



# **Clean Air in Europe**

## **Challenges and EU Policy**

**Copernicus for SDGs, International Agreements and Conventions**

January 2019

Zlatko Kregar  
European Commission  
DG Environment, Clean Air Unit

# Increased awareness of air quality urgencies

**BBC NEWS**

Home Video World UK Business Tech Science Magazine Entertainment & Arts Health More

Science & Environment

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

By Jonathan Amos  
BBC Science Correspondent, Washington DC

© 13 February 2016 | Science & Environment | 14




**Stüddeutsche Zeitung**  
SZ.de Zeitung Magazin

Wochen 9°

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

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

## Die Luft bleibt dreckig - mindestens bis 2030



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

Wyorcza.biz / Wyborcza.biz / Ekologia i Odbychał: po kieszku

**EL PAÍS**

ESPAÑA · Madrid

CONTAMINACIÓN

## 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

Archived en: Manuela Carmena Contaminación atmosférica Madrid Comunidad de Madrid Contaminación Ayuntamientos Problemas ambientales Gobierno municipal



**LE SOIR**

Actu Sports Culture Économie Débats Blogs Images

13° min 9° -0.41% BEL 20 1403 11:16

## La qualité de l'air belge est l'une des plus mauvaise d'Europe

Belga  
Mis en ligne dimanche 31 janvier 2016, 23h25

Le problème principal est celui des particules fines. Les véhicules diesel sont pointés du doigt.



a Belgique est, juste derrière le Monténégro, le pays européen où la qualité

**M Pollutions** Le Monde.fr

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

**wyborcza.biz**

Wojna ze smogiem

Dominika Wantuch 01.02.2016 01:00



Smog w Krakowie, styczeń 2014 (MICHAŁ LEPECKI)


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

**the guardian**

home environment pollution climate change wildlife energy UK world all

## 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  
@adamvaughan\_uk  
Friday 8 January 2016, 10:58 GMT

**DeMorgen** Cult. Muziek, film, tv, expo Zine. interview, foto, lifestyle

NIEUWS

## Fijnstofconcentraties blijven hoog door gebrek aan wind

23-01-17, 14:19u • Bron: Belga



Ook maandag en de volgende dagen blijven de meteorologische omstandigheden van die aard dat de fijnstofconcentraties hoog


# Air pollution in Europe - Overview

Europe's **air quality is improving**; between 2000 and 2016 emissions of  $\text{NH}_3$  decreased by 9%, and of  $\text{SO}_2$  emission even by 76% ... **yet still** there are

