Update on the Clean Air for Europe Programme

17 February 2016

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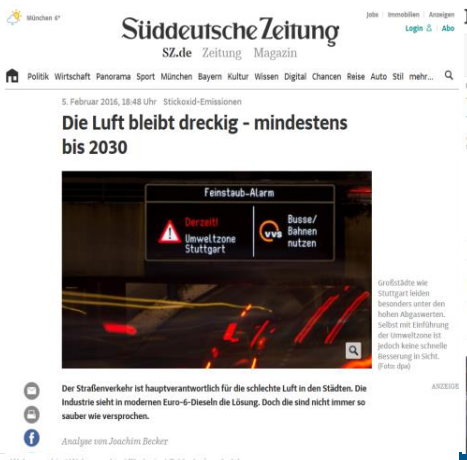
Air

Increasing awareness of air quality urgencies



Source(s): Various online and print media

Air pollution is still a problem across Europe

Europe's air quality is slowly improving, but fine particulate matter and ground-level ozone in particular continue to cause serious impacts on health.

Estimates point to well above 400.000 premature deaths in EU-28 each year due to particulate matter; and more than 15.000 due to ground-level ozone.

3 out of 10 EU citizens are exposed to particulate matter concentrations above the EU limit value; with 9 out of 10 exposed above WHO guidelines.

63%

Air pollution exceeds eutrophication limits in 63% of ecosystem area, and in 73% Natura2000 area.

Source(s): EEA, Air Quality in Europe (2015) und SOER (2015)

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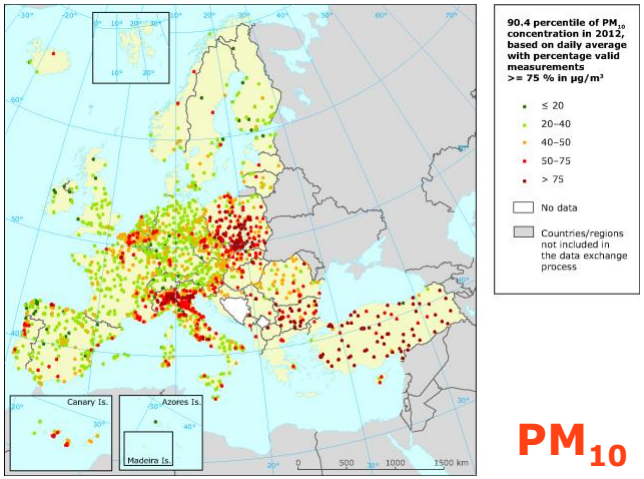
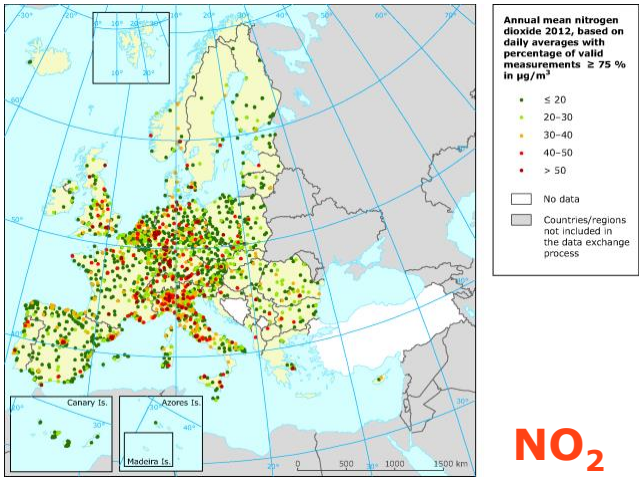
AQUILA & FAIRMODE

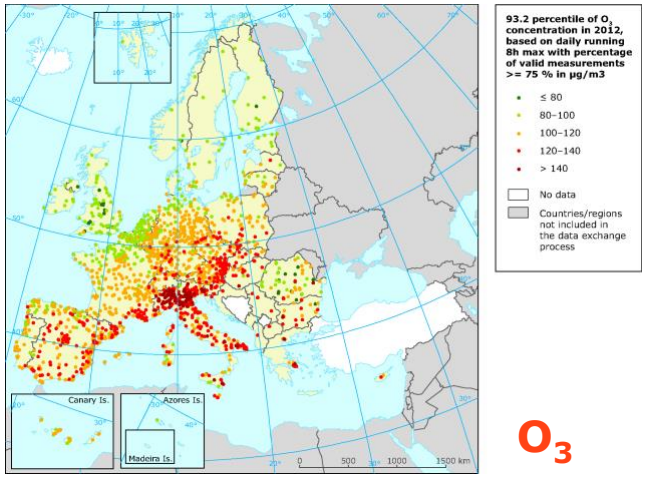
Where and when is air pollution a problem?



