



# **Clean Air Programme for Europe - update -**

04 July 2016

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European Commission  
DG ENV C.3  
Air



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Commission

# Topic of air pollution high in the public interest

**BBC NEWS**

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**Science & Environment**

## Polluted air causes 5.5 million deaths a year new research says

By Jonathan Amos  
BBC Science Correspondent, Washington DC

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**M Pollutions**

PLANÈTE POLLUTIONS

## Nouveau pic de pollution à Paris

Le Monde | 20.01.2016 à 08h26 • Mis à jour le 20.01.2016 à 10h29



Le stationnement résidentiel est gratuit, mercredi 20 janvier à Paris, en raison d'un nouvel épisode de pollution atmosphérique. Airparif, l'association de

**Städtische Zeitung**  
SZ.de Zeitung Magazin

Politik Wirtschaft Panorama Sport München Bayern Kultur Wissen Digital Chancen Reise Auto Stil mehr...

5. Februar 2016, 18:48 Uhr Stickoxid-Emissionen

## Die Luft bleibt dreckig - mindestens bis 2030

Feinstaub-Alarm  
Derzeit: Umweltzone Stuttgart  
Busse/Bahnen nutzen

Größtenteils wie Stuttgart bleibt besonders viel der hohen Abgaswerte, selbst eine Einführung der Umweltzone ist jedoch keine schnelle Besserung in Sicht. (Foto: dpa)

Der Straßenverkehr ist hauptverantwortlich für die schlechte Luft in den Städten. Die Industrie sieht in modernen Euro-6-Dieseln die Lösung. Doch die sind nicht immer so sauber wie versprochen.

Analysen von Joachim Becker

Wbyorczabiz / Wbyorczabiz / Ekologia / Odszychał po kutschu

**Wojna ze smogiem**

Dominika Wantuch 01.02.2016 01:00

wyborcza.biz



Smog w Krakowie, styczni 2014 (MICHAŁ LEPECKI)

Najgorzej jakości węgiel i przestarzałe piece idą w odstawkę. Po Krakowie uchwali antysmogowych chcą władze Wrocławia i Legnicy, a marszałek Śląska przepisał antysmogowymi zamierza objąć ponad 160 gmin.

**EL PAÍS**

ESPAÑA · Madrid

## La capital vulnera por sexto año seguido los límites de contaminación

El informe anual de Ecologistas en Acción concluye que en 2015 los niveles de contaminación han sufrido un incremento notable

- Las alertas por contaminación se vuelven cotidianas
- Intentamos pasar muy poco tiempo al aire libre

ESTHER SÁNCHEZ | Madrid | 12 EN 2016 - 21:27 CET

Archivado en: Manuela Camena, Contaminación atmosférica, Madrid, Comunidad de Madrid, Contaminación, Ayuntamientos, Problemas ambientales, Gobierno municipal

the guardian

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## Pollution

### London takes just one week to breach annual air pollution limits

Parts of the capital have already breached EU hourly limits for nitrogen dioxide pollution which causes thousands of premature deaths each year

Adam Vaughan  
@adamvaughanuk  
Friday 8 January 2016 10:08 GMT



High Street in London breached annual limits for nitrogen dioxide early on 8 January. Photograph: Peter Macdonald/Getty Images

**The Economist**

World politics Business & finance Economics Science & technology Culture

## Choking on it

While Paris focuses on climate change, air pollution kills 400,000 Europeans a year

12c 5th 2015 | KRAKOW | From the print edition

WIELICZKA, near Krakow, a handful of locals have gathered in a hotel conference

**DeMorgen**

WELKE PRESENTIES? Het kan geen kwaad

DE ECONOMIE Is er een toekomst?

## Vlamming kickt af van DIESEL

Verkoop van wagens vergroot als gevolg van beleidsingrepen

DEERDEN VAN HODENBERG

De Vlaamse Regering streeft ernaar om de verkoop van dieselwagens te beperken. Dit kan tot een toename van de verkoop van benzine- en elektrische wagens leiden. De Vlaamse Regering wil de verkoop van dieselwagens beperken tot 10% van de totale verkoop van wagens.

