Air Quality

- revision of EU Rules -

UNECE Expert Panel on Clean Air in Cities
- 29 November 2021

European Commission
Michael Klinkenberg & Johanna Lindner

"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)

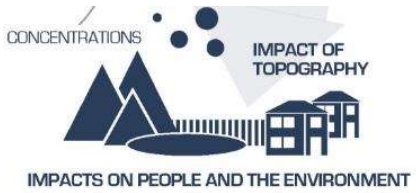
#EUGreenDeal

European Commission

EU clean air policy

European Commission

EU clean air policy

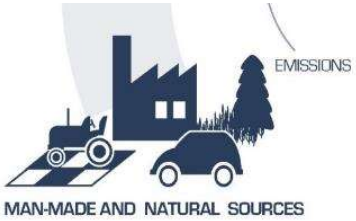


SETTING OBJECTIVES FOR GOOD AIR QUALITY

Ambient Air Quality (AAQ) Directives

Maximum concentrations of
air polluting substances
(PM_{10}, $PM_{2.5}$, SO_2, NO_2, O_3 + 8 more)

REDUCING EMISSIONS OF POLLUTANTS



National Emission reduction Commitments Directive

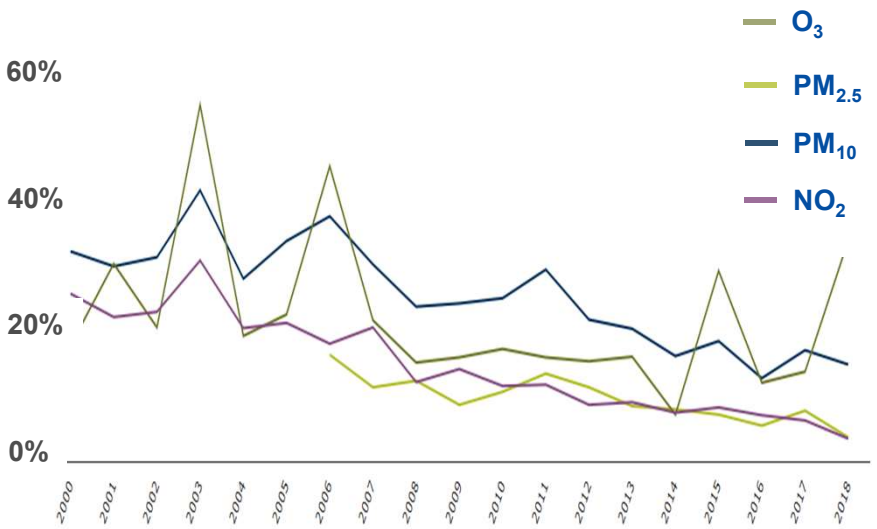
National emission totals
(SO_2, NO_x, NMVOC, $PM_{2.5}$, NH_3)

Source-specific emission standards

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

EU clean air policy works

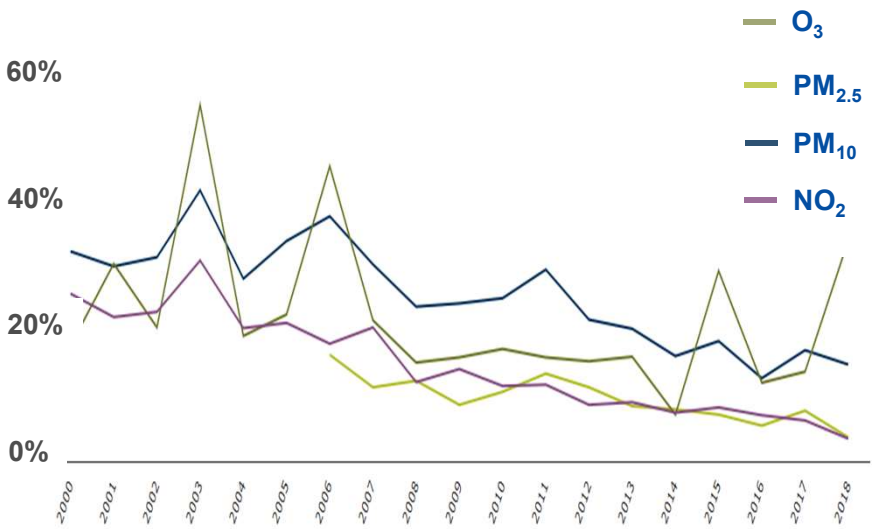
EU urban population exposed to air pollution above **EU standards from 2000 to 2018**