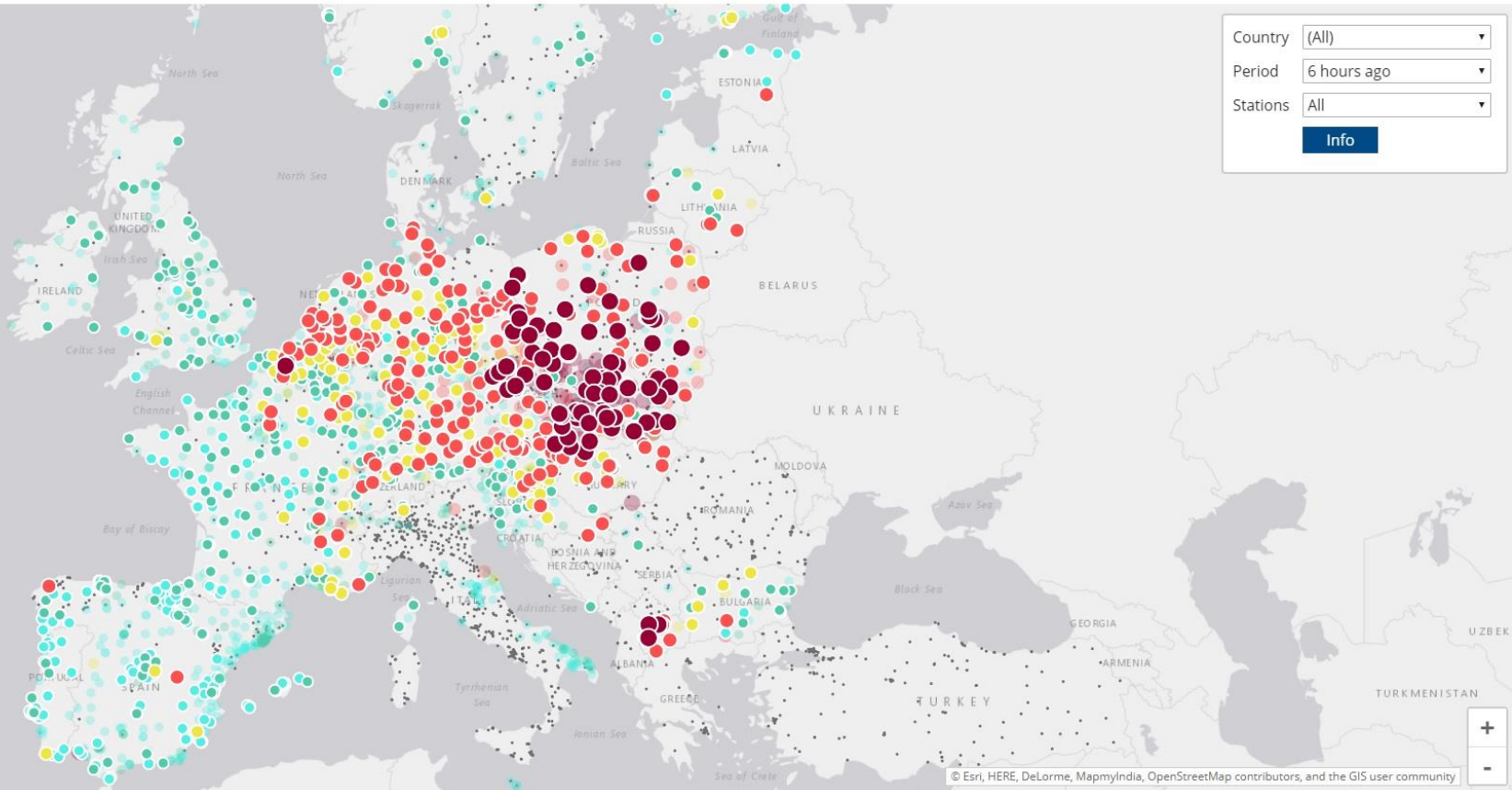
- Health impacts:**
- 391.000 premature deaths each year due to  $\text{PM}_{2.5}$
  - 69.000 premature deaths each year due to  $\text{NO}_2$
  - 16.400 premature deaths each year due to  $\text{O}_3$
  - 17% of all lung cancer deaths are due to air pollution
- Economic impacts:** More than € 24 billion per year in 'direct costs'
- Environmental impacts:** Eutrophication limits exceeded in 72% of ecosystem area in the EU, and in 78% of Natura2000 area