THE TOEGANG dat de consument bij de aankoop van een auto heeft, zal de verkoop van dieselwagens versimpelen. Dit kan tot een toename van de verkoop van benzine- en elektrische wagens leiden. De Vlaamse Regering wil de verkoop van dieselwagens beperken tot 10% van de totale verkoop van wagens.

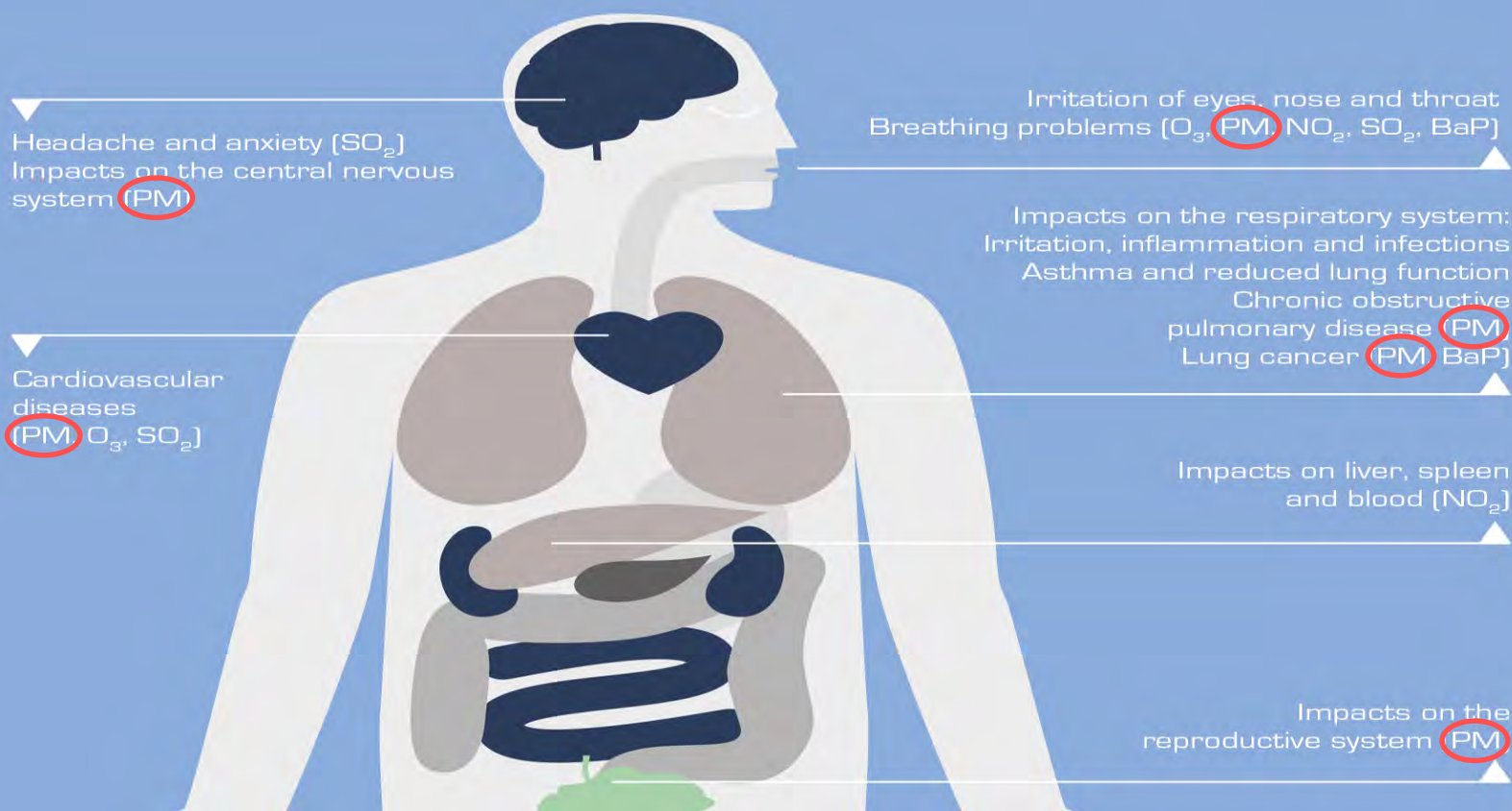
MATHIAS BENTHEIM  
ROMAN BETER LESTERHOLM