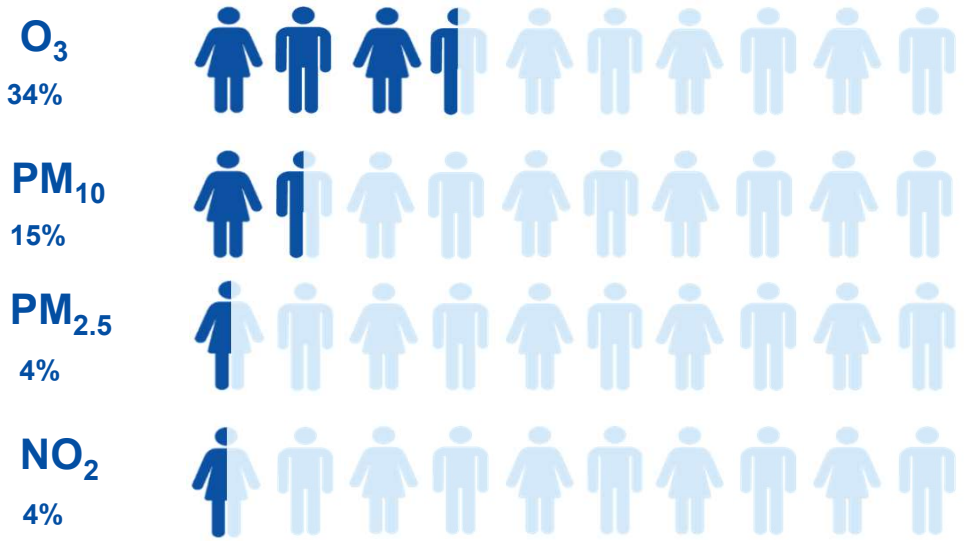
Source(s): EEA Air Quality in Europe (2020) & https://www.eea.europa.eu/data-and-maps/daviz/percentage-of-urban-population-in-13

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 **EU standards** in 2018 / 2019



Source(s): EEA Europe's air quality status 2021 & https://www.eea.europa.eu/themes/air/health-impacts-of-air-pollution

