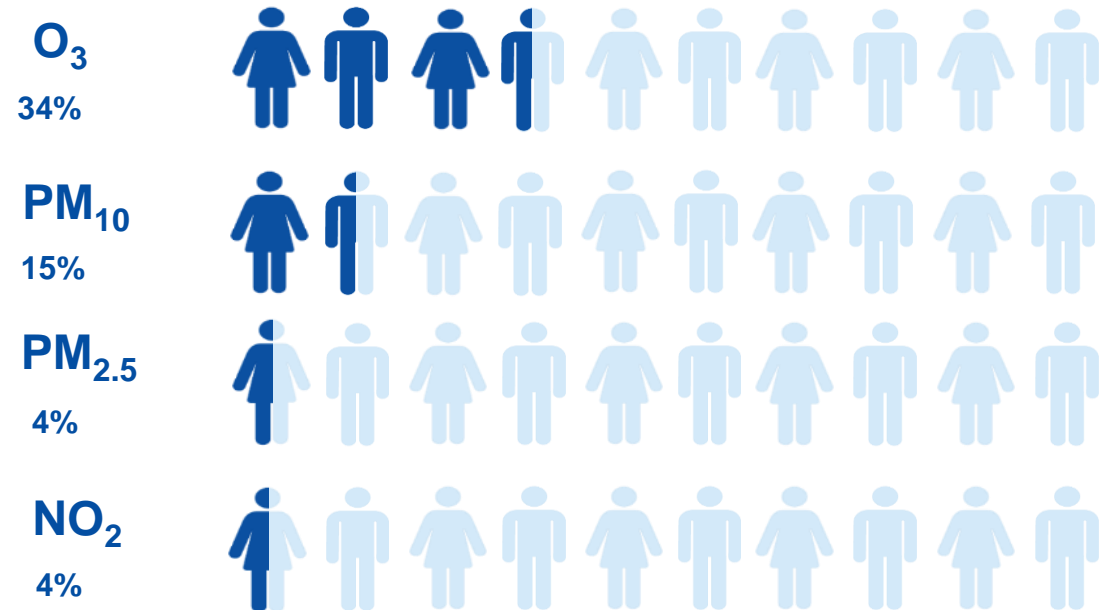


# EU clean air policy works ... but ...

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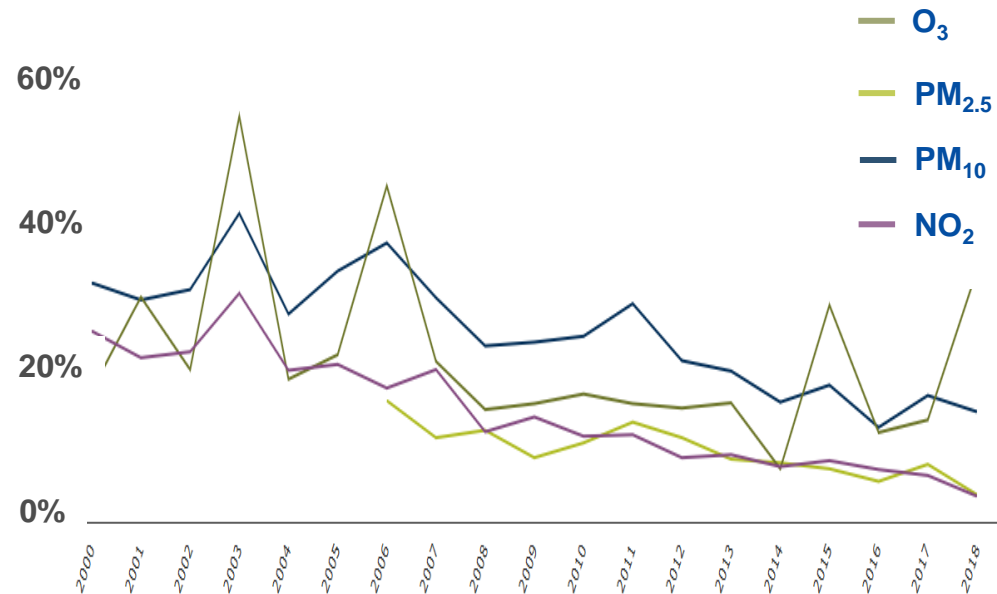