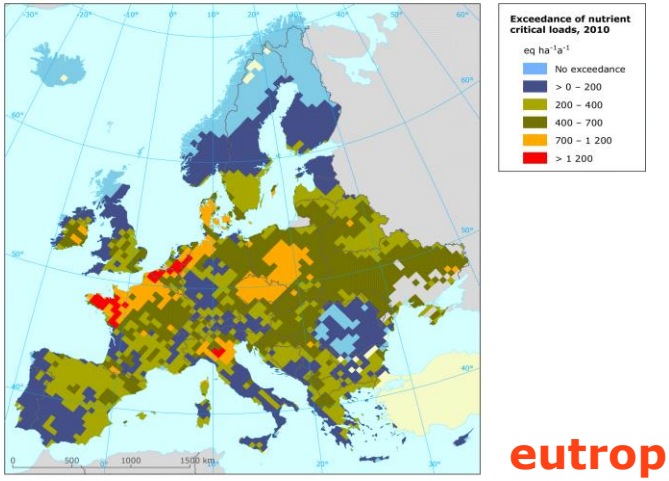
PM_{10}



NO_2



O_3

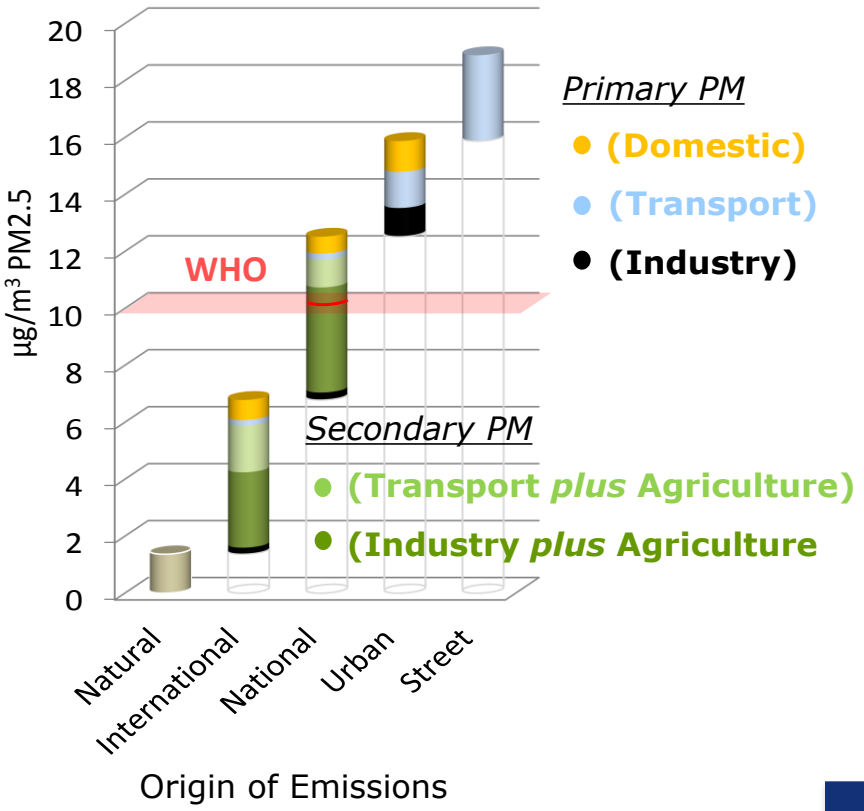


eutrophication

Who and what causes air pollution?