van de auto's van het type die in 2015 het meest zijn verkocht. Dit kan tot een toename van de verkoop van benzine- en elektrische wagens leiden. De Vlaamse Regering wil de verkoop van dieselwagens beperken tot 10% van de totale verkoop van wagens.



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# Air pollution affects human health & well-being





# Air pollution is still a problem across Europe

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

Estimates point to well above 400.000 premature deaths in EU-28 each year due to particulate matter; and more than 70.000 due to nitrogen dioxide.

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.

Assessed against EU Limit Value



Assessed against WHO Guidelines



63%

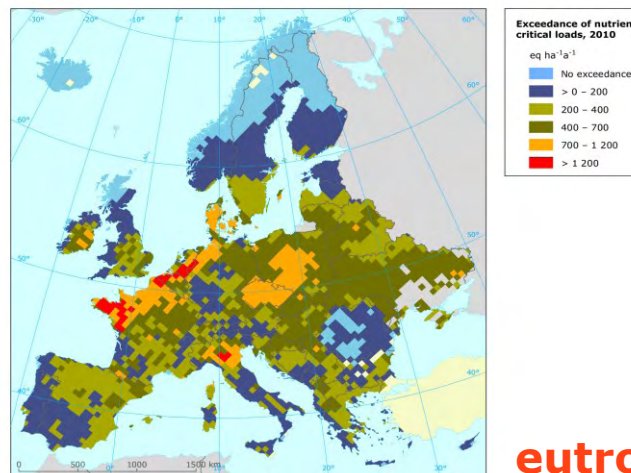
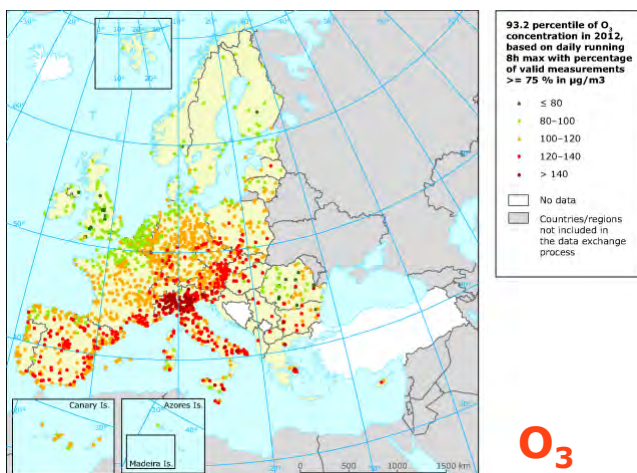
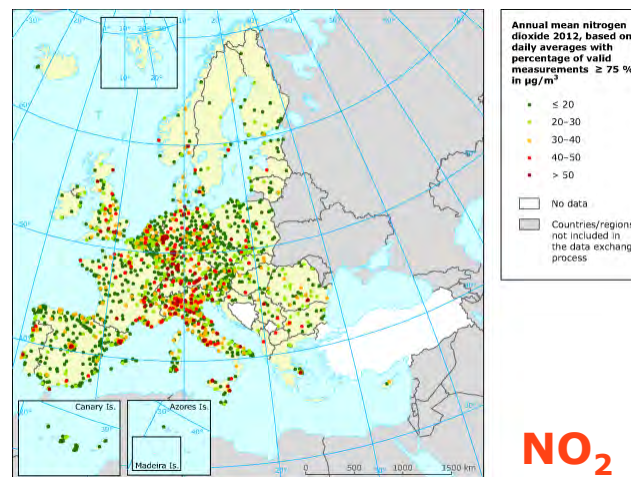
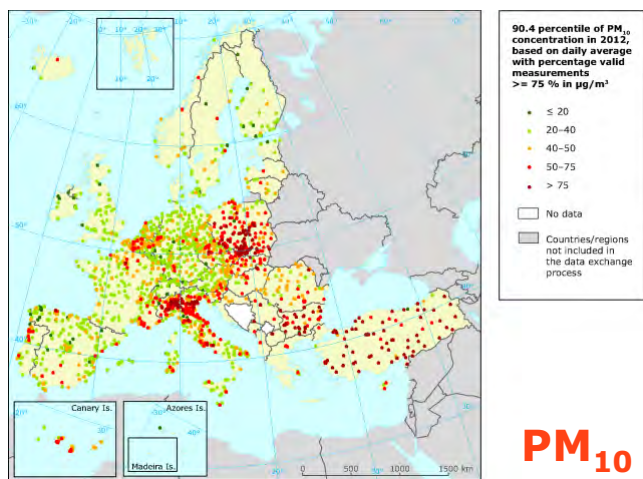
Air pollution exceeds eutrophication limits in 63% of ecosystem area, and in 73% Natura2000 area.