EU urban population exposed to air pollution above **EU standards** in 2018 / 2019

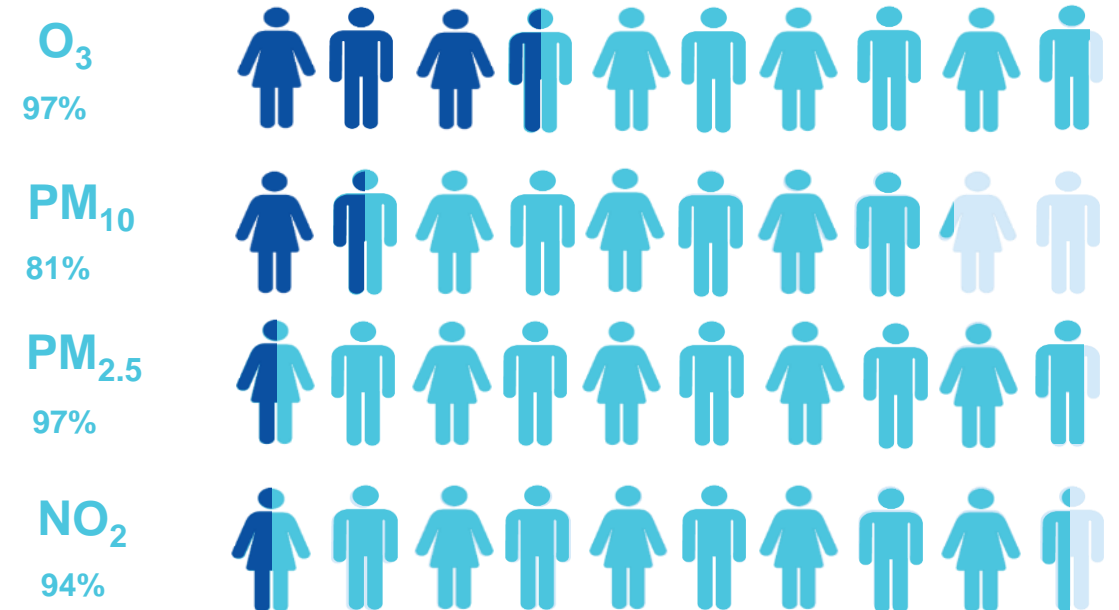


# EU clean air policy works ... but ...

EU urban population exposed to air pollution above **EU standards from 2000 to 2018**



EU urban population exposed to air pollution above **WHO (2021) guidelines** in 2018 / 2019



# Key shortcomings

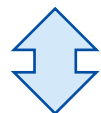
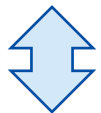
# Air quality health outcome shortcomings

Premature deaths due to air pollution halved during last two decades, but ...