EU clean air policy works … but …

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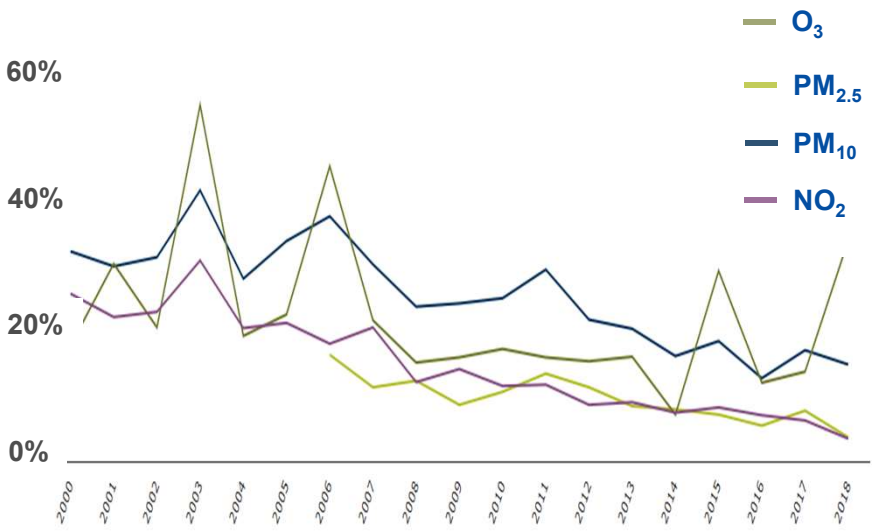
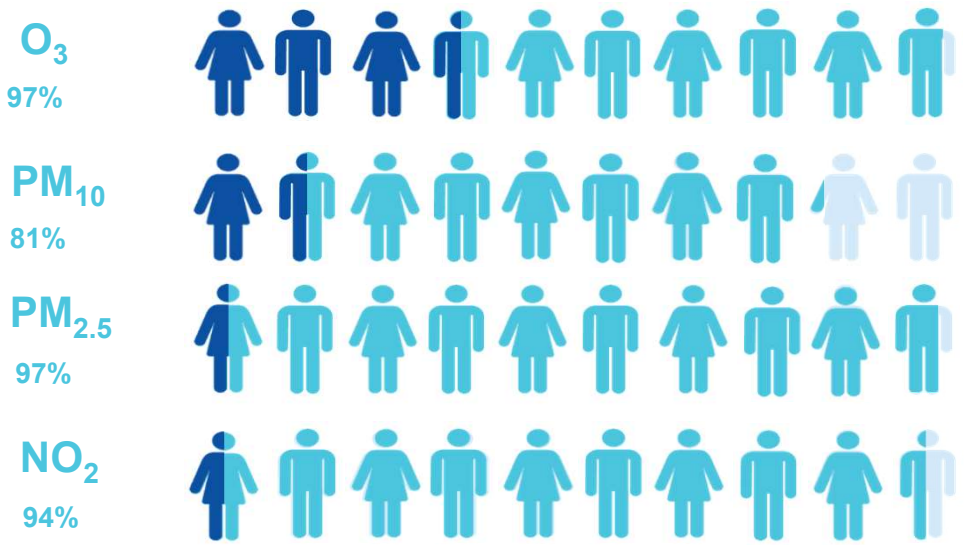


EU urban population exposed to air pollution above **WHO (2021) guidelines** in 2018 / 2019



Source(s): EEA Europe's air quality status 2021 & https://www.eea.europa.eu/themes/air/health-impacts-of-air-pollution

Fitness Check of the AAQ Directives

In 2019, an **evidence-based, retrospective evaluation** offered a number of **lessons learnt**:

- Air quality remains a major **health and environmental concern**;
- Air quality standards have been instrumental, and **partially effective**, to reduce pollution;
- Current EU standards are **less ambitious than scientific advice**;
- **Limit values** have been more effective than other types of air quality standards;
- Legal **enforcement action** by European Commission, and civil society, works *(with some caveats);*
- Scope to further harmonise **monitoring, modelling**, and **air quality plans**;
- Not all reported data equally useful, **e-reporting** allows for further efficiency.