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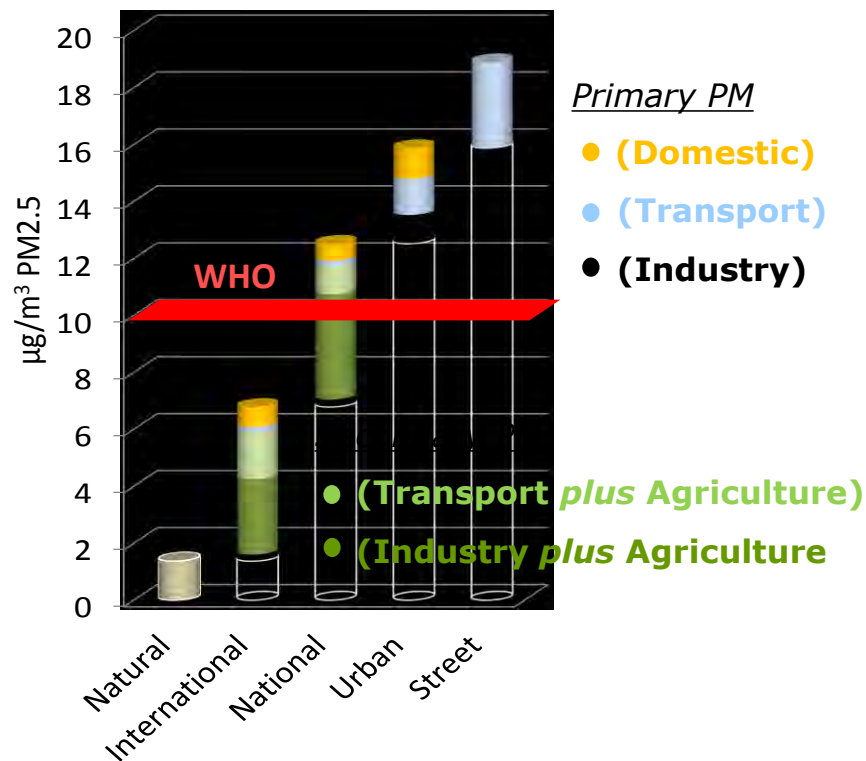
# Where is air pollution a problem?



# Who and what causes air pollution?

## Particulate Matter (PM<sub>2.5</sub>)

e.g. Germany, 2009 -



## Sulphur dioxide (SO<sub>2</sub>)

- Energy sector, Transport, ...