**Estimate for Hungary:**  
10.400 premature deaths due to particulate matter in 2019

**Health outcome shortcomings**  
EU Standards are not fully aligned with scientific advice ...



Exceedances above WHO Air Quality Guidelines and negative health impacts persist

Lack of flexibility to adapt to evolving science and new recommendations

Pollutants	2005 WHO Guidelines	2021 WHO Guideline	EU Air Standards	EU Exceptions
PM <sub>10</sub> (year)	20 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>	-
PM <sub>10</sub> (day)	50 µg/m <sup>3</sup>	45 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	35 days per year
PM <sub>2.5</sub> (year)	10 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>	25 µg/m <sup>3</sup>	-
PM <sub>2.5</sub> (day)	25 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	-	-
NO <sub>2</sub> (year)	40 µg/m <sup>3</sup>	10 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>	-
NO <sub>2</sub> (day)	-	25 µg/m <sup>3</sup>	-	-
NO <sub>2</sub> (hour)	200 µg/m <sup>3</sup>	200 µg/m <sup>3</sup>	200 µg/m <sup>3</sup>	18 hours per year
SO <sub>2</sub> (day)	20 µg/m <sup>3</sup>	40 µg/m <sup>3</sup>	125 µg/m <sup>3</sup>	3 days per year
O <sub>3</sub> (season)	-	60 µg/m <sup>3</sup>	-	
O <sub>3</sub> (8-hr)	100 µg/m <sup>3</sup>	100 µg/m <sup>3</sup>	120 µg/m <sup>3</sup>	75 days in 3 years
CO (8-hr)	-	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	

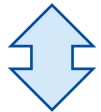
+ Benzene, Lead, Arsenic, Cadmium, Nickel, Benzo(a)Pyrene

# Air quality implementation shortcomings

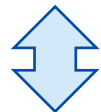
Frequency, extent and magnitude of exceedances has declined, but ...

## Implementation shortcomings

Exceedances are not always addressed sufficiently and/or on time ...



Air quality plans and measures have often proven ineffective



Insufficient penalties and compensation linked to exceedances

As of January 2022, still **31 cases** addressing 18 Member States (+ 1 vs UK) related to bad application:

- 15 particulate matter (PM<sub>10</sub> and/or PM<sub>2.5</sub>)
- 13<sup>1</sup> nitrogen dioxide (NO<sub>2</sub>)
- 1 sulphur dioxide (SO<sub>2</sub>)
- 2 monitoring problems

Of these, 16 cases (i.e. 9 Member States + 1 vs UK) have been referred to the Court of Justice of the EU.

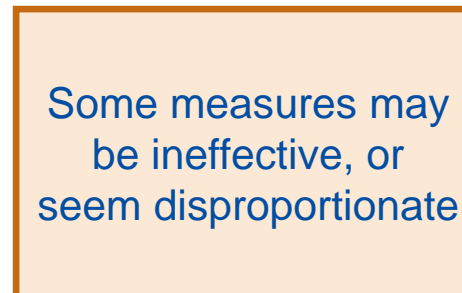
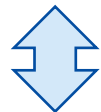
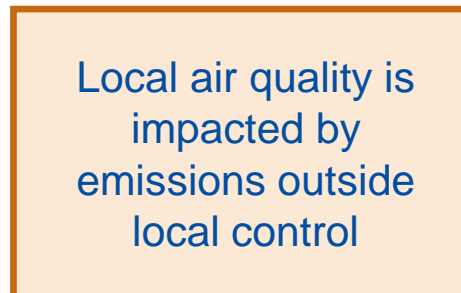
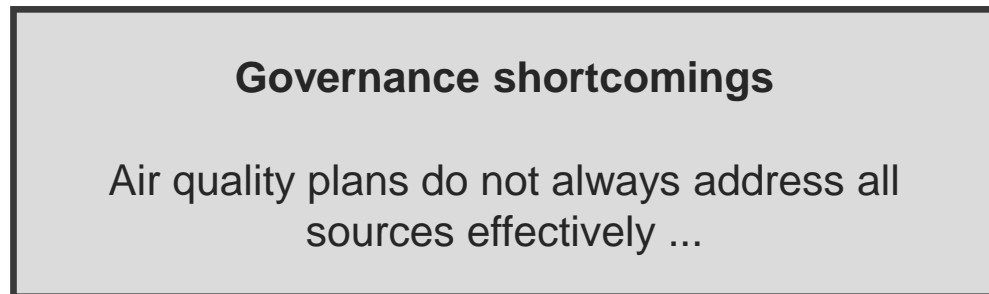
With 8 rulings so far: BG, PL, RO, IT, HU (for PM<sub>10</sub>) and UK, DE, FR (for NO<sub>2</sub>).