European  
Commission

 European Air Quality Index

2019-01-23 09:00 UTC+1



**Air quality**

- Good
- Fair
- Moderate
- Poor
- Very poor
- No data

Legend explained

## Air Quality Index

<http://airindex.eea.europa.eu/>

# EU Clean Air Policy Framework



## Air Quality Directives

Maximum concentrations of air polluting substances

## CONCENTRATIONS

## EMISSIONS



## National Emission Ceilings Directive

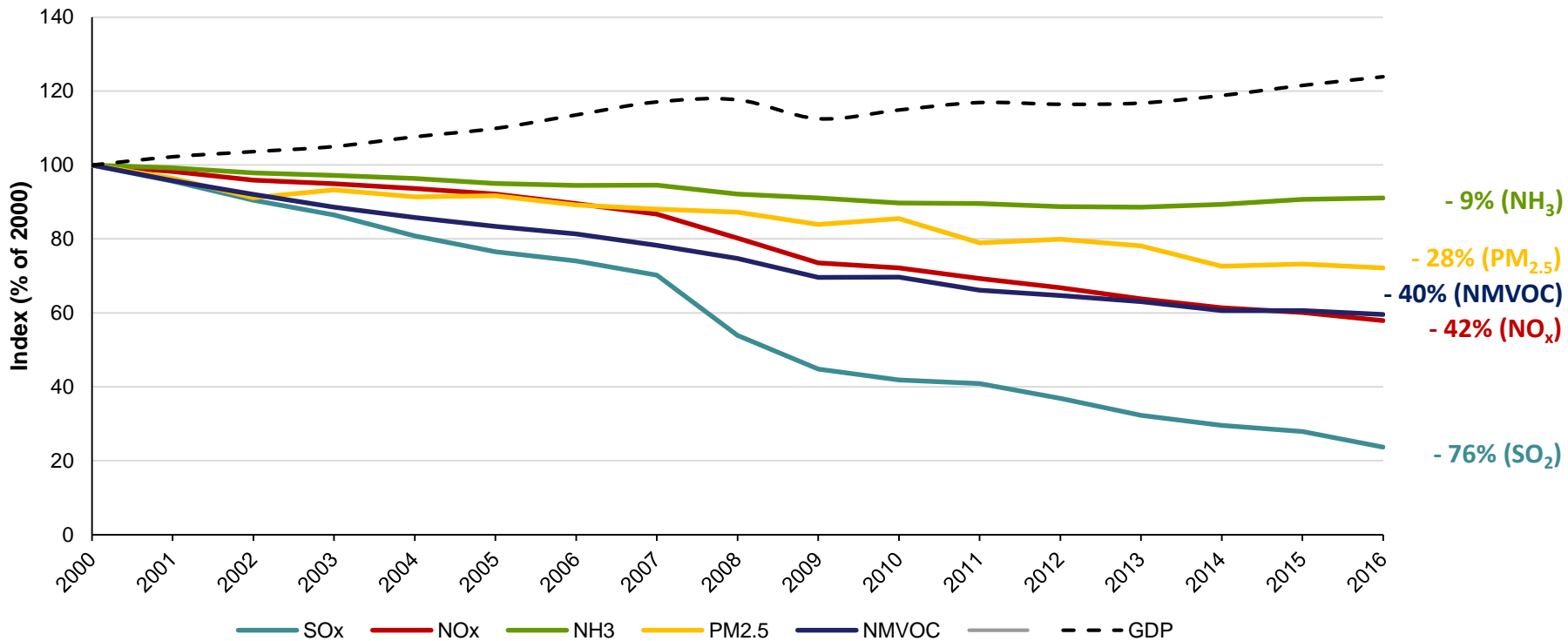
National emission totals  
(SO<sub>2</sub>, NO<sub>x</sub>, VOC, PM<sub>2.5</sub>, NH<sub>3</sub>)

## Source-specific emission standards

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

# EU National Emission Ceilings Directive

Development of EU-28 emissions, 2000-2016 (% of 2000 levels)



# Convention on Long-Range Transboundary Air Pollution – CLRTAP & CAMS links

- CEIP (Centre on Emission Inventories and Projections) & CAMS on improving emission and projection tools: “Improving quality of the EMEP emission inventory: comparison with other references (CAMS and JRC tools)” from 2018-2019 CLRTAP work programme
  - MSC-W&MSC-E (Meteorological Synthesizing Centers, West and East). – have received “CAMS co-funding” for the 2018-2019 work programme
  - CAMS supported TFMM (Task Force on Measurements and Modelling) (jointly with other centres) for assessing the contribution of the long range transport of air pollution to urban air quality by means of a combination of measurements and modelling.
  - Project on ship traffic emissions and contribution to ozone
- CAMS has a role to play, especially in improving our **knowledge of inventories**



# Ambient air quality and compliance gaps

**Compliance gap** persists – see COM (2018)330 for details.

Regarding **NO<sub>2</sub>**: 17 Member States with exceedances (2017); 14 Member States are facing infringement actions.

*>>> Decision to refer Germany, France, United Kingdom to the Court of Justice*

Regarding **PM<sub>10</sub>**: 15 Member States with exceedances (2017); 15 Member States are facing infringement actions; two cases have been decided by the Court.