Particulate Matter ($PM_{2.5}$)

e.g. Germany, 2009 -



Sulphur dioxide (SO_2)

- Energy sector, Transport, …

Nitrogen oxides (NO_x)

- Transport, Energy, Industy, …

Ammonia (NH_3)

- Agriculture (Livestock & Fertilizers), …

Volatile Organic Compounds (VOC)

- Solvents, Paints, Transport, …

Methane (CH_4)

- Agriculture, Waste, Energy, …

Source(s): IIASA TSAP 12 Report (2014)

Clean Air Policies in Europe – An Overview

The international context

- **UN ECE Convention on Long-Range Transboundary Air Pollution** (CLRTAP) and its Protocols (e.g. Gothenburg Protocol for 2010 and 2020)

The main European Union air policy instruments

- **Ambient Air Quality Directives** (AAQD): Maximum concentrations to be attained across the EU (SO2, NO2, PM10, benzene, lead, CO, O3, arsenic, cadmium, nickel, PM2.5 and BaP) **+ Directive EU/2015/1480 (NEW!)**
- **National Emission Ceilings Directive** (NECD): National emission inventories and caps to limit transboundary pollution (SOx, NOx, NMVOC, and NH3)
- **Source-specific performance standards**: Euro and fuel standards, Industrial Emissions Directive, energy efficiency standards, etc.

The main Member States air policy instruments

- Air Quality Plans & Programmes (AAQD)
- National Emission Inventories, Projections, and Measures (NECD)
- Other policy and implementation measures
- …

Clean Air Programme - Strategic Ambitions

Year	Health impact (premature deaths) reduction vs 2005	Ambient air quality standards and compliance
2020	33%	**Full compliance with existing ambient air quality legislation** (including NO2, PM10 and PM 2.5)
2030	**52%**	Most Member States would reach PM 2.5 levels below or close to the WHO guidelines of 10 µg/m3

Source(s): Clean Air Programme

Ambient Air Quality Directives

Compliance gap persists: in 2014, only 2 countries reporting no exceedances, and only 6 countries indicate compliance with all limit values.

Regarding NO2: 19 Member States have reported excess levels in 2014, and infringement proceedings have already been opened against 6 Member State.

Regarding PM10: 16 Member States are facing infringement actions at various stages. First cases have been brought to Court.

Regarding PM2.5: Annual limit value applies as of 1 January 2015.

Directive 'kept under review, with a view to revision once the NECD' is agreed.

Source(s): AQ Portal, Clean Air Programme

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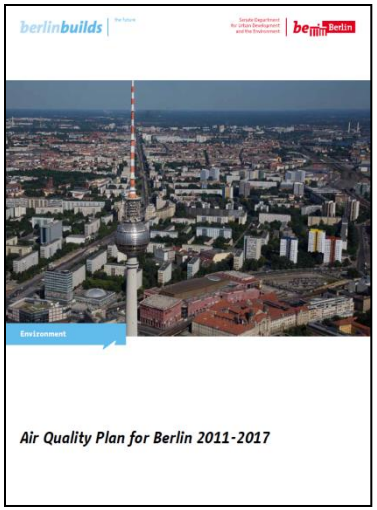
Ambient Air Quality Plans and Measures