*These cases address both exceedances of air quality standards and not keeping these as short as possible.*

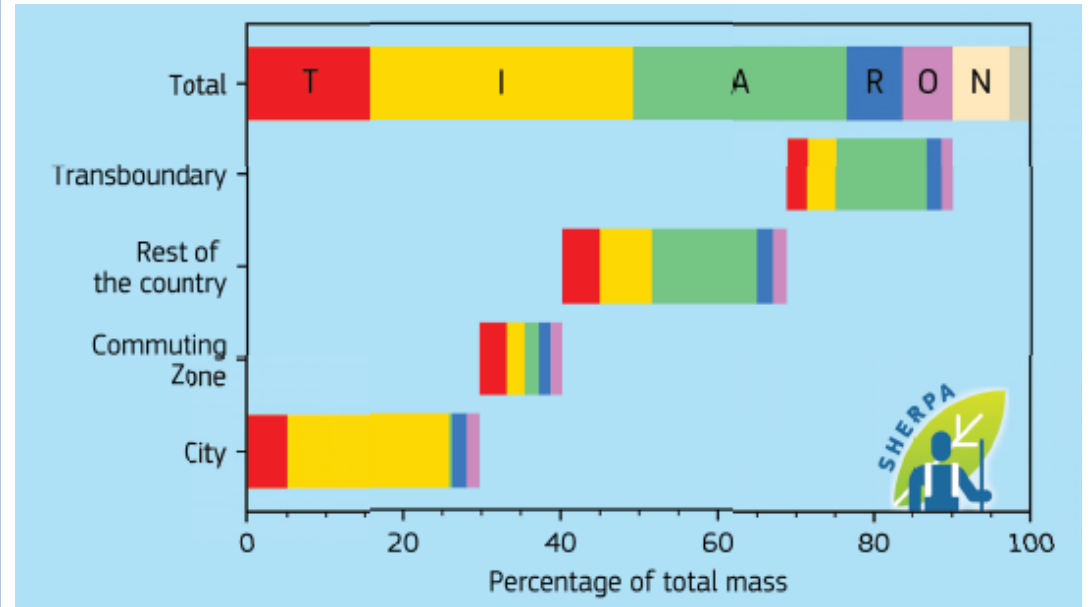


# Air quality governance shortcomings

To limit exceedances, competent authorities develop plans, but ...



Example: Air pollution (here: PM<sub>2.5</sub>) in Frankfurt (DE) is a combination of emissions in the city, its surroundings, the rest of the country and from other parts of Europe:



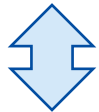
This combination requires air quality plans to address all sectors & all scales – in a coherent manner (!)

# Air quality assessment shortcomings

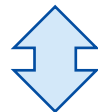
More than 4.000 air quality monitoring stations deliver robust data, but ...