A decade of air data
For period 2008 to 2018
from all Member States

Stakeholder feedback
Open public consultation
and expert questionnaires

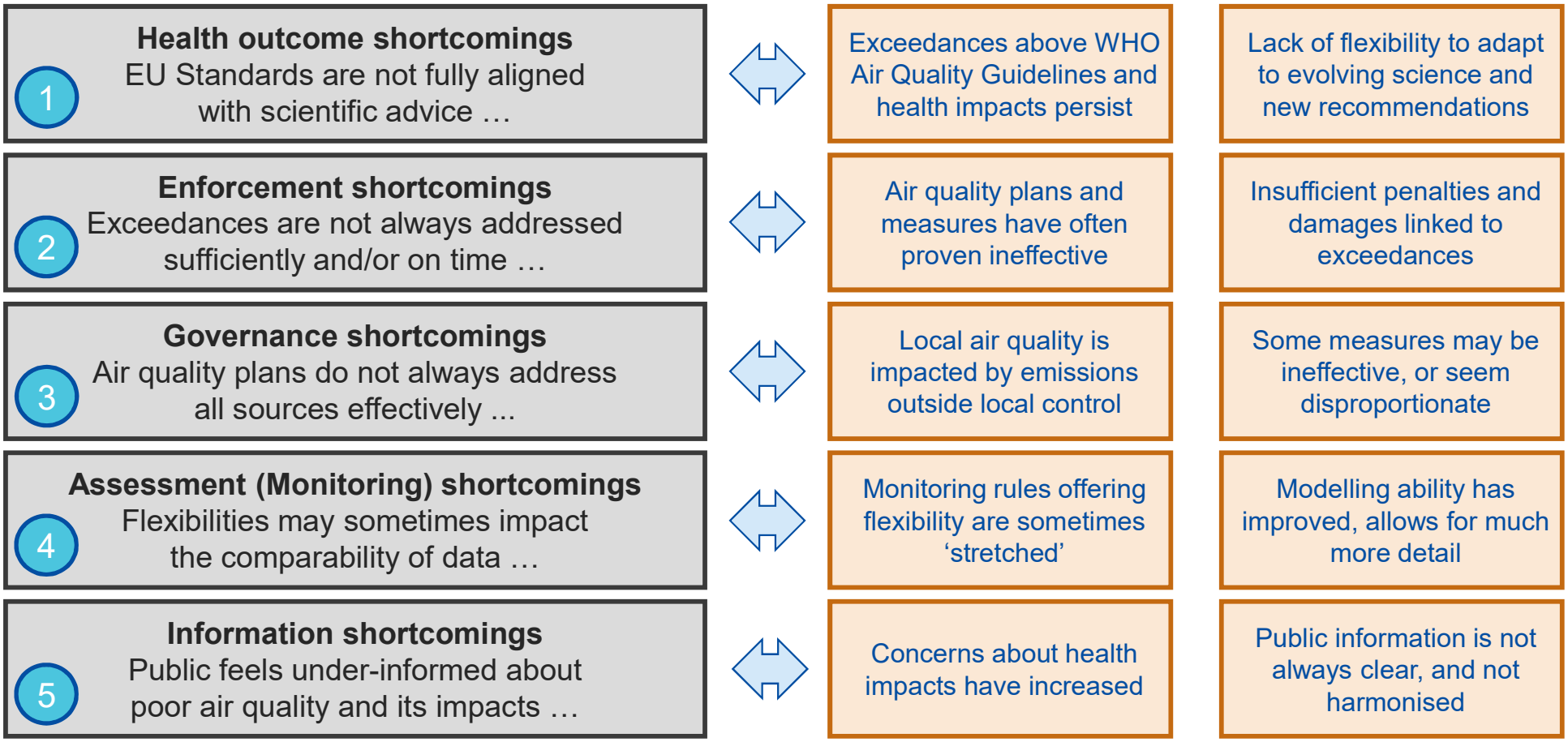
Seven case studies
BG,DE,ES,IE,IT,SE,SK
each with specific focus

Literature & analysis
600 scientific sources
& a cost-benefit model

Key shortcomings

European Commission

5 shortcomings … and their drivers



The consequences of these shortcomings

Environment & Health

- **Elevated concentration levels of air pollutants,** both general exposure of population and at pollution hotspots
- **Health impacts**, more than 400.000 premature deaths each year across the EU, plus morbidity health impacts
- **Ecosystem impacts**, eutrophication limits are being exceeded in 62% of ecosystem areas across the EU territory
- **Links with climate change**, as higher temperature are associated with elevated ozone levels
- **Synergies with other EU policies**, and in particular with the goals of the EU Zero Pollution Action Plan
- **Administrative burden** of air quality management, in particular as relates to air quality assessment regimes

Economic

- **Cost to society**, EUR 20 bn direct cost to health-care, lost work-days, crop losses, plus EUR 330-940 bn indirect costs
- **Measures needed to meet EU air quality standards,** with costs for industry, transport, energy, and agriculture sector
- **Impacts on the EU's international competitiveness,** with innovation potential, especially for clean air technologies