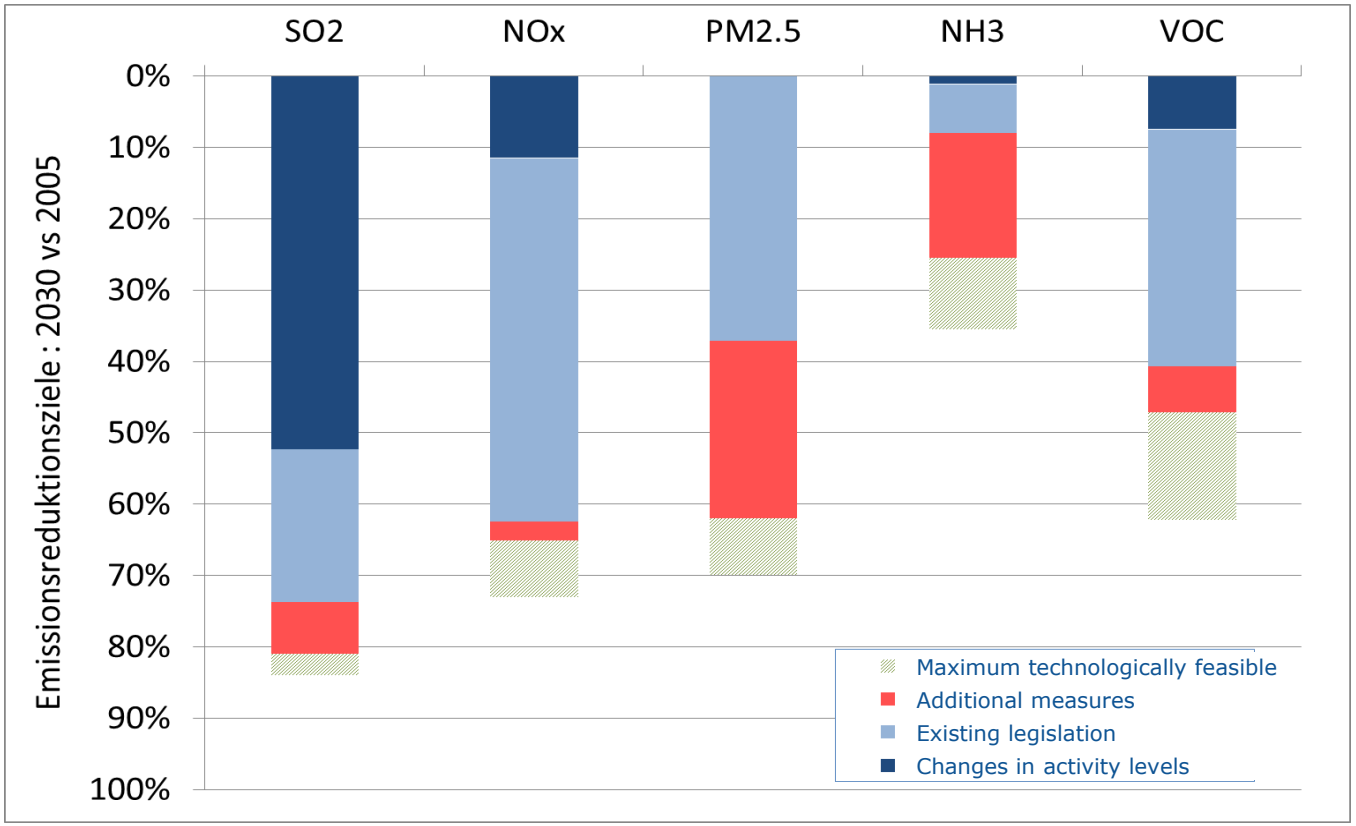
The Ambient Air Quality Directive requires Member States to have air quality plans to keep exceedance as short as possible:

- General information and details on measuring stations
- Nature and assessment of pollution (incl. trends)
- Techniques used for air quality assessments
- Origin of pollution (incl. source apportionment)
- Details of measures and estimate of improvement of air quality planned, and the expected time required
- *… see also e-reporting Plans and Programmes, H to K*



National Emission Ceiling Directive

	2020	2030
SO_2	-59%	-81%
NO_x	-42%	-69%
VOC	-28%	-50%
NH_3	-6%	-27%
$PM_{2.5}$	-22%	-51%
CH_4	-	-33%

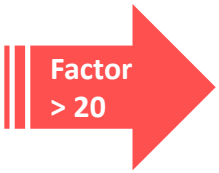


Source: IIASA, TSAP Report #16 (2015)

National Emission Ceiling Directive

Costs

- Implementation cost: €2.2 billion per year



Benefits

- Indirect economic benefits: €44-140 billion per year
- Direct economic benefits: €3 billion per year

The effort for the new policy (in cost terms) is split:

- 40% - domestic sector
- 37% - industrial sector
- 23% - agricultural sector

- 52% less health damage;
- 35% less eutrophication;
- 85% less acidification.

Sources: EC Impact Assessment, IIASA (2015)

National Air Pollution Control Programmes

The revised NEC Directive includes provision for Member States to draw up National Pollution Control Programmes:

- Setting out the pathway to achieve commitments by 2030
- Identifying the measures needed to achieve the reductions
- Improve long-term legal certainty to stimulate investments
- Enhance coordination between national, regional and local level: better connect national and local air pollution action
- Better cross-sectoral approach (links with other policy areas)
- Special focus on agricultural measures

Source-specific performance standards

Industrial Emission Directive, Industrial Emissions Performance Standards Ecodesign and Eco-Label standards, BATs and BREFs, …