## Nitrogen oxides (NO<sub>x</sub>)

- Transport, Energy, Industry, ...

## Ammonia (NH<sub>3</sub>)

- Agriculture (Livestock & Fertilizers), ...

## Volatile Organic Compounds (VOC)

- Solvents, Paints, Transport, ...

## Methane (CH<sub>4</sub>)

- Agriculture, Waste, Energy, ...



# 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 (SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, benzene, lead, CO, O<sub>3</sub>, arsenic, cadmium, nickel, PM<sub>2.5</sub> and BaP)
- **National Emission Ceilings Directive (NECD)**: National emission inventories and caps to limit transboundary pollution (SO<sub>x</sub>, NO<sub>x</sub>, NMVOC, and NH<sub>3</sub>)
- **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)
- Fiscal measures, urban mobility measure, ...

## Clean Air Programme - Strategic Ambitions

Year	Health impact (premature deaths) reduction vs 2005	Ambient air quality standards and compliance
2020	33%	<b>Full compliance with existing ambient air quality legislation</b> (including NO <sub>2</sub> , PM <sub>10</sub> and PM 2.5)
2030	<b>52%</b>	Most Member States would reach PM 2.5 levels below or close to the WHO guidelines of 10 µg/m <sup>3</sup>





# Ambient Air Quality Directives

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

Regarding **NO<sub>2</sub>**: 19 Member States have reported excess levels in 2014, and infringement proceedings have already been opened against 9 Member State.

Regarding **PM<sub>10</sub>**: 16 Member States are facing infringement actions at various stages. First cases have been brought to Court.

Regarding **PM<sub>2.5</sub>**: Annual limit value applies as of 1 January 2015.

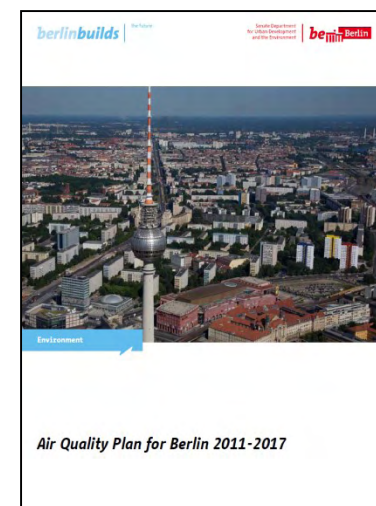
Directive '**kept under review**, with a view to revision once the NECD' is agreed.