Social

- **Sensitive population groups** (children, pregnant women, elderly citizens) are more susceptible to air pollution
- **Inequalities and social sustainability**, as groups of lower economic status tend to be more negatively affected
- Measures to address air pollution may have effects on **employment**

European Commission

Impact assessment

European Commission

Intervention Logic of the IA

Policy Context

Current AAQDs

Fitness Check

European Green Deal

Zero Pollution / Climate Neutrality

Recovery plan

Problems

Health outcome shortcomings

EU Standards are not fully aligned with scientific advice …

AQ Implementation shortcomings

Exceedances are not always addressed sufficiently and/or timely …

AQ Governance shortcomings

Air quality plans do not always address all sources effectively ...

AQ Monitoring shortcomings

Flexibilities may sometimes impact the comparability of data …

AQ Information shortcomings

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

Drivers

Exceedances above health guidelines and negative health impacts persist

Lack of flexibility to adapt to evolving science' and new recommendations

Insufficient penalties and compensation linked to exceedances

Air quality plans and measures have often proven ineffective

Local air quality is impacted by emission outside control

Some measures may seem disproportionate, ineffective

Monitoring rules offering flexibility are 'stretched' in instances

Modelling ability has improved, allows for much more details

Concerns about health impacts have increased, not addressed

Public information is not always available, and not harmonised

Consequences

Elevated concentration levels of air pollutants

Environment & Health

Health impacts, 400.000 premature deaths each year across the EU, due to both general exposure of population, pollution hotspots (& COVID)

Ecosystem impacts, eutrophication limits are being exceeded in 62% of ecosystem areas and in 73% of Natura2000 areas across the EU territory

Links with climate change, as higher temperature are associated with elevated ozone levels; ozone levels also linked to hemispheric methane

Economic

Cost to society, estimated at over EUR 20 bn direct cost to health-care, lost working days, and crop losses, plus EUR 330-940 bn indirect costs

Measures needed to meet EU air quality standards – and their costs, esp. for industry sector, transport sector, energy sector, and agriculture sector

Positive and negative impacts on the EU's international competitiveness including underutilised innovation potential, especially for clean air technologies

Social

Sensitive population groups (children, pregnant women, elderly citizens and those suffering from pre-existing conditions) are more susceptible to air pollution

Inequalities and social sustainability, as groups of lower economic status tend to be more negatively affected by air pollution (incl. regional difference)

Effects of measures to address air pollution on **employment**

Synergies with other EU policies, and in particular with the goals of the (upcoming) EU Zero Pollution Action Plan

Administrative burden of air quality management, in particular as relates to air quality assessment regimes

Interventions

Policy Area 1
'EU standards

Policy Area 2
'legislative frame'

Policy Area 3
'monitoring, modelling and plans'

Different levels of ambition (example: for $PM_{2.5}$)