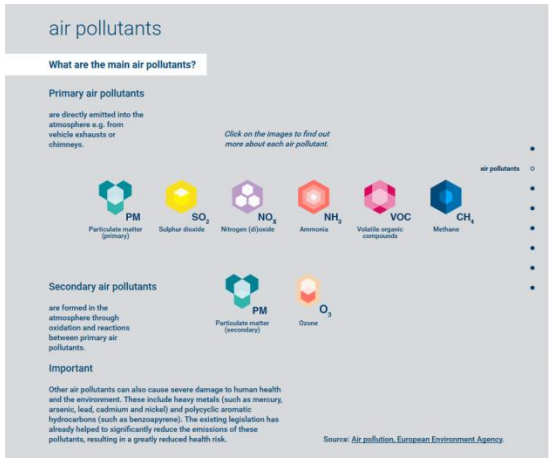
Medium Combustion Plants Directive addresses installations at 1-50 MW, setting fuel-specific emission limit values (focus on SO2, NOx and PM), …

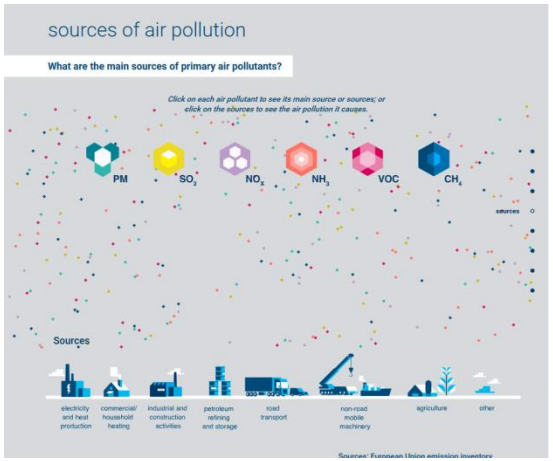
Road transport including type approval standards, ensure real driving emission Euro 6 standards (with conformity factor of 2.1 from 2019, 1.5 from 2021), …

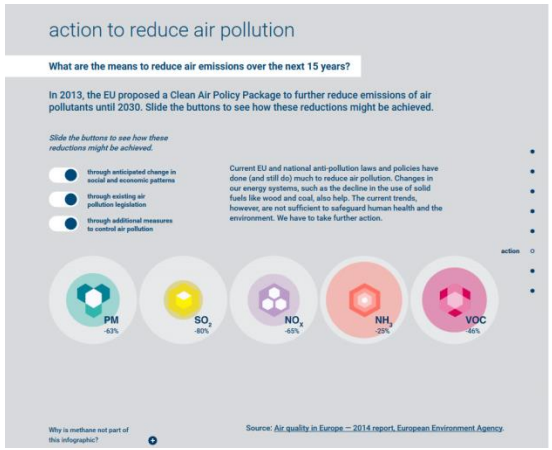
Non-Road Mobile Machinery (NRMM Directive) type approval standards, fuel quality standards (e.g. sulphur in liquid fuels) to reduce shipping emissions …

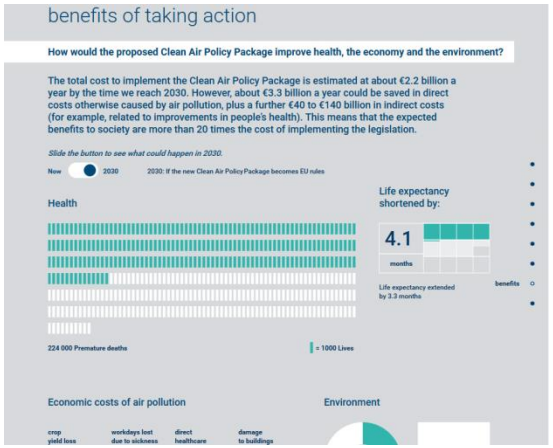
Source(s): Clean Air Programme, various

Cleaner Air For All Infographic









http://ec.europa.eu/environment/air/cleaner_air/index.html

European Commission

AQUILA & FAIRMODE

Reflections in an AQUILA / FAIRMODE context

Ensure AQUILA and FAIRMODE remain relevant for policy support (including consolidate assessment regimes, and improve measures and air quality plans).

Need to further strengthen the links between air emissions and quality monitoring, modeling, reporting and reflective assessment (also for NAPCP).

The Commission is looking to establish a Clean Air Forum and a bespoke regular Clean Air Outlook – to facilitate implementation of air policies.

Will be looking for input to inform an evaluation of the Ambient Air Quality Directive starting in 2017.

More Information

http://ec.europa.eu/environment/air/

Feedback

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Thank you!

European Commission
DG ENV C.3
Air