# Air Quality Plans and Air Quality Measures

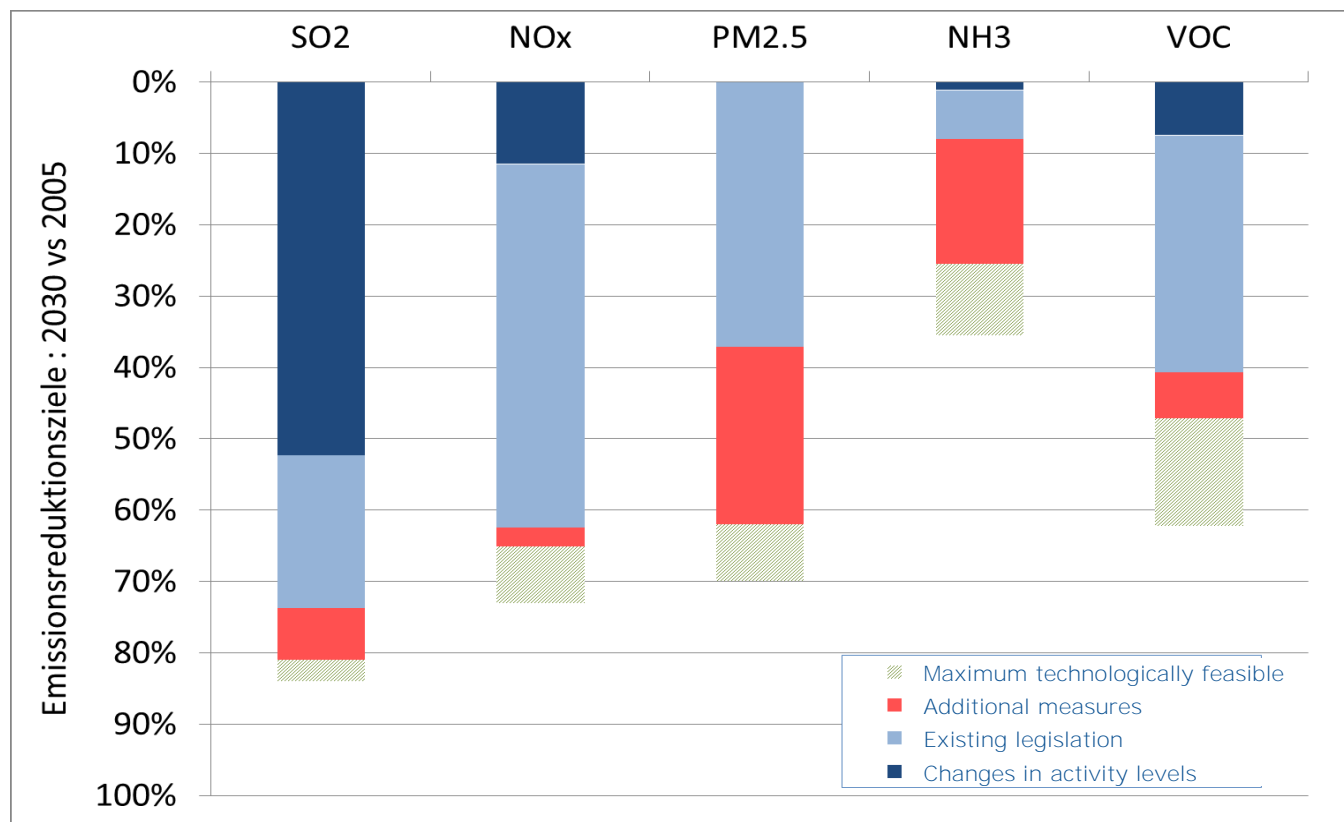
The Ambient Air Quality Directive requires Member States to have air quality plans to keep exceedance as short as possible:

- 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



# National Emission Ceiling Directive

	2020	2030
<b>SO<sub>2</sub></b>	-59%	-81%
<b>NO<sub>x</sub></b>	-42%	-65%
<b>VOC</b>	-28%	-46%
<b>NH<sub>3</sub></b>	-6%	-25%
<b>PM<sub>2.5</sub></b>	-22%	-54%
<b>CH<sub>4</sub></b>	-	-33%





# National Emission Ceiling Directive

## Costs

- Implementation cost:  
€2.2 billion per year

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

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



## Benefits

- Indirect economic benefits:  
€44-140 billion per year
- Direct economic benefits:  
€3 billion per year
- 52% less health damage;
- 35% less eutrophication;
- 85% less acidification.



# 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 SO<sub>2</sub>, NO<sub>x</sub> 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 ...





## Clean Air action offers synergies

An **energy** challenge ... e.g. by promoting of renewable energy, and by reducing use of coal by replacing it with cleaner fuels;

An **agriculture** challenge ... e.g. by focusing on better livestock and manure management practices, and using low-emission fertilisers;

A **transport** challenge ... e.g. by reducing emissions from vehicles, by setting standards to improve fuel quality, by encouraging sustainable mobility options;

An **urban** challenge ... e.g. by investing in cleaner transport options, and by considering traffic access conditions that encourage use of low emission vehicles.



## **More Information**

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

## **Feedback**

[ENV-AIR@ec.europa.eu](mailto:ENV-AIR@ec.europa.eu)

## **Thank you!**

European Commission

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