AMBITION LEVEL

-

EU standards today / baseline

Low ambition

Mid ambition

High ambition

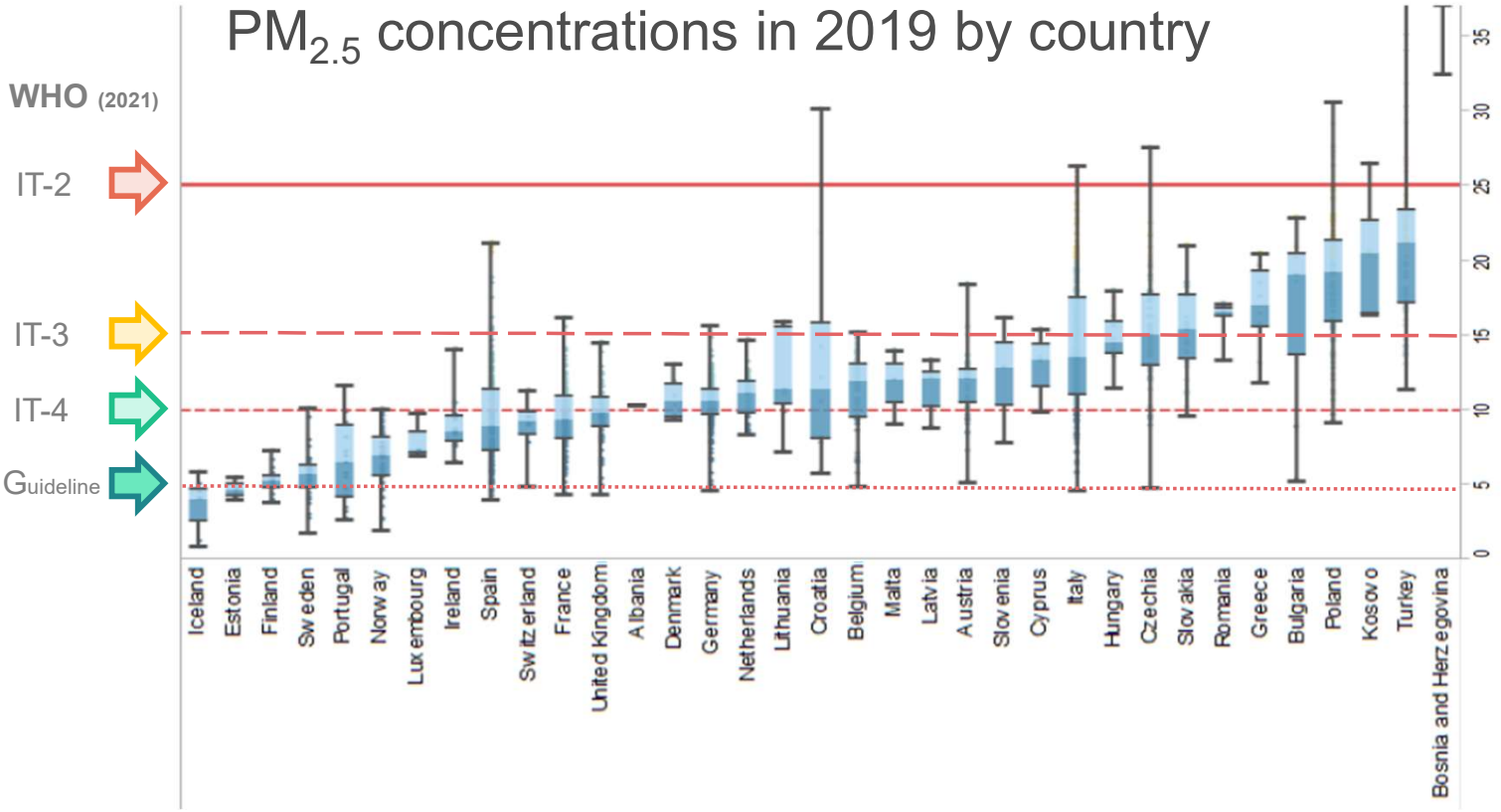
WHO – Air Quality guidelines and interim targets for PM (annual mean)

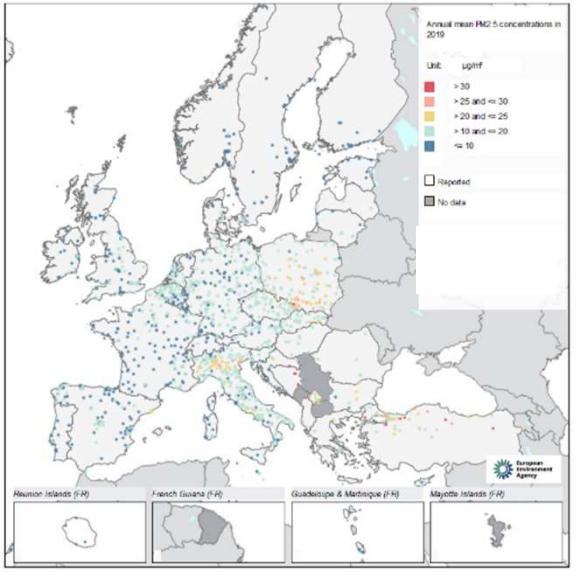
Annual mean level	$PM_{2.5}$ (µg/m3)	Mortality
Interim target 1	35	+ 24 % above guideline level
Interim target 2	25	+ 16 % above guideline level
Interim target 3	15	+ 8 % above guideline level
Interim target 4	10	+ 4 % above guideline level
AQ guideline level	5	mortality at guideline level