## Assessment shortcomings

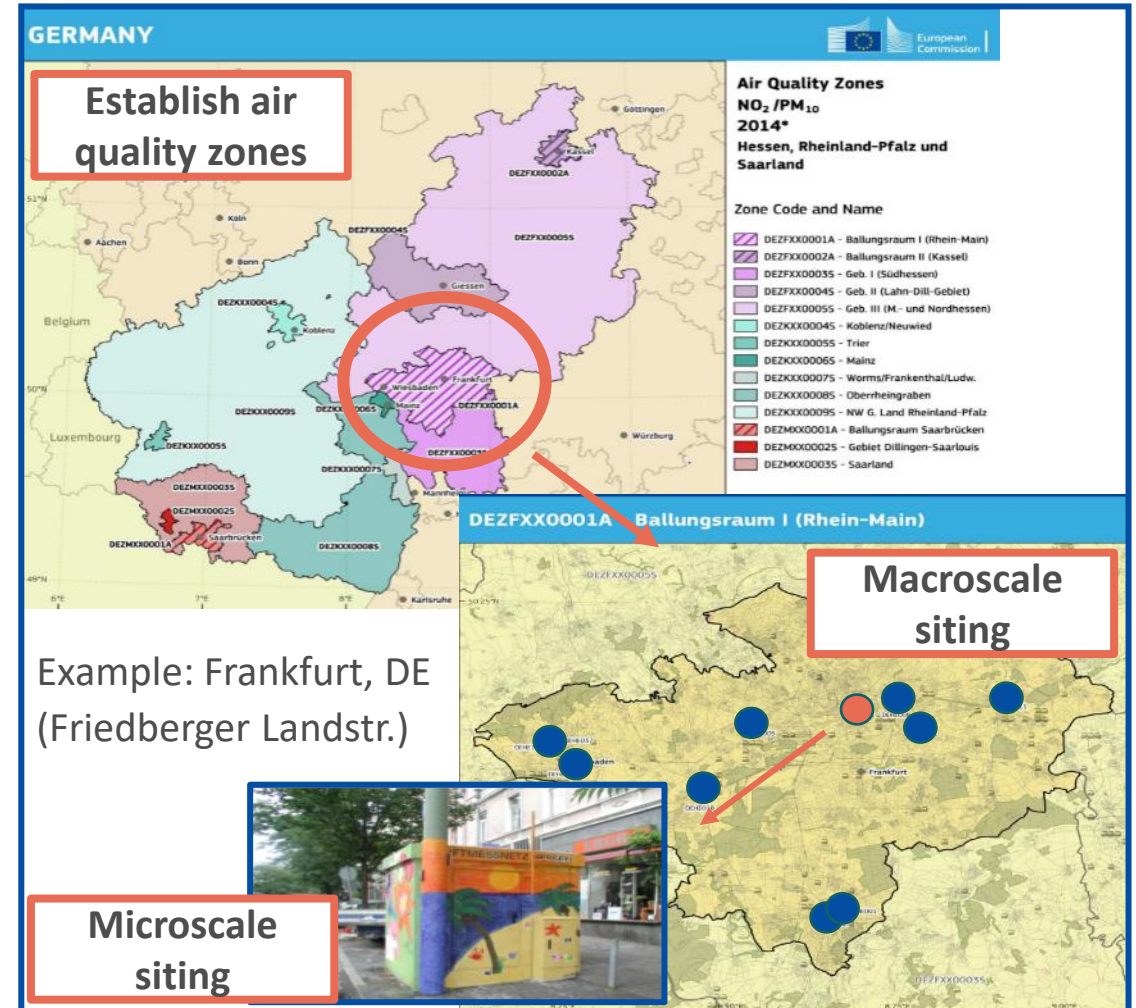
Flexibilities may sometimes impact the comparability of data ...



Monitoring rules offering flexibility are sometimes 'stretched'



Modelling ability has improved, allows for much more detail

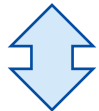


# Air quality information shortcomings

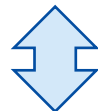
Reliable air quality information is widely available, often even in real-time, but ...

## Information shortcomings

Public feels under-informed about poor air quality and its impacts ...



Concerns about health impacts have increased

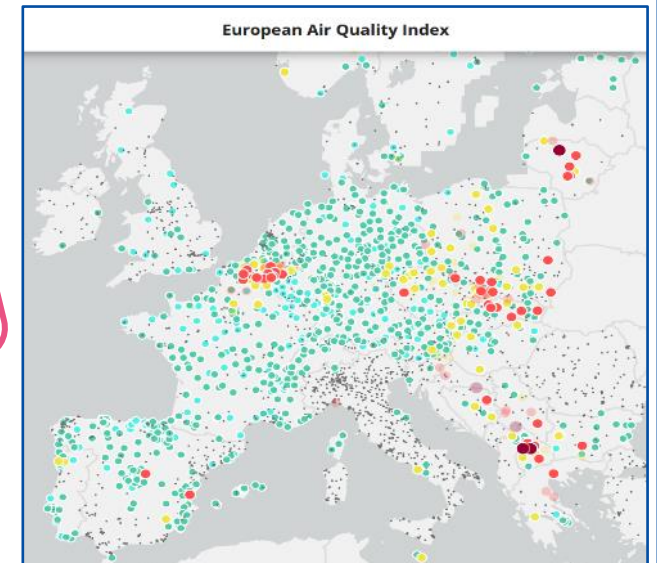


Public information is not always clear, and not harmonised



**54%**  
MORE THAN HALF OF EUROPEANS SAY THAT THEY ARE **NOT WELL-INFORMED ABOUT AIR QUALITY PROBLEMS**

Real time data @  
<https://airindex.eea.europa.eu>



# Air Quality: Revision of EU Rules

*“The Commission will draw on the lessons learnt from the evaluation of the current air quality legislation.*