*>>> Decision to also refer Italy, Hungary, Romania to the Court of Justice*

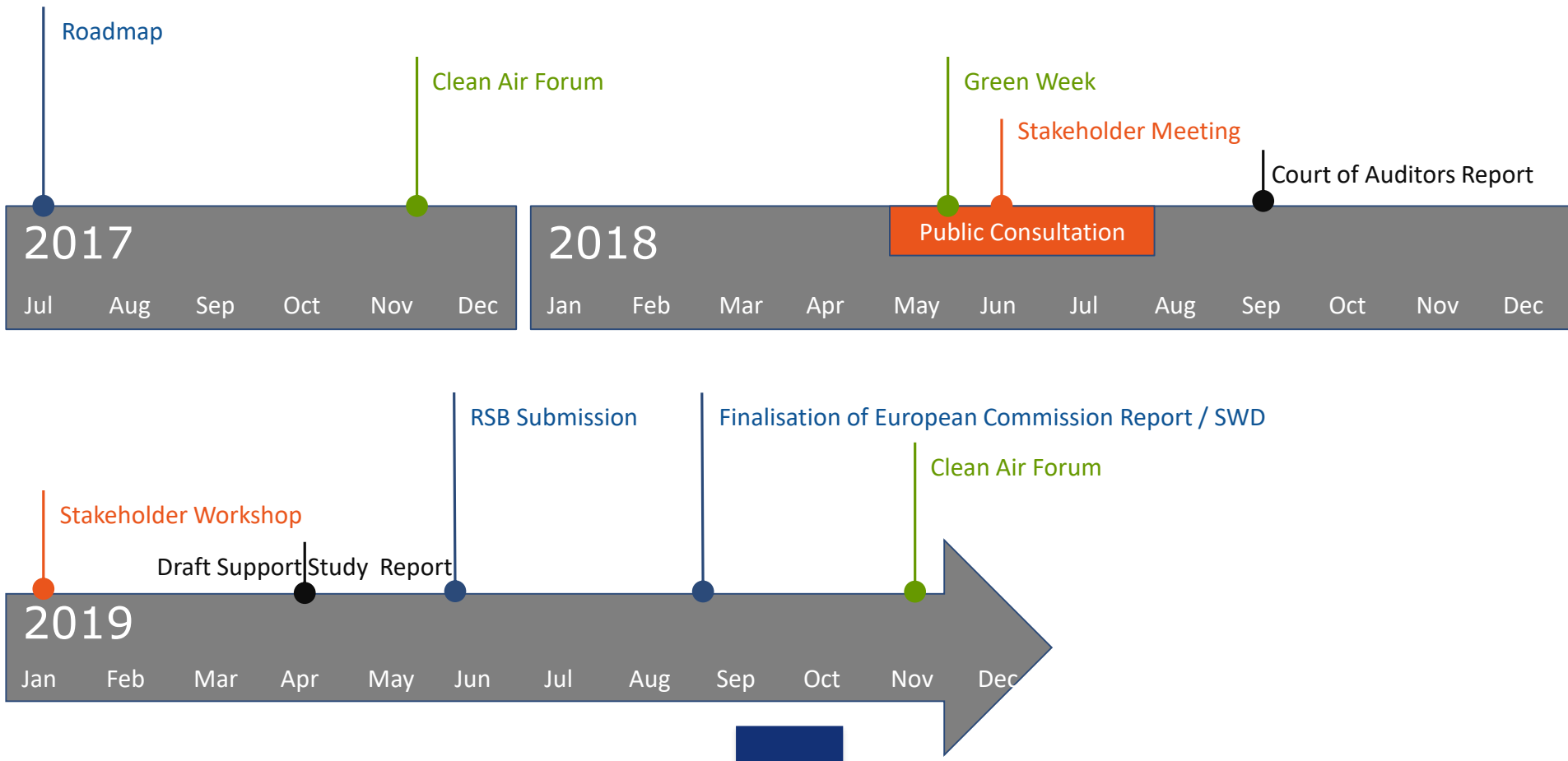
Regarding **SO<sub>2</sub>**: 2 Member States with exceedances; 1 infringement ongoing.



## Fitness Check – Ambient Air Quality Directives

- Purpose:** Evidence-based analysis of whether EU actions are fit for purpose, and identify excessive regulatory burdens, overlaps, gaps, inconsistencies and/or obsolete measures
- Scope:** EU Ambient Air Quality Directives, i.e. 2008/50/EC and 2004/107/EC
- Focus:** A fitness checks is a retrospective exercise: period 2008 to 2018
- Criteria:** Relevance, Coherence, Effectiveness, Efficiency, EU Value Added
- Goal:** To inform further reflections on whether the EU Ambient Air Quality Directives provide the appropriate legislative framework - and identify learning points to guide future action

# Fitness Check – Ambient Air Quality Directives



## Some concluding reflections

Clean Air for all Communication emphasizes urgent need to improve air quality through **full implementation** of air quality standards – for now, compliance gaps remain (and addressing these requires close cooperation at all levels).

CAMS remains an important **complementary source** of information for scientific, inventory and modelling communities & valuable tool for raising public awareness, understanding of pollution patterns and reaction to extreme episodes of high pollution.

Checking **compliance with legal standards** will always need to rely on data that meets strict uncertainty and reliability requirements, and thus likely precisely located ground monitoring stations using established and recognized reference methods and ensuring uninterrupted long term monitoring.



# 2<sup>nd</sup> #CleanAirEU Forum Bratislava, 28-29 November 2019