Ambition level versus WHO recommendations

Pollutant	Avg.time	IT1	IT2	IT3	IT4	AQG level	EU standard
$PM_{2.5}$ (µg/m³)	Annual	35	25	15	10	**5**	25
"	24-hour	75	50	37.5	25	**15**	N/A
PM_{10} (µg/m³)	Annual	70	50	30	20	**15**	40
"	24-hour	150	100	75	50	**45**	50
NO_2 (µg/m³)	Annual	40	30	20	-	**10**	40
"	24-hour	120	50	-	-	**25**	N/A
"	1-hour	-	-	-	-	[200]	200
O_3 (µg/m³)	Peak Season	100	70	-	-	**60**	N/A
"	8-hour	160	120	-	-	**100**	120
SO_2 (µg/m³)	24-hour	125	50	-	-	**40**	125
"	1-hour	-	-	-	-	-	350
"	10-min	-	-	-	-	[500]	N/A
CO (mg/m³)	24-hour	7	-	-	-	**4**	N/A
"	8-hour	-	-	-	-	[10]	10
"	1-hour	-	-	-	-	[100]	N/A

Ambition level versus air quality today





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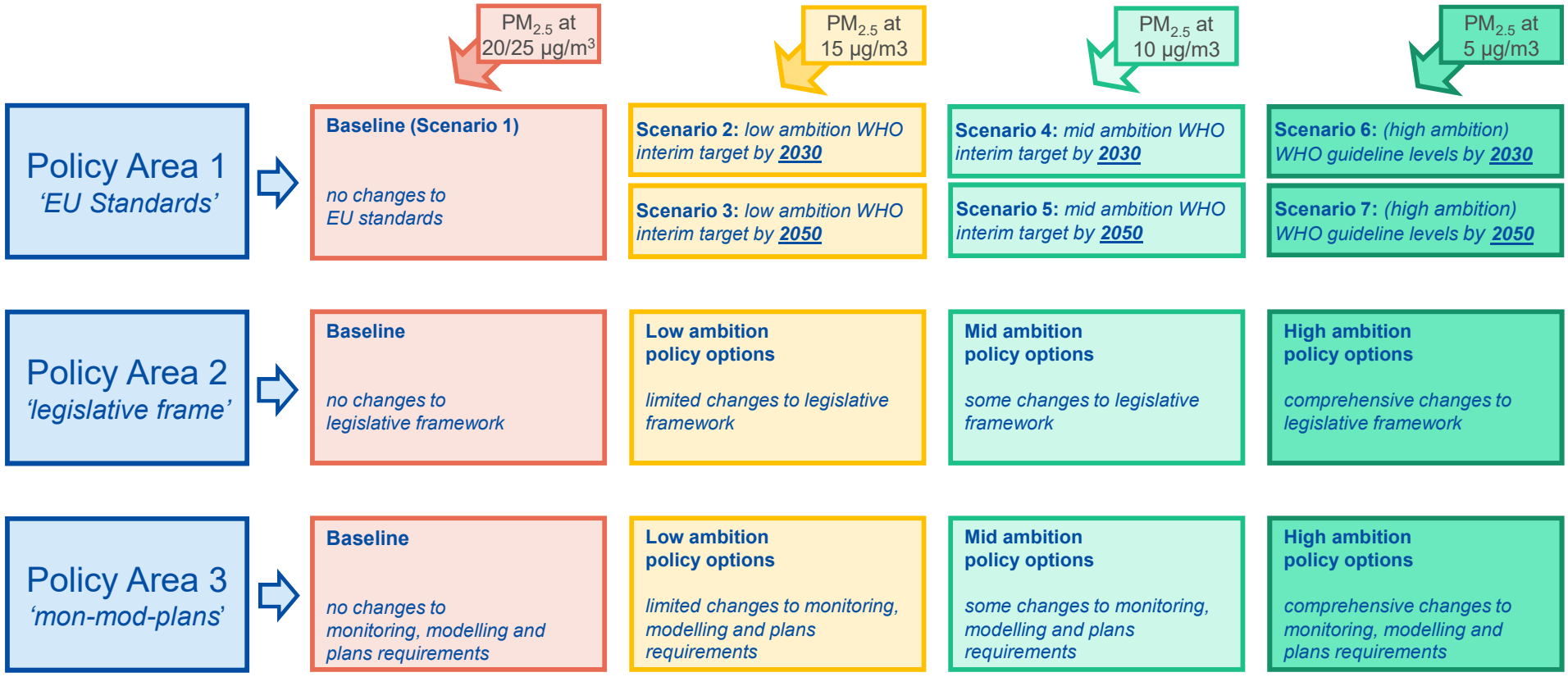
Source(s): EEA Europe's air quality status 2021