*It will also propose to strengthen provisions on monitoring, modelling and air quality plans to help local authorities achieve cleaner air.*

*The Commission will notably propose to revise air quality standards to align them more closely with the World Health Organization recommendations.”*

Communication on the European Green Deal  
(COM/2019/640 final)

#EUGreenDeal

# Different levels of ambition (example: for PM<sub>2.5</sub>)

## AMBITION LEVEL

-



EU standards today / baseline



Low ambition



Mid ambition



High ambition

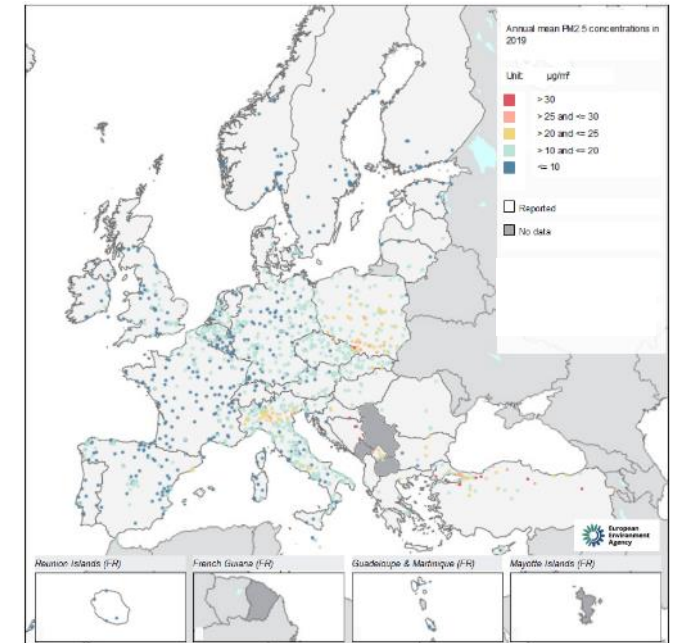
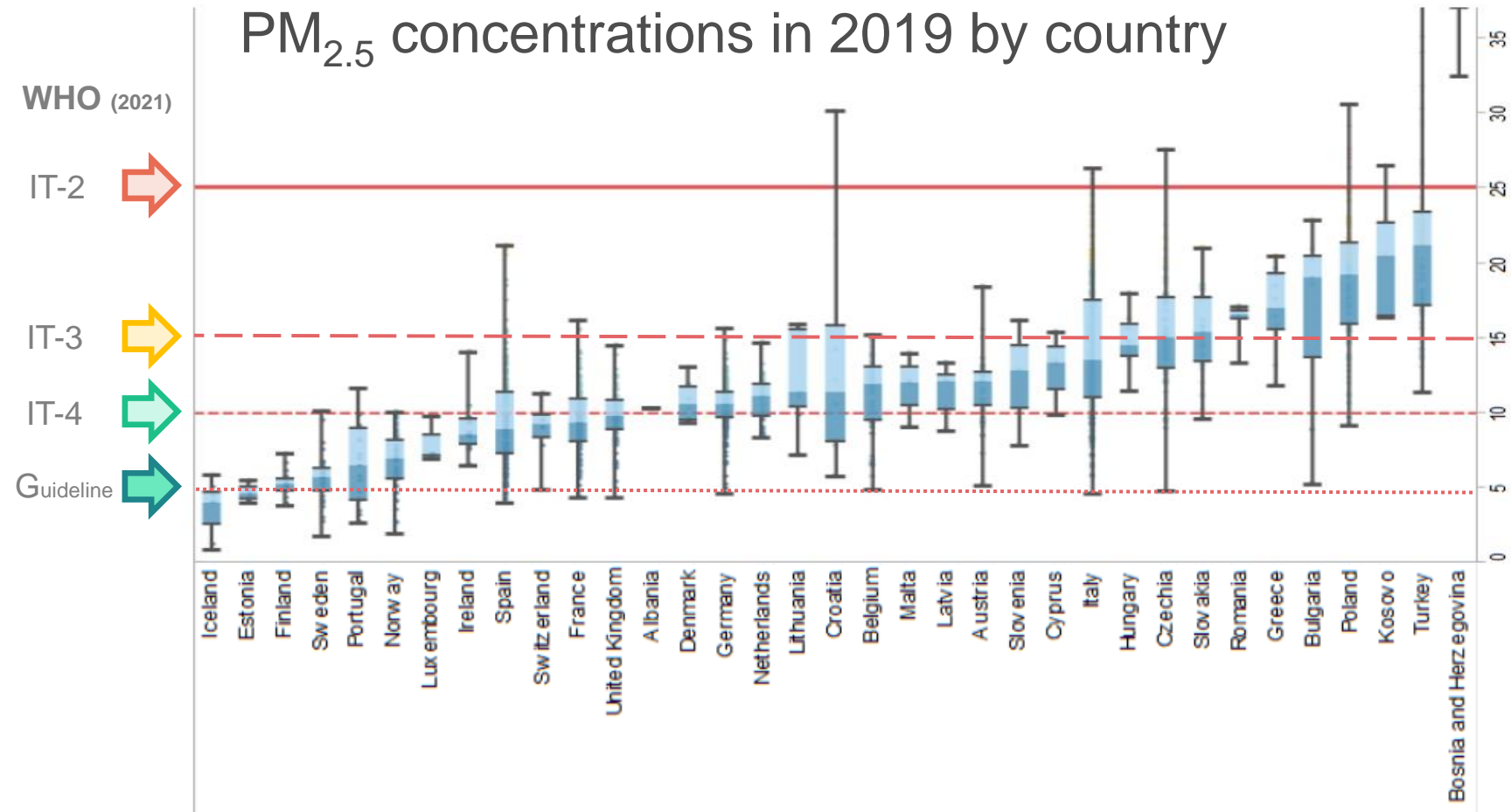