Assessment of policy options per policy area



→ *based on assessment of consequences, combine different policy options to* ***policy packages***

Stakeholder consultation

European Commission

Have your say

On **23 September 2021**, we have launched a twelve week online public consultation – we invite you to reply to a four-part questionnaire until **16 December 2021**:

By 25 Nov:
346 replies

- **Part 1: About you** – questions about yourself and why you are answering this questionnaire.
- **Part 2: General questions section** – 19 questions on your views on air quality issues.
- **Part 3: Specialised questions section** – 8 questions on your views on air quality measures.
- **Part 4: Concluding questions & remarks** – share your thoughts on key topics not covered.

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Timeline & next steps

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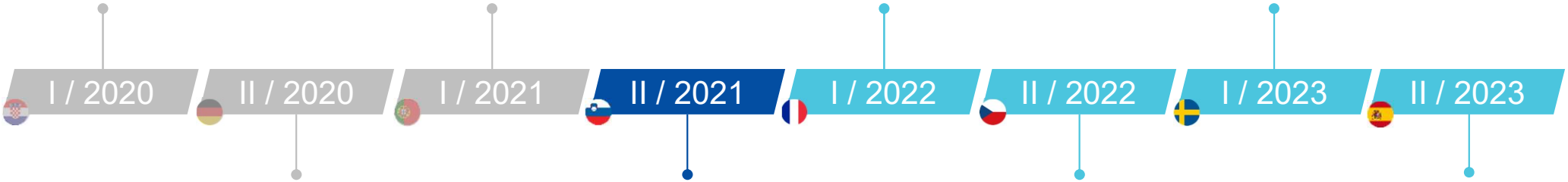
Clean Air Milestones 2020 to 2023 (indicative)



Fitness Check
(published in Nov 2019)

Council Conclusions

NEC Implementation Report
(Commission Communication)

Expert consultation
(on monitoring, modelling, plans)

WHO Guidelines publication
(postponed to II/2021)

Zero Pollution Action Plan

Finalisation of
Impact Assessment (air quality)

Council discussions of
legislative proposal
(air quality - revision of EU rules)

Submission of Second
National Air Pollution Control
Programmes begins

EEA Air Quality Report 2020

Inception Impact Assessment
(revising the Air Quality Directive)

Second Clean Air Outlook
(Commission Report)

EEA Air Quality Briefings 2021

WHO Guidelines publication
(22 September 2021)

Public consultation: air quality
(air quality - revision of EU rules)

3rd EU Clean Air Forum
(18 & 19 November in Madrid)

EEA Air Quality Briefings 2022

Adoption: legislative proposal
(air quality - revision of EU rules)

Review Gothenburg Protocol
(Air Convention)

Third Clean Air Outlook
(Commission Report)

EEA Air Quality Briefings 2023

4th EU Clean Air Forum
(location to be determined)

European Commission

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