## WHO – Air Quality guidelines and interim targets for PM (annual mean)

Annual mean level	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	Mortality
Interim target 1	35	+ 24 % above guideline level
Interim target 2	25	+ 16 % above guideline level
Interim target 3	15	+ 8 % above guideline level
Interim target 4	10	+ 4 % above guideline level
AQ guideline level	5	mortality at guideline level



# Ambition level versus air quality today



# Timeline & next steps



# What needs to be improved today?

**Implementation:** Need continued push towards full implementation of existing clean air legislation.

See also COM (2018) 330 'Clean Air for All' for an overview.

**(Use) Funding:** Specific allocations for air quality of some EUR 2 billion (2014-2020), plus substantial indirect contributions (> 28 bn).

See: <https://cohesiondata.ec.europa.eu/stories/s/Tracking-cohesion-policy-air-quality-investments/7ddu-4fki/>

**Enforcement:** As of January 2022, still 31 infringement cases addressing 18 Member States (+ 1 vs UK) related to bad application.

**Information:** Eurobarometer polls (No 497, 2019) indicate a majority (54%) do not feel well informed about air quality problems.

See: <https://airindex.eea.europa.eu/Map/AQI/Viewer/> - this shows up-to-date, near real time air quality data, also for Bulgaria

# Clean Air Milestones 2020 to 2023 (indicative)



Contact us:

env-air@ec.europa.eu

Have your say:

<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12677-Revision-of-EU-Ambient-Air-Quality-legislation>

# Thank you

